

# The Free Wiki

## About

Starting June 4th 2020, this wiki will be a collection of all the issues I, Phil Wayne, have faced and will face on my Linux machine. It remains incomplete, since I have encountered many an issue, yet it shall grow over time, from this day forth. Since this file is destined to be read by the masses, I shall strive to be as clear as possible. If you have any suggestions, do not hesitate to contact me or make your own fork.

You may also find me here:

- [My blog \(https://madlibrarian.xyz\)](https://madlibrarian.xyz)
- [My YouTube channel \(https://www.youtube.com/channel/UCsem4aDdFN9x719N9EPZkww\)](https://www.youtube.com/channel/UCsem4aDdFN9x719N9EPZkww)
- [The FreeWiki From GitHub \(https://soimuen11.github.io/FreeWiki\)](https://soimuen11.github.io/FreeWiki)

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## ANNOYING ERRORS

### SSH: could not open a connection to your authentication agent

Option 1:

This means that the ssh-agent is not running. Type this in your terminal:

```
eval "$(ssh-agent -s)"
```

Then you only need retype ssh-add:

```
ssh-add
```

NB: This fix will only work for the current session. If you close your terminal, you will have to re-enter your passphrase.

Option 2:

Run

```
ssh-agent
# Output:
SSH_AUTH_SOCK=/tmp/ssh-hZQhwQlxahPX/agent.1833; export SSH_AUTH_SOCK;
SSH_AGENT_PID=1834; export SSH_AGENT_PID;
echo Agent pid 496;

# Copy and past the first 2 lines of output
SSH_AUTH_SOCK=/tmp/ssh-hZQhwQlxahPX/agent.1833; export SSH_AUTH_SOCK;
SSH_AGENT_PID=1834; export SSH_AGENT_PID;

# Finally, run:
ssh-add

# List your keys with
ssh-add -l
```

## df:/run/user/1000 permission denied

Df is a very handy command which reports file system disk space usage (see man df for more info). You should at least know the -h flag, which prints a human-readable result. If you ever encounter this issue, you need to type this command in your terminal:

```
systemctl --user stop xdg-document-portal.service
```

Since the latter only is a **temporary fix**, I encourage to also type this:

```
systemctl --user disable xdg-document-portal.service
```

If you want to know more about systemd, click on [this link \(https://wiki.archlinux.org/title/Systemd\)](https://wiki.archlinux.org/title/Systemd)

## Trackpad stops working

Since it frequently happened after sleep mode with Arch Linux and it has been happening again with Ubuntu (strangely it never happened with Gentoo), here is the fix I have been using. You only need **2 commands**:

```
sudo modprobe -r psmouse #kill mouse kernel module
sudo modprobe psmouse #restart mouse kernel module
```

Other solution:

- Use my *script* called **mouse** which does exactly that.
- If you frequently use my script, I recommend you create a CRON job (with root privileges) to call it every now and then (perhaps once every 5 minutes). This way you never have to worry about that anymore. To set up said cron job, do not hesitate to use the [Cron Guru web app](#)

<https://www.creativeblog.com/features/10-best-static-site-generators>).

## Removing SSH passphrase

- [Stackoverflow Response \(https://stackoverflow.com/questions/112396/how-do-i-remove-the-passphrase-for-the-ssh-key-without-having-to-create-a-new-key#112409\)](https://stackoverflow.com/questions/112396/how-do-i-remove-the-passphrase-for-the-ssh-key-without-having-to-create-a-new-key#112409)
- [Set up passwordless login \(https://linuxize.com/post/how-to-setup-passwordless-ssh-login/\)](https://linuxize.com/post/how-to-setup-passwordless-ssh-login/)

## CURL TRICKS

Get Your IP Address

```
curl ifconfig.co  
curl ifconfig.co/city  
curl ifconfig.co/country
```

News

```
curl getnews.tech
```

Weather

```
+ curl wttr.in
```

## TIPS, TRICKS AND HELPFUL PROGRAMS

### Mounting Android Phones In Linux

1. Install simple-mtpfs (from the AUR if you are running Arch Linux)
2. Create Android/ directory in your home/
3. Run : simple-mtpfs -o enable-move --device 1 Android/  
(1 being the device ID)
4. Unmount with : fusermount -u Android/

Other solutions to transfer files:

- Use bluetooth (particularly easy with **Gnome Control Center**)
- For file transfer, you may also install **Termux**, an android terminal app which you may find in the **Play Store**. From there you can set up ssh on your phone.

