

RTOS TO LINUX MIGRATION ESSENTIALS

COURSE DESCRIPTION

The RTOS to Linux Migration Essentials course provides a comparison of embedded Linux environments with legacy real-time operating systems (RTOSes) in terms of features, memory model, scheduling algorithms, threading models, and I/O systems. A strategy for migrating applications is discussed.

After this course, participants will be able to perform the following:

- List top considerations for starting a Linux project
- Describe the Linux kernel and architecture
- Apply RTOS to Linux application porting guidelines

COURSE FORMAT

- This two-day expert-led course consists of lectures.
- Participants receive individual guidance from an expert engineer who has extensive experience with Wind River® technologies.

AUDIENCE

- Engineers or managers with experience in existing RTOS development environments, such as VxWorks® or pSOS, who are evaluating migration to an embedded Linux environment.

PREREQUISITE SKILLS

- Familiarity with typical RTOS environments, including tasks and tasks scheduling, synchronization, mutual exclusion, interrupt handling and scheduling, device drivers and general I/O, and boot loaders
- Familiarity with cross-development tools and procedures such as compilers and binary utilities
- General knowledge of the Linux environment

PREREQUISITE COURSES

- None

Course title:	RTOS to Linux Migration Essentials
Duration:	Two days
Format:	Instructor-led lectures; instructor-led Live Remote delivery available
Content:	Day 1: Linux in Embedded/Real-Time Systems; Developing Embedded Linux Applications; Root File System; Linux Kernel; Memory Management; Linux Processes and Threads; Linux Scheduling Day 2: IPC and Synchronization; Linux Timers; Networking; Drivers and I/O; RTOS to Linux Application Porting Guidelines

RELATED COURSES

- Introduction to Linux
- Wind River Linux and Workbench Essentials
- Workbench for Wind River Linux
- Linux Device Drivers
- Wind River Linux Board Support Package

SYLLABUS

Day 1

- Linux in Embedded/Real-Time Systems
- Developing Embedded Linux Applications
- Root File System
- Linux Kernel
- Memory Management
- Linux Processes and Threads
- Linux Scheduling

Day 2

- IPC and Synchronization
- Linux Timers
- Networking
- Drivers and I/O
- RTOS to Linux Application Porting Guidelines

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GLOBAL REACH OF WIND RIVER EDUCATION SERVICES

With more than 30 years of device software experience, Wind River provides education services in every region of the world. Our private classes can be tailored to your needs by adding or removing topics from multiple courses. If you have more specific project challenges, Wind River Mentoring provides coaching by experienced engineers to help you integrate Wind River solutions into your environment. And when you're too busy to attend a whole class, our On-Demand Learning options provide around-the-clock access to advanced and specialized topics. All of our education services are led by expert engineers who are closely connected to the Wind River technical community for access to specific expertise.

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