



Training Debian & E.L.B.E. - best for Embedded Systems

Caveats: This is not an introduction in the development process of Linux for embedded devices. It definitely presumes basic knowledge of Linux and C.

Day 1

- 📦 **Components of a distribution - Bootloader, Kernel, Open Source Software packages and your applications.** How to find the right bootloader and kernel? How to find the right components?
- 📦 **Yocto, Debian, and so on– what should I choose? And why?**

Short overview about Pros and Cons

How the distribution does help you to fulfil the licence constraints?

- 📦 **Linux toolchain – what is needed for?**

Minimum requirements, requirements for bigger groups, central or de-central approach,

- 📦 Why Debian for Embedded Systems? Does it really work?
- 📦 How Debian does works? A deep look inside Debian – packages and dependencies, quality management, build process
- 📦 What is E.L.B.E. (*E*mbedded *L*inux *B*uild *S*ystem)? And why is E.L.B.E. different?
- 📦 Build your own Root File System with E.L.B.E. (theoretical)
- 📦 Generate your own Embedded Image:
 - debootstrap
 - E.L.B.E. (Embedded Linux Build Environment)
- 📦 Bootloader and Kernel – how to work with inside of E.L.B.E.?
- 📦 Develop your own application with E.L.B.E. (simulation)
- 📦 Hands-On: build your own Debian package
- 📦 Updates and Debian and E.L.B.E. – how it works together
- 📦 Security and Debian – how to use for Embedded Systems

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.