

# QUICK NAVIGATION

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Before updating or upgrading the system, check [the arch news](#) (could save your system)!

# BASIC INSTALL

## Setting keymap

```
loadkeys hu
```

## Enable and connect to wifi (Optional)

```
rfkill unblock wifi
iwctl
device list
station **device** scan
station **device** get-networks
station **device** connect **SSID**
```

## Sync time

```
pacman -Sy
timedatectl set-ntp true
```

## Set fastest mirrorlist

```
pacman -Sy
pacman -S reflector
reflector -c Hungary -a 10 --sort rate --save /etc/pacman.d/mirrorlist
pacman -Sy
```

# PARTITIONING

## [Check if running UEFI or BIOS](#)

```
ls /sys/firmware/efi/efivars
```

If writes what's inside the folder: UEFI

If folder doesn't exist: BIOS

## UEFI INSTALL

### [Creating partitions](#)

```
fdisk /dev/sda
```

EFI            g → n → ENTER → ENTER → +512M → t → 1  
ROOT          n → ENTER → ENTER → ENTER → w

### [Formatting the created partitions](#)

```
mkfs.fat -F32 /dev/sda1  
mkfs.ext4 /dev/sda2
```

### [Mounting formatted partitions](#)

```
mount /dev/sda2 /mnt  
mkdir /mnt/boot  
mount /dev/sda1 /mnt/boot
```

## BIOS INSTALL

### [Creating partition](#)

```
fdisk /dev/sda
```

n → ENTER → ENTER → ENTER → ENTER → w

### [Formatting the created partitions](#)

```
mkfs.ext4 /dev/sda1
```

### [Mounting formatted partitions](#)

```
mount /dev/sda1 /mnt
```

# INSTALLING PACKAGES ONTO THE SYSTEM

## [Basic packages](#)

```
pacstrap /mnt base linux linux-firmware nano
```

## [Fstab](#)

```
genfstab -U /mnt >> /mnt/etc/fstab
```

## [Configuring the system](#)

```
arch-chroot /mnt
```

## [Time zone](#)

```
ln -sf /usr/share/zoneinfo/Europe/Budapest /etc/localetime
hwclock --systohc
```

## [Localization](#)

```
nano /etc/locale.gen
uncomment en_US.UTF-8 UTF-8
      ↓
sed -i '177s/^#//' /etc/locale.gen

locale-gen
nano /etc/locale.conf
LANG=en_US.UTF-8
nano /etc/vconsole.conf
KEYMAP=hu
localectl set-keymap --no-convert hu
```

## [Setting the system hostname](#)

```
nano /etc/hostname
arch

nano /etc/hosts
127.0.0.1    localhost
::1         localhost
127.0.1.1    arch.localdomain    arch
```

## [Setting the root password](#)

```
passwd
```

## Installing packages

```
pacman -S grub efibootmgr networkmanager network-manager-applet
wireless_tools wpa_supplicant dialog os-prober base-devel linux-headers reflector
git bluez bluez-utils xdg-utils xdg-user-dirs
```

## Enable SSH connection (optional)

```
pacman -S openssh sshpass openssl
systemctl enable sshd
```

## [Setting up GRUB \(UEFI\)](#)

```
grub-install --target=x86_64-efi --efi-directory=/boot --bootloader-id=GRUB
grub-mkconfig -o /boot/grub/grub.cfg
```

## [Setting up GRUB \(BIOS\)](#)

```
grub-install --target=i386-pc /dev/sda
grub-mkconfig -o /boot/grub/grub.cfg
```

## Enabling internet

```
systemctl enable NetworkManager
```

## Enabling bluetooth (optional)

```
systemctl enable bluetooth
```

## [Adding a new user](#)

```
useradd -mG wheel hakszi
passwd hakszi

EDITOR=nano visudo, and uncomment:
%wheel ALL=(ALL:ALL) ALL
      ↓
sudo sed -i '/%wheel ALL=(ALL:ALL) ALL/s/^#//g' /etc/sudoers
```

## Finish initial setup

```
exit
umount -a
reboot
```

# CONTINUING THE INSTALL FROM THE SYSTEM

(unplug USB)

