

ARCH LINUX INSTALLATION AND CONFIGURATION

Veit Karpf

December 3, 2018

Contents

1	BASIC SYSTEM INSTALL	3
1.1	Load keyboard	3
1.2	partitioning and mounting	3
1.3	setup network connection (wifi-menu)	3
1.4	choose mirror	3
1.5	set time	3
1.6	install base system	3
1.7	Install grub (boot loader)	4
1.8	exit chroot and boot into new system	4
2	CUSTOMIZE SYSTEM	4
2.1	install configs	4
2.2	install packages	4
2.3	install yay (aur helper)	5
2.4	aur packages	5
2.5	switch capslock and escape:	5
2.6	install lightdm greeter	5
3	DUAL BOOTING WITH WINDOWS	5
3.1	setting windows to UTC instead of localtime:	5
3.2	disable fast startup	5
3.3	Mount Windows partition on boot	6
4	ADDITIONAL SETTINGS	6
4.0.1	pacman stuff:	6
4.0.2	vim stuff:	6
4.0.3	have a look at tlp	6
4.0.4	pywal:	6
4.0.5	Fixing Invalid MIT-MAGIC-COOKIE-1:	6
5	PROGRAMMS FOR CERTAIN TASKS	6
6	USEFULL COMMANDS	7
6.1	connect to ethernet:	7
6.2	this app handles monitor setup	7
6.3	search disk an list memory usage	7

6.4	list packages sorted by size	7
6.5	remove orphan packages	7
6.6	check for errors	7
6.7	wifi settings with nmcli	7

1 BASIC SYSTEM INSTALL

1.1 Load keyboard

```
loadkeys de_CH-latin1
```

1.2 partitioning and mounting

```
gdisk /dev/sdx
```

```
(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 swap
```

1.3 setup network connection (wifi-menu)

```
wifi-menu
```

1.4 choose mirror

```
cp /etc/pacman.d/mirrorlist /etc/pacman.d/mirrorlist.bak
vim /etc/pacman.d/mirrorlist
```

1.5 set time

```
timedatectl status
timedatectl set-ntp true
```

1.6 install base system

```
pacstrap /mnt base base-devel intel-ucode networkmanager vim
`genfstab -U /mnt >> /mnt/etc/fstab
arch-chroot /mnt
ln -sf /usr/share/zoneinfo/Europe/Zurich /etc/localtime
echo myhostname > /etc/hostname
vim /etc/locale.gen # uncomment all en_US, de_CH, de_DE
locale-gen
echo LANG=en_US.UTF-8 > /etc/locale.conf # (or: de_CH.UTF-8)

add the following to /etc/vconsole.conf
KEYMAP=sg-latin1
FONT=Lat2-Terminus16
Lang=en_US
```

```
vim /etc/hosts
#
# /etc/hosts: static lookup table for host names
#
#<ip-address>    <hostname.domain.org>    <hostname>
127.0.0.1    localhost.localdomain    localhost arch
::1         localhost.localdomain    localhost arch

mkinitcpio -p linux
passwd
```

1.7 Install grub (boot loader)

```
pacman -S grub os-prober efibootmgr dosfstools gptfdisk

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

1.8 exit chroot and boot into new system

```
exit
umount -R /mnt
reboot

useradd -m -g users -s /bin/bash user_name
passwd user_name

vim /etc/sudoers
%wheel ALL=(ALL) ALL

gpasswd -a user_name wheel

pacman -S acpid dbus avahi cronie
```

2 CUSTOMIZE SYSTEM

2.1 install configs

```
pacman -S git
mkdir .dotfiles
git clone https://github.com/Veit96/dotfiles.git .dotfiles
cd .dotfiles
./install
```

2.2 install packages

```
pacman -S $(< my_packages.txt)
```

2.3 install yay (aur helper)

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

2.4 aur packages

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

2.5 switch capslock and escape:

```
add "XkbOptions" "terminate:ctrl_alt_bksp,caps:swapescape" in /etc/X11/xorg.conf.d/00-keyboard.conf
```

2.6 install lightdm greeter

```
systemctl enable lightdm.service

/etc/lightdm/lightdm.conf
[Seat:*]
...
greeter-session=lightdm-webkit2-greeter
...

/etc/lightdm/lightdm-webkit2-greeter.conf
...
webkit-theme = litarvan
...
```

3 DUAL BOOTING WITH WINDOWS

3.1 setting windows to UTC instead of localtime:

```
reg add "HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\TimeZoneInformation"
/v RealTimeIsUniversal /d 1 /t REG_DWORD /f
```

3.2 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

3.3 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`

4 ADDITIONAL SETTINGS

4.0.1 pacman stuff:

uncomment “`#Color`” for color pacman add aur

4.0.2 vim stuff:

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

4.0.3 have a look at tlp

4.0.4 pywal:

`wal -i image.png`

4.0.5 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`

5 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/audio player -> smplayer, mpv
- system monitoring -> deepin-system-monitor
- offline docs browser -> zeal
- firewall -> ufw
- BitTorrent client -> transmission

6 USEFULL COMMANDS

6.1 connect to ethernet:

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

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

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

6.2 this app handles monitor setup

mons

i3lock-blur replaced i3lock as a screenlocker

wicd connman wpa_supplicant_gui

6.3 search disk an list memory usage

```
ncdu -x
```

6.4 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
```

6.5 remove orphant packages

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

6.6 check for errors

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

6.7 wifi settings with nmcli

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