### Installing Android in Vbox

- [Download the ISO \(https://www.android-x86.org\)](https://www.android-x86.org)
- Change motherboard to PS/2 Mouse in System tab
- Change Processors to 2+
- Change Display to 3d and VboxSVGA

### Video / Audio Editing Software

- [Kdenlive \(kdenlive.org\)](https://kdenlive.org)
- [Olive \(https://www.olivevideoeditor.org/\)](https://www.olivevideoeditor.org/)
- [Ffmpeg \(ffmpeg.org\)](https://ffmpeg.org)
- [OBS \(https://obsproject.com/\)](https://obsproject.com/)

- [Audacity \(https://www.audacityteam.org/\)](https://www.audacityteam.org/)
- [Sox \(http://sox.sourceforge.net/\)](http://sox.sourceforge.net/)

## Displaying keystrokes during screencast

Install this program (with sudo privileges):

- [screenkey \(https://gitlab.com/screenkey/screenkey\)](https://gitlab.com/screenkey/screenkey)
- For Arch users:

```
sudo pacman -S screenkey OR yay -S screenkey
```

- For Ubuntu users:

```
sudo apt install screenkey
```

## Easily Styling Termite Terminal

[Termite \(https://github.com/thestinger/termite/\)](https://github.com/thestinger/termite/) is a terminal emulator which I would most definitely recommend. To configure colors and fonts quickly and nicely, I recommend this program which you can find on github:

- [termite-style \(https://github.com/adi1090x/termite-style\)](https://github.com/adi1090x/termite-style)

For Arch users, I believe it is also directly available in the AUR (it was when I wrote this section). When I last edited this section (on Aug 13, 2021), I read that termite is now obsolete. Hence it might be wiser to make the switch to **alacritty**, as the maintainer of the git repo indicated.

## Downloading Videos From YouTube

One program to rule them all:

- [youtube-dl \(https://github.com/yt-dl-org/youtube-dl\)](https://github.com/yt-dl-org/youtube-dl)

I have never fully experienced it but some people have recommended it to me:

- [mps-youtube \(https://github.com/mps-youtube/mps-youtube\)](https://github.com/mps-youtube/mps-youtube)

## Concatenating Pdfs

```
yay -S pdf-append #for Arch users
```

## Regular Expressions Basics

- . - any one character
- \* - Match any number of previous (includin 0)
- + - Match any number of previous
- \$ - End of the line
- ^ - Beginning of the line
- \S - any non-whitespace character

- \s - any whitespace character
- ? - optional
- [a-z] - any lowercase letter
- [A-Z] - any uppercase letter
- [A-Za-z] - any letter
- [0-9] - any number
- \ escape something
- Examples:
  - grep "something" file
  - grep "^s" file -> any line starting with lowercase "s" in given file

## A Chaotic List Of Useful Programs

- [Neofetch \(https://github.com/dylananaraps/neofetch\)](https://github.com/dylananaraps/neofetch)
- [Sxiv \(https://github.com/ont/sxiv\)](https://github.com/ont/sxiv): A suckless image viewer for X with vim keybindings
- [Zathura \(https://github.com/pwmt/zathura\)](https://github.com/pwmt/zathura): A document viewer (don't forget to download sth to read pdfs along with zathura)
- [Neomutt \(https://neomutt.org/dev/documentation\)](https://neomutt.org/dev/documentation): cli-based email client
- [Sup \(https://github.com/sup-heliotrope/sup/wiki\)](https://github.com/sup-heliotrope/sup/wiki): an equivalent to neomutt written in ruby
- [Noisetorch \(https://github.com/lawl/NoiseTorch\)](https://github.com/lawl/NoiseTorch)
- Ffmpeg
- Vlc / cvlc / nvlc (vlc with ncurses interface)
- Vlc can play the radio directly from terminal too)
- Cli-visualizer : visualize music
- Ntfs-3g

## Networking

```
nmtui # Configure & connect to a network with ncurses interface
nmcli # Cli equivalent to nmtui
sudo pacman -S networkmanager # To install it on Arch Linux
sudo apt install network-manager # To install it on Ubuntu
nmap -A -T4 hostname # See which devices are connected to your network
wireshark # monitor a network
nslookup
wifite2
ifconfig
ip a
net-setup #to set up connection from the Gentoo livecd.
```

## Create Your Own Wiki

- [Mediawiki \(https://www.mediawiki.org/wiki/MediaWiki\)](https://www.mediawiki.org/wiki/MediaWiki)
- Wordpress
- Code from scratch with HTML, CSS & JS and then self-host it.

- With GitHub: create a new repository, initialize it with a file named README.md, go to github pages, pick a theme and publish it.
- [Other amazing tools to build a website from markdown](https://www.creativeblog.com/features/10-best-static-site-generators) (<https://www.creativeblog.com/features/10-best-static-site-generators>)

## Monitor Your System

- **cron** &/or **anacron**: Automate repetitive tasks. To edit your cron file, open a terminal emulator and run:

```
crontab -e
```

- dstat: Versatile resource statistics tool
- perf
- aide: Advanced intrusion detection environment
- sendmail / mailx / msmtpt
- top / htop / bashtop: I personally do not use **top** since **htop** does a much better job and has a much more readable interface. For those of you who enjoy bling, **bashtop** also is a viable option.
- journalctl: If your OS ships with **systemd** (this is the case for most arch-based or debian-based distributions), you can access the logs with journalctl. Otherwise, you can still have a look in /var/logs.