Setting up wifi (optional)

```
sudo nmtui
```

Installing graphics drivers

[For AMD](#)

```
sudo pacman -S xf86-video-amdgpu
```

[For NVIDIA \(open source\) \(recommended\)](#)

```
sudo pacman -S xf86-video-nouveau
```

[NVS 310, GT & GTX 3xx 4xx 5xx series \(proprietary\)](#)

```
yay -S nvidia-340xx
```

[GTX 6xx 7xx 9xx series \(proprietary\)](#)

```
yay -S nvidia-390xx
```

[RTX 2060, GTX 10xx series \(proprietary\)](#)

```
yay -S nvidia-418xx
```

\*Setting up an AUR\*

[Install display driver](#)

```
sudo pacman -S xorg xorg-drivers
```

[Install desktop enviroment](#)    [\(of personal choice\)](#)

XFCE

```
sudo pacman -Syu
sudo pacman -S xfce4 xfce4-goodies
```

↕

Cinnamon

```
sudo pacman -Syu
sudo pacman -S cinnamon gnome-terminal nemo-fileroller
```

#Note that the firewall, no-disturb toggle and auto-login script will only work with XFCE  
See here: Firewall, no disturb mode and auto-login quick settings

[Installing login manager](#)

```
sudo pacman -S lightdm lightdm-gtk-greeter lightdm-gtk-greeter-settings
sudo systemctl enable lightdm
```

Set extra keyboard settings

```
localectl set-x11-keymap hu $USER
reboot
```

# OPTIMALIZATION BEFORE INSTALLING APPS

Mount NTFS hard disk

```
su
pacman -S ntfs-3g
ntfs-3g /dev/your_NTFS_partition /mount/point
```

[Enable 32-bit applications \(recommended\)](#)

```
sudo sed -i '93s/^#//' /etc/pacman.conf
sudo sed -i '94s/^#//' /etc/pacman.conf
pacman -Sy
```

Check to make sure *[multilib]* and *include = /etc/pacman.d/mirrorlist* are uncommented

```
cat /etc/pacman.conf
```

[Optimize package making \(caching, using all cores, compression, etc...\)](#)

```
su
sudo pacman -S wget
cd /etc
rm -rf makepkg.conf
wget https://pastebin.com/raw/9KVnvpbQ
mv 9KVnvpbQ makepkg.conf
*Note: Comment BUILDDIR=/tmp/makepkg on older computers with <8 GB of ram
```

Restore the original makepkg.conf file:

```
su
cd /etc
rm -rf makepkg.conf
wget https://pastebin.com/raw/RYEuK9ND
mv RYEuK9ND makepkg.conf
```

Enable parallel downloads (recommended)

```
sudo sed -i '/ParallelDownloads/s/^#//g' /etc/pacman.conf
```

Setting up an AUR manager

```
git clone https://aur.archlinux.org/yay-git
cd yay-git
makepkg -si
cd ~
sudo rm -rf yay-git
```

Setting up SNAP

```
yay -S snapd
sudo systemctl enable --now snapd.socket
sudo ln -s /var/lib/snapd/snap/snap
```

Installing GUI package manager:

```
yay -S octopi
```

Clean system & update & upgrade & reboot before installing apps:

```
System maintaining
```

# INSTALLING APPS OF CHOICE

## Essentials:

```
sudo pacman -S pavucontrol alsa-firmware alsa-utils alsa-plugins pulseaudio-alsa pulseaudio libcanberra a52dec dvdauthor dvgrab faac faad2 gst-libav libdca libdvdcss libdvdnv libmad libmpeg2 exfat-utils fuse-exfat wget ifplugd python tar rsync zip unzip rmlint fdupes bat curl youtube-dl bc htop pciutils xfce4-whiskermenu-plugin xf86-input-synaptics viewnior ccache neofetch rust
```

```
yay -S update-grub timeshift zramswap xfce4-mixer balena-etcher woeusb-ng safe-rm mkinitcpio-numlock
```

## Most used apps:

```
sudo pacman -S virtualbox virtualbox-sdk virtualbox-host-dkms virtualbox-guest-iso kdeconnect xflux libreoffice gnome-disk-utility gparted clamav krita qbittorrent vlc ufw ufw-extras okular firefox engrampa torbrowser-launcher putty obs-studio discord
```

```
yay -S rider podman docker dotnet-sdk-5.0-bin spotify qdirstat electronmail github-desktop-bin pyakm stacer
```

```
snap install teams-for-linux jpg2pdf pdfmixtool
```

