

Embedded Linux Development with Yocto Project

Online Live

Workshop

Applicable Technologies	Requirements	Contact
Processor based embedded Linux systems like Xilinx® Zynq® and others	Knowledge of the design and system components of an embedded Linux system Knowledge of the training »Compact Embedded Linux« is mandatory.	Michael Schwarz P. +49 7664 91313-15 E. info@plc2.de
Fee (net per person)	Inclusive	Duration
OL € 1,300	Training material	2 days
WO € 1,700	Plus beverages during breaks Lunch	2 days

Workshop

More and more FPGA/SoC systems use Linux as the operating system of choice. Hardware developers are nowadays required to adapt and create a custom Linux system to meet the system specifications. Creating a Linux system from scratch can be a time-consuming task. In the past developers often used the top-down approach, where they used an already available Linux system and removed parts they did not need, and added new functionality. This approach has the disadvantage that the designer never really can be sure about the content of the image which could lead to licensing issues. This has changed with the introduction of the Yocto Project build system, which allows you to easily create your customized Linux system from the ground up. This way we always know what components are included in the final image. The Yocto Project layer

model allows us to easily compile a Linux system for different hardware platforms and makes it simple to integrate image components of third-party sources.

In this training, participants will learn how to design a Linux system using the Yocto Project tools. A Xilinx® Zynq® based development board is used as the hardware platform for this training. It will be discussed how board support packages and meta-layers are structured and included in the Yocto Project build. After the training, attendees are able to design custom Linux Systems with the Yocto Project tool chain.

Due to accompanying exercises, the course offers in-depth and practice-oriented training. Attendees of the online live course will do the practical exercises in the afternoon on their own.

Agenda

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| <p>01. Installation and configuration</p> <p>02. BitBake tool basics
Image generation
Recipes and append files
Classes
Configuration files and patches</p> <p>03. Recipe design
Creating custom recipes
Adapting existing recipes
Building root filesystem recipes</p> | <p>04. Board support packages
Configuration
Bootloader, kernel and device tree
Graphical interfaces
Hob & toaster</p> <p>05. Generating SDK
Cross compiler
Eclipse plugin</p> <p>06. Yocto project licensing features</p> |
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