Installation und Konfiguration von Ubuntu 20.04 LTS

Ubuntu besorgen

```
wget https://releases.ubuntu.com/20.04/ubuntu-20.04-desktop-amd64.iso
```

Grundsystem konfigurieren

Netzwerkeinstellungen

- https://unix.stackexchange.com/questions/351005/how-to- export-and-migrate-networkmanager-settings-to-new-system

```
sudo su
cp old_system/etc/NetworkManager/system-connections /etc/NetworkManager/
systemctl restart NetworkManager
```

SNAP deinstallieren

```
sudo
apt purge snapd
rm -vrf ~/snap
sudo apt-mark hold snapd
```

Flatpack installieren

Quellen:

- https://ubuntuhandbook.org/index.php/2020/09/warpinator-file-transfer-app-linux/
- https://linuxh2o.com/how-to-install-setup-flatpak-on-ubuntu-20-04/

```
sudo su
apt install flatpak
flatpak remote-add --if-not-exists flathub
https://flathub.org/repo/flathub.flatpakrepo
# GUI:
apt install gnome-software-plugin-flatpak
```

Binaries suchen:

```
$ which firefox
/usr/bin/firefox
$ which gnome-terminal
/usr/bin/gnome-terminal
```

verwendete Paketquellen

Applikation	URL:	Repository/PPA:
Clipit	https://github.com/CristianHenzel/ClipIt	ppa:afelinczak/ppa
AVIdemux	http://fixounet.free.fr/avidemux/	ppa:ubuntuhandbook1/avidemux

Paketquellen - veraltet oder ungetestet in Ubuntu 20.04

- ~~andreas-diesner-ubuntu-garminplugin-xenial.list~~ –> outdated!
- ~~fingerprint-ubuntu-fingerprint-gui-xenial.list~~ –> in Ubuntu 20.04 integriert, siehe Einstellungen –> Benutzer
- ~~fingerprint-ubuntu-fprint-xenial.list~~ –> siehe oben
- freecad-maintainers-ubuntu-freecad-stable-xenial.list
- jitsi-stable.list
- jonathonf-ubuntu-ffmpeg-4-xenial.list
- jonathonf-ubuntu-meson-xenial.list
- jonathonf-ubuntu-vlc-3-xenial.list
- js-reynaud-ubuntu-kicad-4-xenial.list
- kdenlive-ubuntu-kdenlive-stable-xenial.list
- librecad-dev-ubuntu-librecad-stable-xenial.list
- libreoffice-ubuntu-ppa-xenial.list
- mkusb-ubuntu-ppa-xenial.list
- musicbrainz-developers-ubuntu-stable-xenial.list
- nilarimogard-ubuntu-webupd8-xenial.list
- openjdk-r-ubuntu-ppa-xenial.list
- pbek-ubuntu-qownnotes-xenial.list
- pipelight-ubuntu-stable-xenial.list
- playonlinux.list
- rebuntu16-ubuntu-avidemux_unofficial-xenial.list
- riot-im.list
- savoury1-ubuntu-ffmpeg4-xenial.list
- savoury1-ubuntu-graphics-xenial.list
- savoury1-ubuntu-multimedia-xenial.list
- savoury1-ubuntu-vlc3-xenial.list
- sebastian-stenzel-ubuntu-cryptomator-xenial.list
- skunk-ubuntu-pepper-flash-xenial.list
- teamviewer.list
- telred.list
- ubuntu-wine-ubuntu-ppa-xenial.list
- ufleisch-ubuntu-kid3-xenial.list
- videolan-ubuntu-master-daily-xenial.list

- webupd8team-ubuntu-indicator-kdeconnect-xenial.list
- webupd8team-ubuntu-java-xenial.list
- webupd8team-ubuntu-nemo3-xenial.list
- webupd8team-ubuntu-nemo-xenial.list
- xenial-partner.list