## Laptop-only:

```
yay -S slimbookbattery auto-cpufreq
```

## For gaming:

```
yay -S dxvk-bin mesa vulkan-radeon mesa-libgl ttf-ms-fonts
```

```
pacman -S dotnet-runtime jre-openjdk lib32-alsa-plugins lib32-dbus lib32-freetype2 lib32-gnutls lib32-libgcrypt lib32-libgpg-error lib32-libldap lib32-libxml2 lib32-mesa lib32-sdl2 lib32-vulkan-radeon libgcrypt lutris steam vulkan-icd-loader wine wine-gecko wine-mono winetricks
```

## Wallpapers

```
curl https://pastebin.com/raw/0EScRV8M
```

## Themes

```
yay -S papirus-maia-icon-theme-git matcha-gtk-theme cantarell-static-fonts capitaine-cursors
```

```
pacman -S noto-fonts-emoji adobe-source-code-pro-fonts adobe-source-han-sans-hk-fonts adobe-source-han-sans-jp-fonts adobe-source-han-sans-kr-fonts adobe-source-han-sans-otc-fonts adobe-source-han-sans-tw-fonts adobe-source-han-sans-cn-fonts ttf-carlito ttf-droid gsfonts ttf-liberation xorg-fonts-misc
```

Theme:	Matcha-dark-aliz [GTK2/3]
Cursor theme:	Capitaine Cursors
Icons:	Papirus-Adapta-Maia [GTK2]
Font:	Cantarell Bold 10
Terminal font:	Source Code Pro Medium 14
See downloaded looks here: Themes	

## Other apps:

<i>ncdu</i>	-	<i>Disk usage analyzer</i>
<i>lyx-git</i>	-	<i>LaTeX editor</i>
<i>vim neovim</i>	-	<i>Nano alternative for text editing</i>
<i>pkgbuild-watch</i>	-	<i>Monitor upstream for updates</i>
<i>firejail firetools</i>	-	<i>Linux namespaces sandbox program &amp; GUI</i>
<i>calibre</i>	-	<i>Ebook management application</i>
<i>transmission-makepkg</i>	-	<i>makepkg download agent for magnet URIs</i>
<i>aur-out-of-date</i>	-	<i>Determines out-of-date AUR packages</i>
<i>net-tools</i>	-	<i>Configuration tools for Linux networking</i>
<i>nmap</i>	-	<i>Utility for network discovery and security auditing</i>
<i>ntop</i>	-	<i>A network traffic probe that shows the network usage.</i>
<i>archlinux-contrib</i>	-	<i>useful scripts</i>
<i>pacman-contrib</i>	-	<i>useful scripts</i>

# ENABLING SERVICES

Start and enable RAM swap at boot

```
sudo systemctl enable zramswap.service
sudo systemctl start zramswap.service
```

Start and enable CPU frequency modifying

```
sudo systemctl enable auto-cpufreq.service
sudo systemctl start auto-cpufreq.service
```

Enabling TLP

```
sudo systemctl enable tlp.service
sudo systemctl start tlp.service
```

Enabling Trimming

```
sudo systemctl enable fstrim.timer
sudo systemctl start fstrim.timer
```



# TWEAK KERNEL SETTINGS

*#paste into /etc/sysctl.conf*

```
net.ipv6.conf.all.disable_ipv6 = 1
vm.swappiness = 80
vm.vfs_cache_pressure = 300
vm.dirty_background_ratio = 5
vm.dirty_ratio = 10
vm.dirty_background_bytes = 4194304
vm.dirty_bytes = 4194304
vm.min_free_kbytes = 8192
kernel.sysrq = 1

#Network tweaks
net.ipv4.tcp_slow_start_after_idle = 0
net.core.default_qdisc = cake
net.ipv4.tcp_congestion_control = bbr
#Receive queue
net.core.netdev_max_backlog = 16384
#Max connections
net.core.somaxconn = 16384
#Max memory
net.core.rmem_default = 1048576
net.core.rmem_max = 16777216
net.core.wmem_default = 1048576
net.core.wmem_max = 16777216
net.core.optmem_max = 65536
net.ipv4.tcp_rmem = 4096 1048576 2097152
net.ipv4.tcp_wmem = 4096 65536 16777216
#UDP Limit
net.ipv4.udp_rmem_min = 8192
net.ipv4.udp_wmem_min = 8192
#TCP FastOpen feature
net.ipv4.tcp_fastopen = 1
```