## Partition Disk

```
fdisk
sfdisk # From a bash script (to automate disk partitioning)
cfdisk # More readable output than fdisk
```

## Edit Subtitles

- [Aegisub \(https://aegisub.it.uptodown.com/\)](https://aegisub.it.uptodown.com/): Allows you to edit existing ones but also to create your own subtitles

## Pentesting programs & websites

### Analyzing

- [Sherlock \(https://github.com/sherlock-project/sherlock\)](https://github.com/sherlock-project/sherlock)
- [Whois \(https://www.whois.com/whois\)](https://www.whois.com/whois)
- [Whatweb \(https://tools.kali.org/web-applications/whatweb\)](https://tools.kali.org/web-applications/whatweb)
- [Dmitry \(https://tools.kali.org/information-gathering/dmitry\)](https://tools.kali.org/information-gathering/dmitry)
- [Shodan.io \(shodan.io\)](https://shodan.io)
- [Google Hacking Database \(https://www.exploit-db.com\)](https://www.exploit-db.com)
- [Linkedin for social engineering \(linkedin.com\)](https://www.linkedin.com)
- [Icann Lookup \(https://lookup.icann.org/\)](https://lookup.icann.org/)
- Job boards (such as indeed.com)
- Netcat
- TheHarvester
- Hping3

### Password Attacks

- Medusa
- John

## Sniffing

- Wireshark
- Tcpdump / Windump (for Windows)
- Steel Central Packet Analyzer
- Capsa Network Analyzer
- Omnipcap Network Analyzer
- Observer Network Analyzer
- Sniff-O-Matic

## Other

- Xtightvncviewer
- Dig
- Nslookup
- Peach fuzzer = fuzzing technique
- Wafw00f : check if there's a firewall on target domain
- Rlogin
- Burpsuite

## Xorg Programs

- xev: print content of X events
- xrandr / arandr: set size, orientation or reflection of the outputs for a screen.
- setxkbmap: set up your keyboard

## Write On Screen

- banner
- figlet

## Formatting A Flashdrive

- Check filesystem

```
fscck -N /dev/sd?
```

- Format with vFat File System

```
sudo mkfs.vfat /dev/sdc1
```

- Format with NTFS File System

```
sudo mkfs.ntfs /dev/sdc1
```

- Format with EXT4 File System

```
sudo mkfs.ext4 /dev/sdc1
```

## Removing Sensitive Data From Git Repo

- [Removing Data From GitHub \(https://help.github.com/en/github/authenticating-to-github/removing-sensitive-data-from-a-repository\)](https://help.github.com/en/github/authenticating-to-github/removing-sensitive-data-from-a-repository)

## Great LS commands

```
lsusb #list usb devices
lscpu #display information about cpu architecture
lspci #list all pci devices
lsblk #list block devices
```

## Customizing Bash

- [Archwiki link \(https://wiki.archlinux.org/index.php/Bash/Prompt\\_customization\)](https://wiki.archlinux.org/index.php/Bash/Prompt_customization)

## Learning AWK

- [Tutorialspoint has a great tutorial \(https://www.tutorialspoint.com/awk/awk\\_basic\\_examples.htm\)](https://www.tutorialspoint.com/awk/awk_basic_examples.htm)

## VPS [Virtual Private Server]

- [Linode \(linode.com\)](https://linode.com): Open-Source & cheapest option
- [AWS \(amazon.aws.com\)](https://amazon.aws.com): Most popular option
- [Google \(cloud.google.com\)](https://cloud.google.com)
- [Digital Ocean \(https://www.digitalocean.com/\)](https://www.digitalocean.com/)
- [Vultr \(vultr.com\)](https://vultr.com)

## Buying Domain Name

- [Epik \(epik.com\)](https://epik.com)
- [Wordpress.org \(wordpress.org\)](https://wordpress.org)
- [Wordpress.com \(wordpress.com\)](https://wordpress.com)

## Copying text from vim to an external program

```
" +y
```

## Vim r!

Write the result of the **ls** command in a file directly from vim

```
:r! ls
```

