ARCH LINUX INSTALLATION AND CONFIGURATION

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Contents

1 BASIC SYSTEM INSTALL

1.1 Load keyboard

```
loadkeys de_CH-latin1
```

1.2 Disk partitioning and mounting

(gpt -> gdisk, mbr -> fdisk)

```
gdisk /dev/sdx
# code root: 8300
# code home: 8300
# code swap: 8200

(mkfs.fat -F 32 -n EFIBOOT /dev/sdx#)
mkfs.ext4 -L ARCH_ROOT /dev/sdx#
mkfs.ext4 -L ARCH_HOME /dev/sdx#
mkswap -L ARCH_SWAP /dev/sdx#

mount -L ARCH_ROOT /mnt
mkdir /mnt/boot
mkdir /mnt/home
mount -L ARCH_HOME /mnt/home
mount -L ARCH_BOOT /mnt/boot
swapon -L ARCH_SWAP
```

1.3 setup network connection (wifi-menu)

```
wifi-menu
```

1.4 install base system

```
# get scripts
pacman -S git
git clone https://github.com/Veit96/bootstrapping.git bootstrapping

# launch first script
# choose mirror
./install_base_system.sh


# change root to new system
mv bootstrapping /mnt/
arch-chroot /mnt/

# launch second script
# choose hostname, default "arch"
# in /etc/locale.gen uncomment all en_US, de_CH, de_DE
./install_in_chroot.sh
```

1.5 exit chroot and boot into new system

```
exit
umount -R /mnt
reboot
# login as root
```

1.6 add user, install essential programs

make sure to modify the user name before launching script.

```
./install_after_reboot.sh
```

relogin as user

```
/install_as_user.sh
```

1.7 configure fstab to be similar to this in case of SSD

```
root: rw,defaults,noatime,discard   0 1
home: rw,defaults,noatime,discard  0 2
boot: rw,noatime,fmask=0022,dmask=0022,codepage=437,iocharset=iso8859-1,shortname=mixed,utf8,error
swap: defaults,noatime,discard,pri=-2   0 0
```

2 CUSTOMIZE SYSTEM

2.1 install aur packages

- urxvt-resize-font-git
- polybar
- mons
- spotify
- popcorntime-bin
- arch-silence-grub-theme

2.2 install configs

```
git clone https://github.com/Veit96/dotfiles.git .dotfiles
cd .dotfiles
./install
```

2.3 configure lightdm greeter (login/display manager)

```
systemctl enable lightdm.service
```

```
/etc/lightdm/lightdm.conf
[Seat:*]
...
greeter-session=lightdm-webkit2-greeter
...
# in case of multiple monitors
display-setup-script=xrandr --output DP-0 --rotate left --pos 0x0 --output DP-2 --primary --pos 14
```

```
#or
display-setup-script=xrandr --output DP-2 --primary
...
```

/etc/lightdm/lightdm-webkit2-greeter.conf

```
...
webkit-theme = litarvan
...
```

3 LAPTOP/NOTEBOOK SPECIFIC

Launch *install_laptop.sh*

??? `pacman -S xf86-input-synaptics`

4 DESKTOP SPECIFIC

install nvidia drivers: nvidia, nvidia-settings

put the following in /etc/X11/xorg.conf.d/20-nvidia.conf Section “Device” Identifier “Nvidia Card” Driver “nvidia” VendorName “NVIDIA Corporation” BoardName “GeForce GTX 1070” Option “Coolbits” “28” EndSection

5 DUAL BOOTING WITH WINDOWS

5.1 setting windows to UTC instead of localtime:

windows key + r, regedit `reg add "HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\TimeZoneInformati /v RealTimeIsUniversal /d 1 /t REG_DWORD /f`

5.2 disable fast startup

1. go to windows power settings
2. go to additional settings
3. go to what power buttons do
4. uncheck fast startup

5.3 Mount Windows partition on boot

Add the following to your /etc/fstab, where /dev/sdxy is the ntfs windows partition to be mounted: `# /dev/sdxy UUID=... LABEL=share /home/veit/share ntfs-3g utf8,uid=1000,gid=1000,dmask=027,fmask=137 0 2`

6 ADDITIONAL SETTINGS

6.1 pacman stuff:

uncomment “#Color” for color pacman

6.2 vim stuff:

- vim-jedi
- vim-jellybeans
- vim-latexsuite
- vim-spell-de
- vim-supertab

6.3 have a look at tlp

6.4 pywal:

```
wal -i image.png
```

6.5 Fixing Invalid MIT-MAGIC-COOKIE-1:

This was needed to launch the graphical matlab installer from terminal with sudo privileges uncomment `Defaults env_keep += "HOME"` in `/etc/sudoers`

6.6 Swappiness

If enough RAM is available, you might want to decrease swappiness level from 60 to 10. To do so, check your current swappiness with `cat /sys/fs/cgroup/memory/memory.swappiness` Afterwards put `vm.swappiness=10` in `/etc/sysctl.d/99-sysctl.conf`

7 PROGRAMMS FOR CERTAIN TASKS

- display manager / login manager -> lightdm
- window manager -> i3
- shell -> zsh
- terminal -> rxvt-unicode
- app launcher -> rofi, dmenu
- aur helper -> yay
- file manager -> ranger
- browser -> qutebrowser
- wallpaper setter -> nitrogen, wal
- image viewer -> sxiv
- pdf viewer -> zathura, okular
- office ->
- video/audo player -> smplayer, mpv
- system monitoring -> deepin-system-monitor
- offline docs browser -> zeal
- firewall -> ufw
- BitTorrent client -> transmission
- Screenshot -> deepin-screenshot
- Polkit authentication agent -> lxsession

8 USEFULL COMMANDS

- connect to ethernet:

```
sudo systemctl enable dhcpcd@enp3s0.service
```

```
sudo systemctl enable netctl-auto@wlo1.service
```

```
sudo systemctl stop/disable netctl/NetworkManager/...
```

- this app handles monitor setup

```
mons
```

- stuff

i3lock-blur replaced i3lock as a screenlocker

wicd connman wpa_supplicant_gui

- search disk an list memory usage

```
ncdu -x
```

- list packages sorted by size

```
expac -H M "%011m\t%-20n\t%10d" $(comm -23 <(pacman -Qqen | sort) <(pacman -Qqg
base base-devel | sort)) | sort -n
```

- remove orphant packages

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

- check for errors

```
sudo systemctl --failed
sudo journalctl -p 3 -xb
```

- wifi settings with nmcli

```
nmcli radio wifi on/off
nmcli con
nmcli dev
```