


# Installation von GNU Debian 8.x aka Jessie auf dem Cubietruck (ARMv7 AllWinner A20)

## Quellen

1. <https://wiki.debian.org/InstallingDebianOn/Allwinner>
2. <http://ftp.uk.debian.org/debian/dists/jessie/main/installer-armhf/current/images/netboot/SD-card-images/>
3. <https://www.debinux.de/2014/12/debian-basics-mit-systemd/>
4. <https://e-tobi.net/blog/2015/09/13/vdr-pakete-fur-raspberrypi>
5. <http://www.milaw.biz/wiki/arch/cubietruck> - Pimp my CubieTruck 
6. <https://docs.armbian.com/>

## Debian 8.x Jessie Installation

Installation wie in [1] beschrieben durchführen.

```
wget http://ftp.uk.debian.org/debian/dists/jessie/main/installer-armhf/current/images/netboot/SD-card-images/firmware.Cubietruck.img.gz
wget http://ftp.uk.debian.org/debian/dists/jessie/main/installer-armhf/current/images/netboot/SD-card-images/partition.img.gz
zcat firmware.Cubietruck.img.gz partition.img.gz > /dev/sde
```

- Serielles Kabel (FTDI-Kabel) anschließen um die folgenden Schritte auf der Konsole beobachten zu können
- `sudo minicom -b 115200 -o -D /dev/ttyUSB0`
- Cubietruck mit der neu erstellten SD-Karte booten
- Installation nach [1] fortführen
- Reboot

## Konfiguration des Grundsystems

```
#login als root via serieller Konsole
apt-get update
apt-get upgrade
apt-get install mc apt-transport-https ntpdate sudo
dpkg-reconfigure locales
[*] de_DE.UTF-8
[*] en_GB.UTF-8
#
#
nano /etc/fstab
#
```

```
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point> <type> <options>          <dump> <pass>
# / was on /dev/mmcblk0p2 during installation
UUID=855ca3a0-0307-45e5-8ac7-020275c8801f /          ext4
errors=remount-ro 0 1
# /boot was on /dev/mmcblk0p1 during installation
UUID=42146a70-75a6-4ee7-b315-ffad2d408385 /boot      ext2      defaults
0 2
# swap was on /dev/mmcblk0p5 during installation
UUID=2f3771cc-68e2-4e44-a97d-6fe99eea34f0 none        swap      sw
0 0
#
UUID=afeb5bfa-bf16-42f0-a8d0-8f57619746a8 /mnt/sda1 ext4 defaults 1 1
#
#
#
cd /home/
mv christoph __christoph
ln -s /mnt/sda1/christoph christoph
```

## Netzwerkconfiguration

```
nano /etc/systemd/resolved.conf
[Resolve]
DNS=192.168.100.1
#
ln -sf /run/systemd/resolve/resolv.conf /etc/resolv.conf
#
# falls 'systemd-resolved' schon läuft:
systemctl restart systemd-resolved.service
#
# sonst:
systemctl enable systemd-resolved.service
systemctl start systemd-resolved.service
#
# nach [3]
nano /etc/systemd/network/eth0.network
#
[Match]
Name=eth0
[Network]
Address=192.168.100.3/24
Gateway=192.168.100.1
```

```

DNS=192.168.100.1
#
# LAN Schnittstelle abschalten:
ifdown eth0
#
cp /etc/network/{interfaces,interfaces_bak}
cat /dev/null > /etc/network/interfaces
update-rc.d networking remove
systemctl enable systemd-networkd.service
systemctl start systemd-networkd.service
#
# Login für den Benutzer 'root' via SSH ermöglichen:
nano /etc/ssh/sshd_config
...
PermitRootLogin without-password -> PermitRootLogin yes
...
#

```

## Zeitserver

```

echo "NTPDATE_USE_NTP_CONF=no" > /etc/default/ntpdate
echo "NTPSERVERS=\"192.168.100.1\"" >> /etc/default/ntpdate
echo "NTPOPTIONS=\"\"" >> /etc/default/ntpdate

```

## Sundtek DVB-C Tuner

### Installation

```

ssh -l root <VDR-IP>
cd /root
wget http://www.sundtek.de/media/sundtek_netinst.sh
chmod +x sundtek_netinst.sh
./sundtek_netinst.sh
/opt/bin/mediaclient --dtvtransfermode=bulk -d /dev/dvb/adapter0/frontend0
# Reconnect Tuner #1
/opt/bin/mediaclient --dtvtransfermode=bulk -d /dev/dvb/adapter1/frontend0
# Reconnect Tuner #2
#
# VDR erneut starten wenn DVB-Tuner Treiber geladen sind:
echo "device_attach=service vdr restart" >> /etc/sundtek.conf