# USING DIFFERENT KERNELS

[Comparing hardened, original, LTS, and zen kernels](#)

## [Harden kernel \(more stable\)](#)

```
su
pacman -S linux-hardened linux-hardened-headers
mkinitcpio -p linux-hardened
grub-mkconfig -o /boot/grub/grub.cfg
reboot
```

## [Zen kernel \(for performance\)](#)

```
su
sudo pacman -S linux-zen linux-zen-headers
mkinitcpio -p linux-zen
grub-mkconfig -o /boot/grub/grub.cfg
reboot
```

## [LTS kernel \(for long term support\)](#)

```
su
sudo pacman -S linux-lts
mkinitcpio -p linux-zen
grub-mkconfig -o /boot/grub/grub.cfg
reboot
```

## [Remember last boot entry](#)

```
nano /etc/default/grub
modify:
    GRUB_DEFAULT=saved
add new line:
    GRUB_SAVEDEFAULT=true
```

# MODIFY GRUB SETTINGS

Using Octopi download “grub-customizer”

Download distro theme of choice

<https://www.gnome-look.org/p/1482847>

Open grub customizer

Go into General settings

Set Boot default entry to 1 second

Set kernel parameters to:

quiet apparmor=1 security=apparmor udev.log\_priority=3

Go into Appearance settings

Set theme to arch

# CUSTOMIZING .BASHRC

```
#PS1="\[\033[38;5;1m\]\u\[$(tput sgr0)\] \[$(tput bold)\]\W\[$(tput sgr0)\] \\\$ \[$(tput sgr0)\]"
PS1="\[\033[38;5;51m\]\u\[$(tput sgr0)\] \W \\\$ \[$(tput sgr0)\]"
```

```
neofetch --ascii_distro archmerge --color_blocks off --cpu_temp C --refresh_rate on --os_arch on --
package_managers on --cpu_brand on --cpu_cores on --cpu_speed on --cpu_temp C --speed_type
current
#neofetch --ascii_distro blackarch --color_blocks off --cpu_temp C --refresh_rate on --os_arch on --
package_managers on --cpu_brand on --cpu_cores on --cpu_speed on --cpu_temp C --speed_type
current
#Actual used aliases
alias calculator='bc -l'
alias yaystat='sudo yay -Ps'
alias pacman='sudo pacman'
alias boot='systemd-analyze'
alias error='sudo journalctl -p 3 -xb'
alias firewall='sudo ufw status verbose'
alias bashrc='nano ~/.bashrc && source ~/.bashrc'
alias disk='ncdu'
alias shut='shutdown -h now'
```

```
#More readable / nicer look / better usability
alias vi='nvim'
alias vim='nvim'
alias mv='mv -vv'
alias ping='ping'
alias ls='ls --color=auto'
alias df='df -h'
alias diff='diff --color=auto'
alias free='free -m'
alias grep='grep --color=auto'
alias ip='ip -color=auto'
alias ls='ls --color=auto'
alias more='less'
alias nano='sudo nano'
alias lsblk='lsblk -e 7'
alias cat='bat'
```

```
#Are you sure?
#copy
alias cp='cp -i'
#move / rename
alias mv='mv -i'
#delete
alias rm='rm -i'
untar='tar xzf'
```

```
#Firewall, no disturb mode and autologin quick settings:
alias home='bash ~/.config/home.sh'
alias work='bash ~/.config/work.sh'
```

# COMFORT ZONE & SETTING THE LOOK

Enable night light at SESSION AND STARTUP:

```
xflux -l 47.719742 -g 18.728781
```

Enable auto-login:

```
su
cd /etc/lightdm/
rm -rf lightdm.conf
wget https://pastebin.com/raw/R3UqReib
mv R3UqReib lightdm.conf
```

Revert to original lightdm config file:

```
su
cd /etc/lightdm/
rm -rf lightdm.conf
wget https://pastebin.com/raw/n8THjn0u
mv n8THjn0u lightdm.conf
```

Also for autologin:

```
sudo groupadd -r autologin
sudo gpasswd -a $USER autologin
```