Eigene "Starter" erstellen

generisches Beispiel für eine Anwendung

- https://developer.gnome.org/desktop-entry-spec/

Beispiele für `*.desktop` Dateien findet mn hier: `/usr/share/applications/`.

```
cd ~
touch .local/share/applications/yourapp.desktop
mcedit .local/share/applications/yourapp.desktop

#
[Desktop Entry]
Version=1.0
Type=Application
Terminal=false
Exec=/path/to/yourapp
Name=YourApp
Comment=Description of YourApp
Icon=/path/to/yourapp.png
#
```

generisches Beispiel für gruppierte Anwendungen

- https://askubuntu.com/questions/1034706/adding-grouped-icons-to-favorite-bar-in-ubuntu-18-04

```
cd ~
touch .local/share/applications/app-folder.desktop
mcedit .local/share/applications/app-folder.desktop

[Desktop Entry]
Name=App folder
Comment=Launch multiple apps from a single launcher
Exec=notify-send "Right click" "to launch your favourite applications!"
Icon=/full/path/to/your/icon-file
Terminal=false
Type=Application
Actions=app1;app2;app3;

[Desktop Action app1]
```

```
Name=Files
Exec=nautilus

[Desktop Action app2]
Name=Text Editor
Exec=gedit

[Desktop Action app3]
Name=Terminal
Exec=gnome-terminal
```

Anwendungen installieren

System-Tools

```
mkdir -p ~/bin
sudo su
apt-get -y update && apt-get -y dist-upgrade
# essential tools:
apt-get -y install mc synaptic aptitude dconf-editor partitionmanager
jfsutils reiser4progs reiserfsprogs gnome-system-tools gparted git libpam-
mount ssh libsecret-tools printer-driver-cups-pdf libcanberra-gtk-module
libcanberra-gtk3-module cifs-utils smb4k vpnc network-manager-vpnc-gnome
davfs2
#
# other necessary tools
apt-get -y install brasero gnome-tweak-tool unity-tweak-tool gnome-tweaks
keepassxc  xfsprogs hfsprogs wireshark chrome-gnome-shell ubuntu-restricted-
extras gnome-shell-extensions gpsbabel gpsbabel-gui ffmpeg vlc h264enc xul-
ext-lightning qpdfview pdfsam dvbcut avidemux2.7-qt5 python3-podcastparser
python3-html5lib copyq
```

Gnome Panel

- https://wiki.ubuntuusers.de/GNOME_Shell/Extensions/

GoCryptfs

Encfs wird aktuell nicht gepflegt, gnome-encfs-manager funktioniert nicht korrekt da API ab Ubuntu 19.04 geändert wurde. Ein sehr guter Ersatz ist https://nuetzlich.net/gocryptfs/|gocryptfs.

```
# gocryptfs - einfch aus dem Ubuntu Repository heraus
apt install gocryptfs
```

oder zu Fuß:

- https://nuetzlich.net/gocryptfs/quickstart/
- https://github.com/rfjakob/gocryptfs/wiki/Mounting-on-login-using-pam_mount

```
sudo apt install golang libssl-dev
# als user:
go get -d github.com/rfjakob/gocryptfs
cd $(go env GOPATH)/src/github.com/rfjakob/gocryptfs
./build.bash
sudo cp go/bin/gocryptfs /usr/local/bin/
```

Konfiguration:

```
# init and use it:
mkdir ~/.gocryptfs ~/Chr_decrypt
gocryptfs -init ~/.gocryptfs
#
# Passwort im Gnome-Schlüsselbund eintragen - aktuell aber nicht verwendet!
# secret-tool store --label="GoCryptfs" gocryptfs /home/christoph/.gocryptfs
# gocryptfs --extpass="secret-tool lookup gocryptfs
/home/christoph/.gocryptfs" ~/.gocryptfs ~/Chr_decrypt
```

Auto Mount via Startprogramme' - der einfache Weg:
–> Startprogramme:

```
sh -c "/usr/bin/zenity --password --title="GoCryptFS" | /usr/bin/gocryptfs -
q .gocryptfs/ Chr_decrypt/"
```