```

## VDR

Auf keinen Fall die automatisch generierte Kanalkonfiguration (channels.conf für vdr) aus dem Kabel Deutschland Forum verwenden - die Parameter für die HD Sender der Öffentlich-Rechtlichen sind fehlerhaft und bringen den VDR regelmäßig zum Absturz (data stream broken → emergency exit).

```
echo "deb https://packages.e-tobi.net/vdr-experimental jessie base vdr-  
multipatch" >> /etc/apt/sources.list  
gpg --keyserver keyring.debian.org --recv-keys 041390BC  
gpg --armor --export 041390BC | apt-key add -  
apt-get update  
apt-get install vdr vdr-plugin-streamdev-server vdr-plugin-vnsiserver  
vdradmin-am vdr-plugin-epgsearch dvb-apps  
#  
# VDR und VDRadmin-am Dienst via sytemctl starten:  
systemctl start vdr && systemctl start vdradmin-am  
#  
# VDR und VDRadmin-am Dienst via sytemctl stoppen:  
systemctl stop vdr && systemctl stop vdradmin-am  
#
```

## Sendersuche

```
sudo su  
apt-get install w-scan  
w_scan -fc -c DE >> channels.conf
```

## Konfiguration

```
nano /etc/default/vdradmin-am  
... ENABLED="1"  
#  
nano /etc/vdr/setup.conf  
# automatische Kanalsuche abschalten:  
UpdateChannels = 0  
#  
nano /etc/vdradmin-am/vdradmind.conf  
LANG =  
LANGUAGE = Deutsch  
#  
nano /etc/vdr/conf.d/00-vdr.conf  
[vdr]  
# --video=/var/lib/video  
--video=/mnt/sdal/video0  
--config=/var/lib/vdr  
--lib=/usr/lib/vdr/plugins  
--record=/usr/lib/vdr/vdr-recordingaction  
--epgfile=/var/cache/vdr/epg.data  
--user=vdr  
--grab=/tmp  
--port=6419  
--watchdog=60  
# --lirc
```

```
#- -vfat
#- -shutdown=/usr/lib/vdr/vdr-shutdown.wrapper
#- -userdump
#
#
nano /etc/default/vdr
#VDR_CHARSET_OVERRIDE=ISO-8859-9
#
```

## vor und nach Aufnahmen ...

[/etc/vdr/recording-hooks/R90.custom](#)

```
case $1 in
  before)
    # do here whatever you would like to do right BEFORE
    # the recording $2 STARTS
    echo 1 > /sys/class/leds/blue\:ph21\:led1/brightness
    sudo telegram-cli -W -e "msg <EMPFÄNGER> \"VDR: Aufnahme $2
gestartet!\""
    ;;

  started)
    # do here whatever you would like to do right AFTER
    # the recording $2 STARTED
    ;;

  after)
    # do here whatever you would like to do right AFTER
    # the recording $2 ENDED
    echo 0 > /sys/class/leds/blue\:ph21\:led1/brightness
    chmod -R g+w $2/..
    sudo telegram-cli -W -e "msg <EMPFÄNGER> \"VDR: Aufnahme $2
beendet!\""
    ;;

  edited)
    # do here whatever you would like to do right AFTER
    # the recording $2 has been EDITED
    # $3 is the original recording
    ;;

  deleted)
    # do here whatever you would like to do right AFTER
    # the recording $2 has been DELETED
    ;;

esac
```