Improve look of fonts

[Improve look of fonts](#)

[Stop beep sound:](#)

```
rmmod pcspkr
su -c 'modprobe -r pcspkr && echo "blacklist pcspkr" >> /etc/modprobe.d/50-blacklist.conf'
```

Session and Startup → Application autostart → + → Add these:

```
xset b off
xset b 0 0 0
```

Disable F1 for help and F11 for fullscreen for terminal

```
nano ~/.config/xfce4/terminal/acceels.scm
add these lines:
(gtk_accel_path "<Actions>/terminal-window/fullscreen" "F11")
(gtk_accel_path "<Actions>/terminal-window/contents" "F1")
```

[Set keyboard shortcut to launch whisker menu](#)

[One wallpaper across multihead](#)

[Set all java apps to use GTK theme settings](#)

[Activate numlock on startup](#)

[Dualboot arch with windows](#)

# CUSTOM SCRIPTS

Firewall, no disturb mode and auto-login quick settings  
curl https://pastebin.com/raw/Vna6dNRz  
Alias them on page 12

## Custom neofetch

```
rm -rf ~/.config/neofetch/config.conf
cd ~/.config/neofetch/
wget https://pastebin.com/raw/dWnPDBaX
mv dWnPDBaX config.conf
```

## Custom polkit

```
su
mkdir /etc/polkit-1/rules.d/
cd /etc/polkit-1/rules.d/
wget https://pastebin.com/raw/144dRAbP
mv 144dRAbP 99-manjaro.rules
```

## Auto-cpufreq config

```
cd /etc/
wget https://pastebin.com/raw/4ChzT2Tm
mv 4ChzT2Tm auto-cpufreq.conf
```

# SYSTEM MAINTAINING

Automate cache clearing

```
find ~/.cache/ -type f -atime +100 -delete
```

Remove all journalctl older than 2 weeks:

```
sudo journalctl --vacuum-time=2weeks
sudo journalctl --vacuum-size=50M
SystemMaxUse=50M
```

Set automatic paccache clearing

```
sudo nano /etc/systemd/system/paccache.timer
[Unit]
Description=Clean-up old pacman pkg

[Timer]
OnCalendar=monthly
Persistent=true

[Install]
WantedBy=multi-user.target

sudo systemctl enable paccache.timer
sudo systemctl start paccache.timer
sudo systemctl status paccache.timer

sudo nano /usr/share/libalpm/hooks/paccache.hook
[Trigger]
Operation = Upgrade
Operation = Install
Operation = Remove
Type = Package
Target = *

[Action]
Description = Cleaning pacman cache with paccache ...
When = PostTransaction
Exec = /usr/bin/paccache -r
```

Check for duplicates

```
rmLint /home/hakszi
```

Clearing cache

```
rm -rf ~/.cache/*
```

Remove temporary files

```
rm -rf /tmp/*
```

[Remove broken symlinks](#)

```
find . -xtype l -delete
```

Remove orphan packages:

```
sudo pacman -Rs $(pacman -Qtdq)
```

Update, upgrade and clear cache

```
sudo pacman -Syu --noconfirm -q &&
sudo pacman -Syyu --noconfirm -q &&
paccache -rvk1 &&
yay -Syu --noconfirm -q &&
yay --clean -Sc --noconfirm -q &&
sudo snap refresh &&
```

reboot

# TROUBLESHOOTING

## If bluetooth is not working

```
sudo systemctl enable bluetooth && sudo systemctl start bluetooth
```

## Have boot messages stay on screen

```
su
mkdir /etc/systemd/system/getty@tty1.service.d
nano /etc/systemd/system/getty@tty1.service.d/noclear.conf
[Service]
TTYVTDIsallocate=no
```

## Unable to make AUR packages

Is /tmp full?

```
df -h /tmp
```

Clear it if it's full

```
rm -rf /tmp/*
```

Note: you can do a restart as well to clear this.