## Vim powerline

- [Archwiki Page For powerline \(https://wiki.archlinux.org/title/Powerline\)](https://wiki.archlinux.org/title/Powerline)
- [GitHub Repo For Powerline \(https://github.com/powerline/powerline\)](https://github.com/powerline/powerline)
- [A Tecmint Tutorial \(https://www.tecmint.com/powerline-adds-powerful-statuslines-and-prompts-to-vim-and-bash/\)](https://www.tecmint.com/powerline-adds-powerful-statuslines-and-prompts-to-vim-and-bash/)
- [Powerline As A Widget \(https://powerline.readthedocs.io/en/master/usage/wm-widgets.html\)](https://powerline.readthedocs.io/en/master/usage/wm-widgets.html)

## VIFM Matrix Color Scheme



.config/vifm/colors/Default.vifm

```
" Matrix
" by Michael jubalh Vetter
" https://github.com/jubalh/vifm-colors

highlight clear

highlight Win                cterm=none ctermfg=green   ctermbg=black

highlight TopLine           cterm=none ctermfg=green   ctermbg=none
highlight TopLineSel        cterm=none ctermfg=green   ctermbg=none
highlight StatusLine        cterm=none ctermfg=green   ctermbg=none
highlight Border            cterm=none ctermfg=green   ctermbg=none

highlight Selected          cterm=bold ctermfg=red     ctermbg=default
highlight CurrLine          cterm=bold ctermfg=black   ctermbg=green

highlight WildMenu          cterm=underline,reverse ctermfg=white ctermbg=black
highlight CmdLine           cterm=none ctermfg=white ctermbg=black
highlight ErrorMessage      cterm=none ctermfg=red    ctermbg=black

highlight Directory         cterm=none ctermfg=blue   ctermbg=default
highlight Link              cterm=none ctermfg=yellow ctermbg=default
highlight BrokenLink        cterm=none ctermfg=red    ctermbg=default
highlight Socket            cterm=none ctermfg=yellow ctermbg=default
highlight Device            cterm=none ctermfg=yellow ctermbg=default
highlight Fifo              cterm=none ctermfg=yellow ctermbg=default
highlight Executable        cterm=none ctermfg=green   ctermbg=default
```

## Fuzzy Finders

- **Find** can be a slow command
- Use **broot** instead
- **Fzf** also is very popular and can be used together with **bfs**.

## Modifying images

- **ImageMagick** (cli tool). [imagemagick.org](https://imagemagick.org) ([imagemagick.org](https://imagemagick.org)) is its official site. They also have a github page.
- [Canva.com](https://canva.com) ([canva.com](https://canva.com)): very quick and effective for youtube thumbnails. The problem is: it is web-based.
- Gimp: Free software, equivalent to photoshop. The problem is: it is very complex.
- Inkscape

## Patching (Suckless Software)

1. clone the repository of the program you want to patch (eg: dmenu)  
in .local/repos/
2. cd into the repo && run : sudo make install
3. download the patches

4. run : patch -p1 < name-of-patch.diff
5. if something goes wrong, look into the patch file and modify your source files manually (config.h for dmenu and dwm)

**NB : YOU NEED TO RECOMPILE (SUDO MAKE INSTALL) EVERY TIME YOU MAKE AN EDIT !**

## Configuring Neomutt

- Clone [luke smith's mutt-wizard GitHub repository \(https://muttwizard.com/\)](https://muttwizard.com/)
- OR download it from the AUR with:

```
yay -S mutt-wizard
```

## Hdparm

**hdparm** is a command line utility to set and view hardware parameters of hard disk drives. It can also be used as a simple benchmarking tool:

- [Click here for more info \(https://wiki.archlinux.org/index.php/Hdparm#Putting\\_a\\_drive\\_to\\_sleep\\_directly\\_after\\_boot\)](https://wiki.archlinux.org/index.php/Hdparm#Putting_a_drive_to_sleep_directly_after_boot)

## Streaming With CVLC Command Line Mode

Open your terminal & run:

```
vlc v4l2:// :v4l-vdev="/dev/video0" OR mpv /dev/video0
```

Then start the video with :

```
ffmpeg -video_size 1366x768 -framerate 25 -f x11grab -i :0.0 -f pulse -ac 2 -i 1 output.mkv -async 1 -vsync 1
```

## Audio Management

- PulseAudio / Pavucontrol / Pulsemixer: For sound control of your system.
- Alsa / Alsamixer: For sound control of your system.
- Audacity: To record audio (and so much more).
- Sox (for terminal): Same as audacity but is terminal-based.

## Distros One Should Be Curious About?

NB: source-based = you need to compile your programs when installing them = you do not directly install binaries

- CRUX (source-based)
- Gentoo (source-based)
- Source Mage (source-based)
- LFS (Linux From Scratch = create your own distro)
- Slackware / OpenSuse
- Void Linux

## Mother distros

1. Slackware
2. Debian (comes with binaries)
3. Ubuntu (debian-based)
4. Sorcerer (source-based)
5. Crux (Arch's big daddy)
6. Gentoo / Enoch
7. Redhat (Fedora, CentOS, others)

## Iptables Firewall Rules

A firewall is essentially a way to filter traffic. What traffic do you want to allow / block ?

