



LINUX TRAINING

Embedded Linux Platform Development With Yocto Project

Develop custom Embedded Linux platforms using the Yocto Project. Master build system essentials and create tailored, efficient embedded solutions.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

-
- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

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COURSE OVERVIEW

Embark on a rapid journey into the world of Embedded Linux Platform Development with the Yocto Project, a powerful open-source collaboration that helps developers create custom Linux-based systems for embedded products. This intermediate-level course is designed to demystify the complexity of building bespoke embedded Linux distributions, covering the core concepts, architecture, and essential build processes of the Yocto Project in a highly condensed format. You will gain a foundational understanding of how Yocto enables efficient and reproducible embedded software development, crucial for modern IoT and specialized device ecosystems.

Participants will explore key Yocto components such as BitBake, layers, and recipes, learning how they interact to form a robust build system. While the duration necessitates a conceptual and high-level walkthrough rather than extensive hands-on development, the course provides the critical insights needed to understand Yocto-based projects, interpret configurations, and effectively contribute to development teams. By mastering these foundational principles, you will be well-prepared to engage with complex embedded Linux projects, streamline development workflows, and leverage the power of customization in diverse application domains.

Duration	2 hours
Level	Intermediate
Vendor	Linux

COURSE CURRICULUM

01 Module 1: Introduction to the Yocto Project Ecosystem

- The Challenge of Embedded Linux Distribution Development
- Overview of the Yocto Project: Purpose, History, and Advantages
- Key Yocto Components: Poky, BitBake, Layers, Recipes, Classes
- Understanding the Yocto Build Cycle and Workflow

02 Module 2: Setting Up and Performing a Basic Build

- System Requirements for a Yocto Build Host
- Setting Up the Yocto Build Environment: Cloning Poky and Initializing
- Understanding `local.conf` and `bblayers.conf` for Initial Configuration
- Performing a First Build with `core-image-minimal`

03 Module 3: Exploring Layers and Recipes for Customization

- The Yocto Layer Model: Metadata Organization and Hierarchy
- Types of Layers: BSP, General, Distribution, and Custom Layers
- Introduction to Recipes (`.bb` files): Variables, Tasks, and Dependencies`
- Utilizing `.bbappend` Files for Extending and Customizing Existing Recipes`

04 Module 4: Concepts of Image Customization and SDK Generation

- Adding and Removing Packages from Images (`IMAGE_INSTALL`)`
- Understanding Different Image Types (e.g., `core-image-minimal``, `core-image-base`)`
- Brief Overview of Creating a Custom Image via a Distribution Configuration
- Introduction to Software Development Kit (SDK) Generation for Application Development

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Embedded Linux System Architect**
- > **IoT Device Platform Engineer**
- > **Custom Embedded OS Developer**

FREQUENTLY ASKED QUESTIONS

Q: What foundational knowledge is expected to maximize learning from this concise Yocto Project course?

To get the most out of this intensive course, participants should have strong proficiency with the Linux command line, a basic understanding of C/C++ programming, and familiarity with general embedded systems concepts. Prior exposure to version control systems like Git is also highly beneficial for navigating the Yocto Project's source tree.

Q: Given its brief duration, how will this specific Yocto course enhance my ability to contribute to embedded Linux projects?

This course is designed to provide a critical conceptual understanding of the Yocto Project's architecture, build system, and customization capabilities in a short timeframe. You'll be equipped to understand Yocto-based projects, interpret build configurations, effectively collaborate with teams already using Yocto, and lay a solid groundwork for more advanced hands-on development in roles like Embedded Software Engineer or IoT Platform Developer. It accelerates your grasp of the Yocto ecosystem.

Q: What are the key practical skills or insights I will gain regarding Yocto's build process and customization?

Upon completion, you will gain significant insight into setting up a Yocto build environment, understanding the fundamental layer system, interpreting recipes and essential configuration files (`local.conf`, `bbayers.conf`), and conceptually grasping the process of adding or removing software packages from a custom embedded Linux image. While hands-on development is introductory due to the course length, you will master the underlying principles required for Yocto-based platform creation and troubleshooting.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

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50+

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READY TO ENROL?

Take the next step in your technology career.

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