Auto Mount via Startprogramme' - der elegante Weg:
–> Startprogramme:

```
sh -c "~/bin/mount_gocryptfs.sh mount"
```

mount_gocryptfs.sh

```
#!/bin/bash
# show zenity dialog to enter password and mount encrypted folder
# sh -c "/usr/bin/zenity --password --title="GoCryptFS" |
/usr/bin/gocryptfs -q .gocryptfs/ Chr_decrypt/"

action=$1

case "$action" in
   mount)
      if [ -e /home/christoph/Chr_decrypt/gocryptfs_Chr_decrypted ];
then
        echo "already mounted"
      else
        echo "mounting .."
        /usr/bin/zenity --password --title="GoCryptFS" |
```

```
/usr/bin/gocryptfs -q .gocryptfs/ Chr_decrypt/
      fi
      ;;
   umount)
      if [ -e /home/christoph/Chr_decrypt/gocryptfs_Chr_decrypted ];
then
        echo "unmounting ..."
        fusermount -u /home/christoph/Chr_decrypt
      else
        echo "already unmounted"
      fi
         ;;
   *) echo "Command unknown!"
         ;;
esac
```

USB Security Dongle

Nitrokey

- https://www.nitrokey.com/download/ubuntu

```
sudo add-apt-repository ppa:nitrokey/nitrokey
sudo apt install nitrokey-app

#
https://decatec.de/home-server/nextcloud-zwei-faktor-authentifizierung-mit-n
itrokey-fido2/
wget https://www.nitrokey.com/sites/default/files/41-nitrokey.rules
sudo mv 41-nitrokey.rules /etc/udev/rules.d/
```

Solokey

xxx

Yubico Authenticator

- yubico-ubuntu-stable-xenial.list

Online Banking & Reiner-SCT Kartenleser

Einrichtung des Reiner-SCT CyberJack e-com –> https://wiki.ubuntuusers.de/HBCI_Kartenleser/

```
apt-get install aqbanking-tools libccid libifd-cyberjack6 libchipcard-data
libchipcard-tools libchipcard-libgwenhywfar60-plugins pcsc-tools
pcsc_scan
```

Jameica & Hibiscus

- https://www.willuhn.de/wiki/doku.php?id=start
- https://www.willuhn.de/products/hibiscus/download.php

```
# install OpenJDK first!
wget
https://www.willuhn.de/products/jameica/releases/current/jameica/jameica-lin
ux64.zip
unzip jameica-linux64.zip
./jameica.sh
```

UNetbootin

```
sudo su
add-apt-repository ppa:gezakovacs/ppa
aptitude install unetbootin
```

Epson Perfection V300 Scanner

- http://download.ebz.epson.net/dsc/search/01/search/

```
sudo su
# Treiber herunterladen
wget
https://download2.ebz.epson.net/iscan/plugin/gt-f720/deb/x64/iscan-gt-f720-b
undle-2.30.4.x64.deb.tar.gz
# ... entpacken ...
tar xfz iscan-gt-f720-bundle-2.30.4.x64.deb.tar.gz
# ... installieren ...
cd iscan-gt-f720-bundle-1.0.1.x64.deb/
./install.sh
# Root PW eingeben ;-)
#
# fehlende UDEV Regel erstellen:
echo "ATTRS{manufacturer}==\"EPSON\", DRIVERS==\"usb\", SUBSYSTEMS==\"usb\",
ATTRS{idVendor}==\"04b8\", ATTRS{idProduct}==\"*\", MODE=\"0777\"" >>
/etc/udev/rules.d/79-udev-epson.rules
#
# Benutzer der Gruppe scanner hinzufügen:
adduser <user> scanner
```