There are 3 different ways that data can be sent:

- Input = whenever you are receiving data (eg from the internet)
- Output = Whenever you are sending data out
- Forward = You see that a lot on routers. When data passes through from one device to another.

In between brackets, you have the POLICY, which ACCEPTs everything by default.

Some useful Commands:

```
iptables -L #(or --list) List current firewall rules
iptables -P POLICY DROP/ACCEPT #Change a (-P) policy from drop to accept, or
vice versa.

# example:
iptables -P FORWARD DROP

# If your computer is not set up as a router, you don't need FORWARD to accept
# everything, so you can set its policy to DROP.

iptables -A #Add or Append a rule to the bottom of the chain
iptables -I #Add or Append a rule to the top of the chain

#Make rules permanent:
sudo iptables-save > /etc/iptables/iptables.rules
```

If you wish to quickly and easily set up your firewall, you may use Chris Titus' configuration, which you can find clicking on the link below:

- [Click here & clone this repository \(https://github.com/ChrisTitusTech/firewallsetup.git\)](https://github.com/ChrisTitusTech/firewallsetup.git)

## Ranger (File Manager Program)

Rename several files in one go : select the files you wish to rename with the space bar. Then type :bulkrename. That will open your fave text-editor and then you can rename them as you wish.

## dmesg

Program to control or examine the kernel ring buffer.

## systemd-analyze

Analyze how much time it takes for each service to load (how long to completely boot your pc)

```
systemd-analyze
systemd-analyze critical-chain graphical.target
systemd-analyze blame
```

## Managing logs

```
last #shows a listing of last logged in users
```

## Pacman

```
+ pacman -S: install a program
+ pacman -Ss: search for a program
+ pacman -Syu: update + upgrade the system
+ pacman -Syyuu
+ pacman -Q
+ pacman -Qte
+ pacman -R OR pacman -Rns: This removes a program and all its dependencies /
config files
+ pacman -Rdd $ program: This removes only the program without its dependencies
+ pacman -Rc $program: This removes all the packages which depend on a program
```

## Software To Make You Own Music

- [Rosegarden \(https://rosegardenmusic.com/\)](https://rosegardenmusic.com/)
- [Audacity \(https://www.audacityteam.org/\)](https://www.audacityteam.org/)
- LMMS : Linux Multimedia Studio

## Nice Ncurses Programs

- glances : written in Python
- ncd : ncurses disk usage
- moc: listen to music from your terminal
- cmus: equivalent to moc (I personally prefer moc)
- bastet : a tetris for terminal
- dialog / smenu (programs to interact with the user)
- vifm (vim-like file manager)
- mc (midnight commander) : file-system manager

## Recovering deleted files

- testdisk

## Spreadsheet Program With Vim Bindings

- [SC-IM \(https://github.com/andmarti1424/sc-im\)](https://github.com/andmarti1424/sc-im)
- Install it with the AUR on Arch Linux: yay -S sc-im

## Display Manager Setup

1. **Permanently** change DM:

```
sudo systemctl disable [$CURRENT-DISPLAY-MANAGER]
sudo systemctl enable [$NEW-DISPLAY-MANAGER]
```

2. **Temporarily** change DM:

```
sudo systemctl stop [$CURRENT-DISPLAY-MANAGER]
sudo systemctl start [$NEW-DISPLAY-MANAGER]
```

3. Restart DM:

```
sudo systemctl restart [$DISPLAY-MANAGER-NAME]
```

## Set Keyboard With Setxkbmap

Forever Option 1:

1. Create a file : /etc/X11/xorg.conf.d/10-keyboard.conf
2. Add lines I added in my current 10-keyboard.conf

Temporarily:

- setxkbmap us
- setxkbmap us -variant intl

If you wish to remap your capslock and make it behave like the control key, you may also add this line to your .xprofile:

```
setxkbmap -option ctrl:nocaps
```

## Bc

Bc is a built-in POSIX CLI calculator (for bash).