## Radiorecorder Web GUI

```
sudo su
apt-get install lighttpd streamripper at
systemctl status lighttpd
usermod -G vdr -a www-data
#chown -R www-data:www-data /var/www/html
#chmod -R 775 /var/www/html
# zuerst lighttpd installieren da sonst auf Grund von Abhängigkeiten evtl.
# der apache2 Webserver installiert wird!
apt-get install php5-common php5-cgi php5
lighty-enable-mod fastcgi
lighty-enable-mod fastcgi-php
systemctl restart lighttpd
echo "<?php phpinfo(); ?>" >> /var/www/html/phpinfo.php
# Im Browser öffnen: http://<RASPBERRYPI-IP>/phpinfo.php
# www-data aus /etc/at.deny entfernen
sed -i -e '/www-data/d' /etc/at.deny
cd ~
wget
https://netcologne.dl.sourceforge.net/project/radiorecwebgui/0.3.x/radioreco
rder_0.3.1.tar.gz
tar xzf radiorecorder_0.3.1.tar.gz
mkdir -p /var/www/html/radiorecorder
cp -R radiorecorder_0.3.1/* /var/www/html/radiorecorder/
#
echo
"NDR2;http://ndr-ndr2-niedersachsen.cast.addradio.de/ndr/ndr2/niedersachsen/
mp3/128/stream.mp3" > /var/www/html/radiorecorder/res/streams.txt
echo "NDR
Kultur;http://ndr-ndrkultur-live.cast.addradio.de/ndr/ndrkultur/live/mp3/128
/stream.mp3" > /var/www/html/radiorecorder/res/streams.txt
echo "NDR
Info;http://ndr-ndrinfo-niedersachsen.cast.addradio.de/ndr/ndrinfo/niedersac
hsen/mp3/128/stream.mp3" > /var/www/html/radiorecorder/res/streams.txt
echo "N-
Joy;http://ndr-njoy-live.cast.addradio.de/ndr/njoy/live/mp3/128/stream.mp3"
> /var/www/html/radiorecorder/res/streams.txt
echo "NDR
Blue;http://ndr-ndrblue-live.cast.addradio.de/ndr/ndrblue/live/mp3/128/strea
m.mp3" > /var/www/html/radiorecorder/res/streams.txt
echo "NDR
Plus;http://ndr-ndrplus-live.cast.addradio.de/ndr/ndrplus/live/mp3/128/strea
m.mp3" > /var/www/html/radiorecorder/res/streams.txt
#
chown -R www-data:www-data /var/www/html/
mkdir /mnt/video0/radiorecorder
chown -R vdr:vdr /mnt/video0/radiorecorder/
```

```
chmod -R g+w /mnt/video0/radiorecorder/  
#  
systemctl restart lighttpd  
# Im Browser öffnen: http://<RASPBERRYPI-IP/
```

**/var/www/html/radiorecorder/res/settings.php**

settings.php

```
<?php  
  
class Settings {  
  
    public static $siteRoot = '/var/www/html/radiorecorder';  
    public static $recordedFilesDestination =  
'/mnt/sda1/video0/radiorecorder';  
    public static $language = 'de'; // "de" for german or "en" for english  
    public static $locale = 'C'; // default is "C"; other possible  
    locales: "de_AT.UTF-8" to enable all corresponding characters for the  
    filename  
    public static $defaultStreamripperParams = ''; // adds streamripper  
    params to each call  
    public static $addDatePrefixToFilename = null; // prefix format  
    (e.g. 'Y-m-d') or null if no prefix to add  
    public static $postCommand = ''; // command to be executed after  
    the recording is finished  
    public static $logThreshold = 3; //Level of log messages, possible  
    values : LEVEL_DEBUG=4, LEVEL_INFO=3, LEVEL_WARN=2, LEVEL_ERROR=1  
  
}  
  
?>
```

## SAMBA installieren und einrichten

```
aptitude install samba  
echo "wins server = eth0:192.168.100.1" > /etc/samba/dhcp.conf  
adduser christoph  
smbpasswd -a christoph  
aptitude install cifs-utils
```

## Samba Konfiguration

smb.conf

```
#===== Global Settings =====

[global]
    workgroup = WG
    server string = %h server
    wins support = no

    wins server = 192.168.100.1
    dns proxy = no
    name resolve order = lmhosts host wins bcst
    unix extensions = no

#### Networking ####
;   interfaces = 127.0.0.0/8 eth0
;   bind interfaces only = yes

#### Logging ####
    log file = /var/log/samba/log.%m

# Cap the size of the individual log files (in KiB).
    max log size = 1000
    syslog = 0
    panic action = /usr/share/samba/panic-action %d

##### Authentication #####
    security = user
    encrypt passwords = true
    passdb backend = tdbsam
    obey pam restrictions = yes
    unix password sync = yes
    passwd program = /usr/bin/passwd %u
    passwd chat = *Enter\snew\s*\spassword:* %n\n
    *Retype\snew\s*\spassword:* %n\n *password\supdated\ssuccessfully* .
    pam password change = yes
    map to guest = bad user

#===== Share Definitions =====

[homes]
    comment = Home Directories
    browseable = yes
    writeable = yes
    read only = no
    create mask = 0700
    directory mask = 0700
    valid users = %S

[Aufnahmen]
    comment = VDR Aufnahmen
    path = /mnt/sda1/video0
```



```
browseable = yes
writeable = yes
read only = no
#create mask = 0700
#directory mask = 0700
#valid users = %S
create mask = 0664
directory mask = 0775
force group = users
follow symlinks = yes
wide links = yes

load printers = no
printing = bsd
printcap name = /dev/null
disable spoolss = yes
```

## Telegram für Benachrichtigungen

siehe [hier](#)

```
echo "vdr    ALL = NOPASSWD: /bin/telegram-cli" >> /etc/sudoers
```

## Nextcloud

Aktuelle Version siehe hier:

<https://www.von-thuelen.de/doku.php/wiki/projekte/raspberrypi/uebersicht#nextcloud>

Quellen:

- <https://www.howtoforge.com/tutorial/installing-lighttpd-with-php-fpm-and-mysql-or-mariadb-on-ubuntu/>
- <https://pimylifeup.com/raspberry-pi-nextcloud-server/>
- <https://stackoverflow.com/questions/33470753/create-mysql-database-and-user-in-bash-script>

## Installation

```
apt-get update
apt-get upgrade
```

## MySQL Datenbank

```
aptitude install mysql-server mysql-client
mysql Datenbank, User und Passwort anlegen
mysql -uroot -p${mysqlrootpasswd} -e "CREATE DATABASE nextcloud;"
```

```
mysql -uroot -p${mysqlrootpasswd} -e "CREATE USER nextcloud@localhost  
IDENTIFIED BY '${PASSWDDB}';"  
mysql -uroot -p${mysqlrootpasswd} -e "GRANT ALL PRIVILEGES ON nextcloud.* TO  
'nextcloud'@'localhost';"  
mysql -uroot -p${mysqlrootpasswd} -e "FLUSH PRIVILEGES;"
```

## Lighttpd Webserver und PHP

```
aptitude install lighttpd
```

## PHP

```
aptitude install php5-fpm php5  
mcedit /etc/php5/fpm/php.ini  
# uncomment the line cgi.fix_pathinfo=1  
cd /etc/lighttpd/conf-available/  
cp 15-fastcgi-php.conf 15-fastcgi-php-spawnfcgi.conf  
mcedit 15-fastcgi-php.conf  
-----  
## Start an FastCGI server for php (needs the php5-cgi package)  
fastcgi.server += ( ".php" =>  
    ((  
        "socket" => "/var/run/php5-fpm.sock",  
        "broken-scriptfilename" => "enable"  
    ))  
)  
-----  
lighttpd-enable-mod fastcgi  
lighttpd-enable-mod fastcgi-php  
  
aptitude install php5-mysqldb php5-curl php5-gd php5-intl php-pear php5-  
imagick php5-imap php5-mcrypt php5-memcache php5-pspell php5-recode php5-  
snmp php5-sqlite php5-tidy php5-xmlrpc php5-xsl  
aptitude install php5-xcache  
service php5-fpm reload  
aptitude install phpmyadmin  
  
#Web server to reconfigure automatically: <-- lighttpd  
#Configure database for phpmyadmin with dbconfig-common? <-- yes  
#  
#Password of the database's administrative user: <-- Enter the MySQL/MariaDB  
root password  
#MySQL application password for phpmyadmin: <-- Press ENTER  
  
#Afterwards, you can access phpMyAdmin under  
http://192.168.100.3/phpmyadmin/  
#
```

```
mkdir -p /var/www/html/nextcloud/data
chown www-data:www-data /var/www/html/nextcloud/data
chmod 750 /var/www/html/nextcloud/data
cd /var/www/html/nextcloud
chown www-data:www-data config apps
```

## Nextcloud 13

- aktuelle Version von Nextcloud von [www.nextcloud.com](https://www.nextcloud.com) herunterladen

```
wget
https://download.nextcloud.com/server/releases/nextcloud-13.0.0.tar.bz2
```

- entpacken

```
tar xjf nextcloud-13.0.0.tar.bz2
```

- entpackten Ordner per FTP in das Web-Root Verzeichnis hochladen
- Datenverzeichnis parallel zum Nextcloud Verzeichnis anlegen um Benutzerdaten und Nextcloud Installation voneinander zu trennen
- /tmp Verzeichnis innerhalb des Nextcloud-Verzeichnisses anlegen
- URL des Web-Root Verzeichnis in Browser aufrufen und die neue Nextcloud Instanz mit den richtigen Parametern für das Datenverzeichnis, den Benutzernamen und das Passwort des Administrators sowie den Datenbankparametern konfigurieren
- In der Datei /nextcloud/config/config.php den Pfad zum Datenverzeichnis anpassen und den Pfad zum /tmp Verzeichnis ergänzen

```
'tempdirectory' => '/.../.../.../htdocs/.../nextcloud/tmp',
```

- php.ini unterhalb von /nextcloud mit folgendem Inhalt anlegen:

### php.ini

```
opcache.enable=1
opcache.enable_cli=1
opcache.interned_strings_buffer=8
opcache.max_accelerated_files=10000
opcache.memory_consumption=128
opcache.save_comments=1
opcache.revalidate_freq=1
```

From:  
<https://von-thuelen.de/> - Christophs DokuWiki

Permanent link:  
[https://von-thuelen.de/doku.php/wiki/projekte/cubietruck/cubietruck\\_debian\\_jessie?rev=1520186939](https://von-thuelen.de/doku.php/wiki/projekte/cubietruck/cubietruck_debian_jessie?rev=1520186939)

Last update: 2020/04/15 20:21

