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Inhaltsverzeichnis

1 Intro

How to prepare and create an SD-Card or USB Stick Boot-Image for RasPi 2 or 3
to be able to run the AS Software.

Basic Elements: Linux is ArchLinuxArm because it has most flexibility and newest drivers.
The Installation is with Xorg and jre for JavaFX. All activations are made with SYSTEMD.
Watchmen is running in parallel to GUI. (Simple WebServer for system analysis)
Hardware: RasPi 2 or 3 with ToucScreen 800x480 and USB Audio Interface.

2 Image prepare

2.1 Parting

Plan: part1 256M part2 7G

Part1:

Part 1Sector Start 2048

Size Part1[sectors]: (256 * 1024 * 1024 – 2048 * 512) / 512 = 522240

Part 2:

Start Part2[Sectors]: 256 * 2^20 / 512 = 524288

Size Part2[Sectors]: 7 * 2^30 /512 = 14680064

dd size: (7 * 2^30 + 256 * 2^20) / 2^20 = 7424

TRAP: Knoppix background file system vFat does not allow 7G Filesize

UNTRAP: use with overlay .. allowes big files inside knoppix (not at mouunt system)

3 Creating

TRAP: ArchLinux requires bigger first partition than Raspbian.

tar -xvzf <file.tar.gz> -C <destination>

??? -p preserve file attributes

Use script

age.sh

to get the ala archieve file

TRAP: use rpi-2 image for raspi 3 too

Use script

make_image.sh

To create an image for arch linux

change config.txt for USB Stick usage

TODO every script mount and unmount losetup

4 First Install and Update

After starting image … log into arch linux with putty

Login as alarm; su to root (both name = passwd)

loadkeys de
at Terminal usage.

Two commands by install advise

pacman-key --init
pacman-key --populate archlinuxarm

Init the update system

pacman -Sy
pacman -Su

Special tool found necessary

pacman -S mc

nstall xorg in arch with optional lxde

pacman -S xorg
pacman -S xterm
pacman -S lxde
pacman -S xorg-xinit
start with

startx startlxde

PROBLEM: xorg istall is incomplete; after 2nd reboot sd card is corrupted and usb does not start maybe: arch linux runs only from sd card

SUXXESS:

Everything from SD Card; not USB Stick

pacman -S xf86-video-fbdev
Datei

~/.xinitrc
enthält

startlxde
starten mit

startx
dann kommt Bildschirm

5 Prep 4 X

6 Add JRE

7 Links

7.1 alarm

http://archlinuxarm.org

https://archlinuxarm.org/platforms/armv8/broadcom/raspberry-pi-3

Hints about X Server

https://wiki.archlinux.org/index.php/xorg

7.2 Hints

WorkEnvironement/Doc/Javarpi2_alarm.odt