## Autojump

- A shell program to cd faster, a bit like broot or fzf (though not a fuzzy finder).
- Install it on Ubuntu: `sudo apt install autojump`

## Browser Recommendations

1. [Iridium is the best one regarding privacy \(https://iridiumbrowser.de/\)](https://iridiumbrowser.de/)
2. [Brave & vimium plugin: for its relative security builtin js/ad-blocker & its speed \(brave.com\)](https://brave.com)
3. [Qutebrowser: if you love vim, you will love it \(https://qutebrowser.org/\)](https://qutebrowser.org/)
4. [Firefox with the pentadactyl plugin \(https://www.mozilla.org/it/firefox/new/?redirect\\_source=firefox-com\)](https://www.mozilla.org/it/firefox/new/?redirect_source=firefox-com)

## Getting RSS Links

FROM WEBSITES:

- Add /feed/ at the end of the url address

FROM YOUTUBE CHANNEL:

- Press ctrl+u to go to the page sources & search for the channelId
- Then copy-paste this url: [https://www.youtube.com/feeds/videos.xml?channel\\_id=YOURCHANNELIDHERE](https://www.youtube.com/feeds/videos.xml?channel_id=YOURCHANNELIDHERE)
- Add the channelId where it belongs

[INSTALL NEWSBOAT: \(https://github.com/newsboat/newsboat\)](https://github.com/newsboat/newsboat)

- `sudo apt install newsboat` (debian-based distros)
- `sudo pacman -S newsboat` (arch-based distros)

## GAMING ON LINUX

### False Stereotypes

Nothing is less true than "you cannot play on Linux". Try out these one of these 3 programs and you will not be disappointed. I highly recommend Steam. It has entertained me for many an hour.

- [Wine \(https://www.winehq.org/\)](https://www.winehq.org/)
- [PlayOnLinux \(https://www.playonlinux.com/en/\)](https://www.playonlinux.com/en/)
- [Steam \(https://store.steampowered.com/\)](https://store.steampowered.com/)

All these programs are well documented in the Arch Wiki. Be careful and install the proper fonts/dependencies for Steam! All three programs are directly available with pacman or in the AUR.

### Emulating console games

Many emulators exist. Here are the ones I use and consider as "the best":

1. Nintendo DS (nds): **desmume**
2. GameBoy Advanced (gba): **vbam**
3. PlayStation Portable (psp): **ppsspp**
4. Wii-U: **decaf** OR **Cemu & Wine**
5. PC: **Wine + Playonlinux**
6. Wii + Gamecube: **Dolphin**
7. Nintendo 64: **Mupen64plus**

Downloading the roms:

- [emulatorgames.net \(https://emulatorgames.net\)](https://emulatorgames.net)
- [Romsmania \(https://consolegames.down10.software/roms/\)](https://consolegames.down10.software/roms/)

## FFMPEG

### Webcamming

```
ffmpeg -y -i /dev/video0 out.mkv
```

### Determining Available Resolutions

```
xrandr
```

## Find Size And Offset Of Particular Window To Capture

```
xwininfo
```

## Find Out Which Pulseaudio Sound Sources Exist

```
pactl list sources #to record, find the input source (not output)
```

## The entire ffmpeg command.

```
ffmpeg -video_size 1366x768 -framerate 25 -f x11grab -i :0.0 -f pulse -ac 2 -i 1 output.mkv -async 1 -vsync 1
# video_size 1920x1080: Sets the size of the video capture. This is the value we used xrandr to find.
# framerate 25: Sets the frames per second value.
# f x11grab: Force the video format to a specific type. Here we're setting the input format to the output of your X server.
# i :0.0: This specifies the video input will come from the main screen.
# f pulse: Sets the expected format to be PulseAudio.
# ac 2: Set two audio channels
# i 1: Take audio input from PulseAudio source #1. This is the value we used pactl to discover.
# output.mkv: The name of the file we wish to create.
# async 1: Set the audio sync method. This is a deprecated parameter, but we're using it here to avoid error messages that can be ignored.
# vsync 1: set the video sync method. This is a deprecated parameter, but we're using it here to avoid error messages that can be ignored.
```

NB: If you don't specify a directory to save the video, it will be saved in the directory ffmpeg was launched from.

## Extract Audio From Video

```
ffmpeg -i sample.avi -q:a 0 -map a sample.mp3
```

## Capture only video, no audio

```
ffmpeg -video_size 1366x768 -framerate 25 -f x11grab -i :0.0 output.mkv -vsync 1
```

## Converting files

```
ffmpeg -i output.mkv output.mp4
```

general formula : `ffmpeg -i output.oldformat output.wantedformat`

## Add background music

```
ffmpeg -i arch-install.mp4 -i archinstall-soundtrack.mp4 -c copy -map 0:v:0 -map 1:a:0 output2.mp4
```

## Add a new audio track to an existing file

- [Superuser.com has the answer \(https://superuser.com/questions/1140452/ffmpeg-add-a-new-audio-track-to-existing-file\)](https://superuser.com/questions/1140452/ffmpeg-add-a-new-audio-track-to-existing-file)

## Concatenating Files

1. Create a list of files in a FILE  
example: filename  
file "file1\_path"  
file2 "file1\_path"  
file3 "file1\_path"
2. Run:

```
ffmpeg -f concat -safe 0 -i /home/soimuen/Downloads/FILENAME -c copy  
output.webm
```

## Cutting Videos

```
ffmpeg -ss 00:01:00 -i input.mp4 -to 00:02:00 -c copy output.mp4
```

## Burning Subs To Video

**NOTE: This solution "burns the subtitles" into the video, so that every viewer of the video will be forced to see them.**

Use the libass library (make sure your ffmpeg install has the library in the configuration --enable-libass).