Brother HL3170CDW

- https://support.brother.com/g/b/producttop.aspx?c=de&lang=de&prod=hl3170cdw_all

```
wget https://download.brother.com/welcome/dlf006893/linux-brprinter-installer-2.2.2-2.gz
tar xfz linux-brprinter-installer-2.2.2-2.gz
sudo ./linux-brprinter-installer-2.2.2-2
```

XXXX

```
# ppa:tomtomtom/woeusb --> apt-get install woeusb
KRDC
Filezilla
Pyrenamer
```

Virtualisierung

Wine

```
xxx
```

PlayonLinux

```
xxx
```

VirtualBox 6.1.x

- https://www.virtualbox.org/wiki/Linux_Downloads
- https://linuxize.com/post/how-to-install-virtualbox-on-ubuntu-20-04/

```
wget -q https://www.virtualbox.org/download/oracle_vbox_2016.asc -O- | sudo apt-key add -
wget -q https://www.virtualbox.org/download/oracle_vbox.asc -O- | sudo apt-key add -
sudo echo "deb [arch=amd64] http://download.virtualbox.org/virtualbox/debian $(lsb_release -cs) contrib" | sudo tee -a /etc/apt/sources.list.d/virtualbox.list
sudo apt-get update
sudo apt-get install virtualbox-6.1
#
```

```
wget
https://download.virtualbox.org/virtualbox/6.1.8/Oracle_VM_VirtualBox_Extens
ion_Pack-6.1.8.vbox-extpack
sudo VBoxManage extpack install
Oracle_VM_VirtualBox_Extension_Pack-6.1.8.vbox-extpack
sudo adduser $USER vboxusers
```

Kommunikation & Massanger

- https://riot.im/download/desktop/ - bisher nicht verwendet!

Telegram

- https://desktop.telegram.org/

```
mkdir ~/bin/Telegram
cd ~/bin/Telegram
wget -O telegram-desktop.tar.xz https://tdesktop.com/linux
tar -Jxf telegram-desktop.tar.xz
./Telegram
```

Signal

- https://signal.org/de/download/

```
wget -q -O "-" https://updates.signal.org/desktop/apt/keys.asc | sudo apt-
key add -
echo "deb [arch=amd64] https://updates.signal.org/desktop/apt xenial main" |
sudo tee -a /etc/apt/sources.list.d/signal-xenial.list
sudo apt update && sudo apt install signal-desktop
```

Thunderbird

- Thunderbird –> bereits vorinstalliert

Office & Co.

Foxit Reader

- https://www.foxitsoftware.com/pdf-reader/

```
wget
https://cdn01.foxitsoftware.com/pub/foxit/reader/desktop/linux/2.x/2.4/en_us
/FoxitReader.enu.setup.2.4.4.0911.x64.run.tar.gz
tar xfz FoxitReader.enu.setup.2.4.4.0911.x64.run.tar.gz
./FoxitReader.enu.setup.2.4.4.0911\(r057d814\).x64.run
```

Google Chrome

```
wget -q -O - https://dl.google.com/linux/linux_signing_key.pub | sudo apt-
key add -
sudo sh -c 'echo "deb [arch=amd64] http://dl.google.com/linux/chrome/deb/
stable main" >> /etc/apt/sources.list.d/google-chrome.list'
sudo apt update
sudo apt install google-chrome-stable
# oder:
wget https://dl.google.com/linux/direct/google-chrome-
stable_current_amd64.deb
sudo dpkg -i google-chrome-stable_current_amd64.deb
```

weiteres ...