## Failed services:

```
systemctl --failed
```

## Logfiles:

```
journalctl -p 3 -b
```

## Check packages that were installed but no packages depend on them now:

```
pacman -Qtd
```

## Manually installed packages that no package depend on:

```
pacman -Qm
```

## List installed packages:

```
pacman -Ql
yay -Ql
```

## Touchpad not working:

```
yay -S xf86-input-libinput
```

## Check connected usb devices:

```
yay -S xorg-xinput
xinput
```

## Windows unmountable due to hibernation

## Screen tearing

[Using compton](#)

[Using dmenu](#)

[Fixes specifically for NVIDIA](#)

## Volume stuck on mute

## Reactivating the screen backlight (BIOS ONLY)

```
sudo sed -i "s/\"(GRUB_CMDLINE_LINUX=\\)\\\"/\\1\"acpi_osi=Linux
acpi_backlight=vendor\\\"/\" /etc/default/grub -i
sudo update-grub
```

## Enable crontab

```
sudo pacman -S cronie
sudo systemctl enable cronie.service
sudo systemctl start cronie.service
```



# USEFUL COMMANDS

## Using SED to uncomment

Uncomment when text matches:

```
sudo sed -i '/*SEARCH_FOR_THIS*/s/^#/g' WHERE_TO_UNCOMMENT  
sudo sed -i '/autologin-user=hakszi/s/^#//g' /etc/lightdm/lightdm.conf
```

Uncomment at line X:

```
sed '*line_number*s/^#//' /etc/pacman.conf  
sed '93s/^#//' /etc/pacman.conf
```

Setup alias SSH connection with password

```
sshpass -p *PASSWORD_HERE* ssh *username*@*ip_address*  
sshpass -p hakszi ssh pi@pi.hole
```

Run the last command with sudo

```
sudo !!
```

# UNSAFE COMMANDS

(without thinking)

- **pacman -Sy**
  - Note that this is essential when installing the system.
  - The bash script checkupdates, included with the pacman package, provides a safe way to check for upgrades to installed packages without running a system update at the same time.
  - TLDR: Refreshes package list, without upgrading the system, and this could lead to dependency issues.
- **rm -rf**
  - Doesn't ask, whether you want to uninstall the files, or not and deletes everything recursively. You can delete essential system files with this. Use safe-rm (yay -S safe-rm).
- **dd**
  - Informally known as disk destroyer (be very careful when using this)
- **chmod 777**
  - What does chmod 777 mean?
  - TLDR: Setting 777 permissions to a file or directory means that it will be readable, writable and executable by all users and may pose a huge security risk.

[Other dangerous commands](#)

# GAMING

## Getting steam set up:

```
sudo mkdir ~/.fonts/ && cd ~/.fonts/  
wget https://support.steampowered.com/downloads/1974-YFKL-4947/SteamFonts.zip  
unzip SteamFonts.zip && rm SteamFonts.zip
```

## Mouse latency

```
sudo nano /etc/default/grub  
add:      usbhid.mousepoll=1  
to:       GRUB_CMDLINE_LINUX_DEFAULT  
update-grub
```

## STEAM

[Steam configuration](#)

[Enable game mode scheduling \(performance improvement\)](#)

[Enable saving the Shader Cache](#)

[Laggy screen updates](#)

[using enviroment variables](#)

## Set-up an AMD GPU for daily usage (Graphics,Gaming,Compute,etc) in Arch Linux.:

```
sudo nano /etc/environment  
AMD_VULKAN_ICD=RADV
```

Complied for certain games:

```
yay -S wine-ge-custom
```

Java (if another version is needed):

Find all available versions

```
sudo pacman -sS java | grep jdk
```

Install the one you want.

## 32 bit wine

[origin](#)

[origin on linux #2](#)

[Simcity](#)

Lutris install

# SECURITY

[Block list for qbittorrent](#) & original list can be found [here](#)

```
cd ~/.config/qBittorrent/  
download files from here into this folder.
```

## [Microcode](#)

### AMD

```
sudo pacman -Syy amd-ucode  
yay -S iucode-tool  
sudo update-grub
```

### Intel

```
sudo pacman -Syy intel-ucode  
yay -S iucode-tool  
sudo update-grub
```

[Enforcing strong passwords](#)

[Running apps in sandbox \(firejail\)](#)

[Firejail \(manjaro\)](#)

[Running apps in sandbox \(polkit\)](#)

# SAVING & RELOADING THE SYSTEM

Save:

Before saving, clear the system: `System maintaining`

```
fstrim /  
dd if=/partition/to/be/written/on bs=64M status=progress | zstd -q3T2c --adapt - > NAME.img.zst  
dd if=/dev/sda bs=64M status=progress | zstd -q3T2c --adapt - > arch.img.zst  
dd if=/dev/nvme0n1 bs=64M status=progress | zstd -q3T2c --adapt - > arch.img.zst
```

Reload previous save (from a live system):

```
zstd -vkdc /backup/file.img.zst | dd of=/dev/sdX bs=4M status=progress  
zstd -vkdc arch.img.zst | dd of=/dev/sda bs=4M status=progress  
zstd -vkdc arch.img.zst | dd of=/dev/nvme0n1 bs=4M status=progress
```

Speed up save and reload:

```
su  
cd /where/you/save/or/load/backup/from
```

Troubleshooting:

Problem #1: Terminal kills program, ram usage at 100%

Solution to #1: Extend ram, or (slower method):

```
sudo nano /etc/makepkg.conf  
MAKEFLAGS="-j2"
```

# EXTRA PRODUCTIVENESS

Control 2 PC with one mouse and keyboard  
Set up virtualbox on arch

## Useful things to take a look at later (guessed right, procrastination)

[https://wiki.archlinux.org/title/Frequently\\_asked\\_questions](https://wiki.archlinux.org/title/Frequently_asked_questions)  
[https://wiki.archlinux.org/title/Improving\\_performance](https://wiki.archlinux.org/title/Improving_performance)  
[https://wiki.archlinux.org/title/Improving\\_performance/Boot\\_process](https://wiki.archlinux.org/title/Improving_performance/Boot_process)  
[https://wiki.archlinux.org/title/Security#Enforcing\\_strong\\_passwords\\_with\\_pam\\_pwquality](https://wiki.archlinux.org/title/Security#Enforcing_strong_passwords_with_pam_pwquality)

[https://wiki.archlinux.org/title/Lenovo\\_V15\\_G2-ALC](https://wiki.archlinux.org/title/Lenovo_V15_G2-ALC)

[https://wiki.archlinux.org/title/System\\_maintenance](https://wiki.archlinux.org/title/System_maintenance)  
<https://wiki.archlinux.org/title/Security>  
[https://wiki.archlinux.org/title/Domain\\_name\\_resolution#Privacy\\_and\\_security](https://wiki.archlinux.org/title/Domain_name_resolution#Privacy_and_security)  
[https://wiki.archlinux.org/title/Power\\_management#Power\\_management\\_with\\_systemd](https://wiki.archlinux.org/title/Power_management#Power_management_with_systemd)  
[https://wiki.archlinux.org/title/CPU\\_frequency\\_scaling](https://wiki.archlinux.org/title/CPU_frequency_scaling)  
[https://wiki.archlinux.org/title/Solid\\_state\\_drive](https://wiki.archlinux.org/title/Solid_state_drive)  
[https://wiki.archlinux.org/title/Uniform\\_look\\_for\\_Qt\\_and\\_GTK\\_applications](https://wiki.archlinux.org/title/Uniform_look_for_Qt_and_GTK_applications)

<https://wiki.archlinux.org/title/Backlight>  
[https://wiki.archlinux.org/title/Webcam\\_setup](https://wiki.archlinux.org/title/Webcam_setup)  
[https://wiki.archlinux.org/title/Hardware\\_video\\_acceleration#NVIDIA](https://wiki.archlinux.org/title/Hardware_video_acceleration#NVIDIA)  
<https://wiki.archlinux.org/title/Acpid>  
[https://wiki.archlinux.org/title/Extra\\_keyboard\\_keys](https://wiki.archlinux.org/title/Extra_keyboard_keys)  
[https://wiki.archlinux.org/title/Network\\_configuration/Wireless](https://wiki.archlinux.org/title/Network_configuration/Wireless)  
[https://wiki.archlinux.org/title/Display\\_Power\\_Management\\_Signaling](https://wiki.archlinux.org/title/Display_Power_Management_Signaling)  
[https://wiki.archlinux.org/title/CPU\\_frequency\\_scaling](https://wiki.archlinux.org/title/CPU_frequency_scaling)

<https://github.com/theo546/my-arch-setup>

<https://askubuntu.com/questions/1015701/display-turns-off-too-soon>  
<https://forum.endeavourous.com/t/screen-brightness-diminishes-after-attaching-ac-adapter/15726>