First convert the subtitles to .ass format:

```
ffmpeg -i subtitles.srt subtitles.ass
```

Then add them using a video filter:

```
ffmpeg -i mymovie.mp4 -vf ass=subtitles.ass mysubtitledmovie.mp4
```

## RESOURCES

### Quickly Access Documentation Offline

- [Zeal \(https://github.com/zealdocs/zeal\)](https://github.com/zealdocs/zeal)
- Man Pages

```
man [ $PROGRAM_NAME ]
```

- Info Pages
- The --help flag shipping with (almost) every program

## Raspberry Pi Docs

- [Installing Nextcloud \(https://raspberrypi.com/install-nextcloud-raspberry-pi\)](https://raspberrypi.com/install-nextcloud-raspberry-pi)
- [Configuring Apache Web Server \(https://vitux.com/how-to-install-and-configure-apache-web-server-on-ubuntu\)](https://vitux.com/how-to-install-and-configure-apache-web-server-on-ubuntu)



- [Remote Access \(https://www.raspberrypi.org/documentation/computers/remote-access.html\)](https://www.raspberrypi.org/documentation/computers/remote-access.html)
- [Create SSH-key passphrase \(https://www.linuxshelltips.com/create-ssh-key-passphrase/\)](https://www.linuxshelltips.com/create-ssh-key-passphrase/)
- [Configuring HTTPS \(https://wiki.debian.org/Self-Signed\\_Certificate\)](https://wiki.debian.org/Self-Signed_Certificate)
- [Certbot \(https://certbot.eff.org/lets-encrypt/arch-apache\)](https://certbot.eff.org/lets-encrypt/arch-apache)
- [Project ideas for raspberry pi \(https://itsfoss.com/raspberry-pi-projects/\)](https://itsfoss.com/raspberry-pi-projects/)
- [Running Your Own Git Server \(https://www.linux.com/training-tutorials/how-run-your-own-git-server\)](https://www.linux.com/training-tutorials/how-run-your-own-git-server)
- [Installing WordPress \(https://wordpress.org/support/article/how-to-install-wordpress\)](https://wordpress.org/support/article/how-to-install-wordpress)

## Microsoft Windows

- [List of CMD Commands \(https://www.lifewire.com/list-of-command-prompt-commands-4092302\)](https://www.lifewire.com/list-of-command-prompt-commands-4092302)
- [Top 20 Windows Tools To Know As Sysadmin \(https://www.poweradmin.com/blog/top-20-windows-tools-every-sysadmin-should-know/\)](https://www.poweradmin.com/blog/top-20-windows-tools-every-sysadmin-should-know/)
- [Administration Commands \(https://geekflare.com/windows-administration-commands/\)](https://geekflare.com/windows-administration-commands/)
- [VLAN definition & advantages \(https://www.guru99.com/vlan-definition-types-advantages.html\)](https://www.guru99.com/vlan-definition-types-advantages.html)

## Other

### 1. English:

- [Tutorials Point \(https://www.tutorialspoint.com/index.htm\)](https://www.tutorialspoint.com/index.htm)
- [W3schools \(https://w3schools.com\)](https://w3schools.com)
- [Javascript.info \(https://javascript.info/\)](https://javascript.info/)
- [Stack Overflow \(https://stackoverflow.com/\)](https://stackoverflow.com/)
- [OpenClassrooms \(https://openclashrooms.com\)](https://openclashrooms.com)
- [Free VS OpenSource Software \(https://www.gnu.org/philosophy/open-source-misses-the-point.en.html\)](https://www.gnu.org/philosophy/open-source-misses-the-point.en.html)
- [Udemy \(https://www.udemy.com/\)](https://www.udemy.com/)
- [Geeks For Geeks \(https://www.geeksforgeeks.org/difference-between-router-and-switch/\)](https://www.geeksforgeeks.org/difference-between-router-and-switch/)
- [The Arch Wiki \(https://archlinux.org\)](https://archlinux.org)
- [Gentoo Wiki \(https://wiki.gentoo.org/wiki/Main\\_Page\)](https://wiki.gentoo.org/wiki/Main_Page)
- [The Ubuntu Wiki \(https://wiki.ubuntu.com/\)](https://wiki.ubuntu.com/)
- [DistroWatch \(https://distrowatch.com/\)](https://distrowatch.com/)
- [Cron Guru \(https://crontab.guru/\)](https://crontab.guru/)
- [Managing Linux User Permissions \(https://docs.rackspace.com/support/how-to/basic-linux-directory-permissions-and-how-to-check-them\)](https://docs.rackspace.com/support/how-to/basic-linux-directory-permissions-and-how-to-check-them)
- [Iptables cheatsheet \(https://www.andreafortuna.org/2019/05/08/iptables-a-simple-cheatsheet/\)](https://www.andreafortuna.org/2019/05/08/iptables-a-simple-cheatsheet/)
- [Learn AWS with tutorialspoint \(https://www.tutorialspoint.com/amazon\\_web\\_services/amazon\\_web\\_services\\_cli\)](https://www.tutorialspoint.com/amazon_web_services/amazon_web_services_cli)
- [Screencasting on Linux \(https://www.howtogeek.com/446706/how-to-create-a-screencast-on-linux/\)](https://www.howtogeek.com/446706/how-to-create-a-screencast-on-linux/)
- [Ffmpeg.org \(ffmpeg.org\)](https://ffmpeg.org)
- [Ffmpeg commands for beginners \(https://ostechnix.com/20-ffmpeg-commands-beginners/\)](https://ostechnix.com/20-ffmpeg-commands-beginners/)
- [Ffmpeg recording webcam](#)