- ~~LibreOffice~~ –> wird mitgeliefert!
- LaTex (via Synaptic)
- Gummi (via Synaptic)
- TOR Browser Bundle
- ~~GIMP~~ –> wird mitgeliefert!
- WikidPad (2.2)

Multimedia

- https://picard.musicbrainz.org/
- https://www.bitblokes.de/freedb-org-macht-dicht-die-freie-datenbank-ab-31-maerz-2020-eingestellt/
- https://www.bsdforen.de/threads/freedb-org-cddb-gibt-es-nicht-mehr-kann-man-ripperx-mit-anderer-musikdatenbank-benutzen.35675/
- https://askubuntu.com/questions/1255906/topic-ripper-x-asunder-cd-ripper

```
sudo add-apt-repository ppa:gpodder/ppa
sudo apt-get update
sudo apt-get insstall gpodder
```

Fehlerbehebung in der Gpodder SQLite Datenbank:

```
sudo su
apt-get install sqlitebrowser
sqlitebrowser
```

PulseAudio

PulseAudio Lautstärkeeinstellung für Ausgabegerät merken und in jeder Anwendung wieder herstellen:

- https://askubuntu.com/questions/1187401/how-can-i-stop-firefox-from-dropping-volume-on-new-media
- https://askubuntu.com/questions/1257380/inconsistent-sound-volume-ubuntu-20-04

```
sudo su
echo "flat-volumes = yes" >> /etc/pulse/daemon.conf
```

ffmped from source

- [https://linuxconfig.org/ubuntu-20-04-ffmpeg-installation|https://linuxconfig.org/ubuntu-20-04-ffmpeg-installation]]

```
sudo apt update
sudo apt install libopus-dev libmp3lame-dev libfdk-aac-dev libvpx-dev
libx264-dev yasm libass-dev libtheora-dev libvorbis-dev mercurial cmake
build-essential
mkdir ~/ffmpeg; cd ~/ffmpeg
hg clone https://bitbucket.org/multicoreware/x265
cd x265/build/linux
PATH="$HOME/bin:$PATH" cmake -G "Unix Makefiles" -
DCMAKE_INSTALL_PREFIX="$HOME/ffmpeg_build" -DENABLE_SHARED:bool=off
../../source && PATH="$HOME/bin:$PATH"
sudo make && sudo make install
if [ -d ~/ffmpeg ]; then cd ~/ffmpeg; else mkdir ~/ffmpeg && cd ~/ffmpeg; fi
wget -O- http://ffmpeg.org/releases/ffmpeg-snapshot.tar.bz2 | tar xj
cd ~/ffmpeg/ffmpeg

PATH="$HOME/bin:$PATH" PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib/pkgconfig" \
   ./configure \
  --prefix="$HOME/ffmpeg_build" \
  --pkg-config-flags="--static" \
  --extra-cflags="-I$HOME/ffmpeg_build/include" \
  --extra-ldflags="-L$HOME/ffmpeg_build/lib" \
  --extra-libs="-lpthread -lm" \
  --bindir="$HOME/bin" \
  --enable-gpl \
  --enable-libass \
  --enable-libfdk-aac \
  --enable-libfreetype \
  --enable-libmp3lame \
  --enable-libopus \
  --enable-libtheora \
  --enable-libvorbis \
  --enable-libvpx \
  --enable-libx264 \
```

```
  --enable-libx265 \
  --enable-nonfree && \
PATH="$HOME/bin:$PATH" sudo make && sudo make install
...
# check version:
ffmpeg -version
```

```
sudo su
apt-get install asunder ripperx eyed3 id3 easytag abcde id3ren kid3 audacity
mediainfo mediainfo-gui
## Kid3-qt (MP3 ID3 Tag Editor) Char Encoding Probleme
```

- Kdenlive
- handbrake
- Xine
- Kodi

guvcview

```
sudo apt-get nstall guvcview v4l-utils
v4l2-ctl --list-devices
HD Pro Webcam C920 (usb-0000:00:14.0-2.2):
    /dev/video2
    /dev/video3
    /dev/media1

v4l2-ctl -d /dev/video2 --list-ctrls
v4l2-ctl -d /dev/video2 --set-ctrl=exposure_auto=1
v4l2-ctl -d /dev/video2 --set-ctrl=focus_auto=0
```

CAD & Mechanik

```
libreCAD
FreeCAD
eagle 7.7.0
CURA
```

Coding & Co.

```
Arduino IDE
gcc
make
python3
Java
kdiff3
```

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