



[OTA] Update & Security

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Day 1

Update concepts for Embedded Devices

Redundancy (A/B based), “Android” style, Delta Images, Bandwidth limited devices
Image based or file / packet based? Or a combination of both worlds?
Bootloader based concepts versus operating system based

Short overview about existing solutions

Open source solutions like swupdate, RAUC et altera, Mender.io, file system based, container based

Requirements on memory layout, supported tools et altera

Simultaneous use of different methods (USB, SDCard, network, OTA ...)

Security requirements

Signed modules, hardware (TPM, HSM...) support



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Additional requirements

Gateway support, FPGA support

Update server (deployment, device management)

Open source example: hawkbit

Hands-On

Requirement:

Nothing on Hardware; Programming knowledge with Linux and C

Software:

Linutronix provides an USB HDD with an x86 64-bit based Debian system for the host system, a Debian toolchain and for the target system an ARM Linux, running on a running on an embedded device. The HDD is a gift for the participant and can be taken home for further studies.

Number of participants:

Due to our experience we know that a single instructor could coach a maximum of 6 persons. Our courses are therefore limited to this number of individuals.