- [https://wiki.archlinux.org/index.php/FFmpeg#Recording\\_webcam](https://wiki.archlinux.org/index.php/FFmpeg#Recording_webcam)
- [Hackthebox \(https://hackthebox.eu\)](https://hackthebox.eu)
- [Tryhackme \(https://tryhackme.com/\)](https://tryhackme.com/)
- [10 Tips to improve next coding project \(https://www.freecodecamp.org/news/10-css-tricks-for-your-next-coding-project/\)](https://www.freecodecamp.org/news/10-css-tricks-for-your-next-coding-project/)
- [A game to learn flexbox \(https://flexboxfroggy.com/\)](https://flexboxfroggy.com/)
- [Nodeschool \(https://nodeschool.io/\)](https://nodeschool.io/)
- [FreeCodeCamp \(https://www.freecodecamp.org/\)](https://www.freecodecamp.org/)
- [Coding Interview Questions \(https://www.byte-by-byte.com/coding-interview-questions/\)](https://www.byte-by-byte.com/coding-interview-questions/)
- [JS Questions \(https://github.com/lydiahallie/javascript-questions\)](https://github.com/lydiahallie/javascript-questions)
- [JS For Cats \(http://jsforcats.com/\)](http://jsforcats.com/)
- [Learning To Code For Free \(https://www.hostinger.com/tutorials/learn-coding-online-for-free/\)](https://www.hostinger.com/tutorials/learn-coding-online-for-free/)
- [HTML Color groups \(https://www.w3schools.com/colors/colors\\_groups.asp\)](https://www.w3schools.com/colors/colors_groups.asp)

2. French:

- [Développez.com \(https://developpez.com\)](https://developpez.com)
- [FrancelOI \(http://www.france-ioi.org/\)](http://www.france-ioi.org/)

3. Italian:

- [Italian HTML guide \(https://www.html.it/guide/guida-html/\)](https://www.html.it/guide/guida-html/)

## My Scripts

You may find my scripts in my Dotfiles github repository. Just go into `.local/scripts`

### game\_launcher.sh

If you wish to quickly launch your emulator games, this is the script for you. Do install the dependencies before running it:

- dmenu
- desmume (nds emulator)
- ppsspp (psp emulator)
- vbm (gba emulator)
- dolphin (gamecube and wii emulator)



```

elif [[ $1 = "--hardcore" ]]
    then range=100000
elif [[ $1 = "--insane" ]]
    then range=1000000
fi
echo "the number you are looking for is b/w 1 & $range"

mystery=$((1 + RANDOM % $range))
counter=1

while [[ $number -ne $mystery ]]
do
    read -p "Enter a number: " number
    if [[ $number -gt $mystery ]]
        then echo "it is less"
    elif [[ $number -lt $mystery ]]
        then echo "it is more"
    fi
    counter=$((counter + 1))
done
echo "well done, you found me"
echo "you needed $counter shots"
exit 0

```

## batteryinfo

```

#!/bin/bash
# Add it as a cron job:
#*/1 * * * * export DISPLAY=:0.0 && bash
/home/philwayne/Dotfiles/.local/scripts/batteryinfo/bat-alert.sh
ac_adapter=$(acpi -a | cut -d' ' -f3 | cut -d- -f1)
for battery in /sys/class/power_supply/BAT?
do
    capacity=$(cat "$battery"/capacity)
done
if [[ "$ac_adapter" = "off" ]] && [[ $capacity -lt 99 ]];
then
    # aplay r2d2-alarm.wav
    notify-send "Warning: Low Battery Power!" "$capacity"
    # espeak 'Warning: Low Battery Power!'
else
    :
fi

```