EDUCATION SERVICES

VXWORKS 6.9 TO VXWORKS 7 MIGRATION

COURSE DESCRIPTION

The VxWorks® 6.9 to VxWorks 7 Migration training course increases the productivity of software engineers developing VxWorks applications with Wind River® Workbench.

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

- Identify the available features of Workbench 4 and VxWorks 7
- Identify the changes in VxWorks 7 project management
- Differentiate between application mode debugging and stop mode debugging
- Configure and use VxWorks 7 analysis tools
- Understand VxWorks 7 memory layouts and create custom memory pools
- Explain the difference between a VxWorks 6.9 BSP and a VxWorks 7 BSP, as well as the difference between drivers

PRODUCTS SUPPORTED

- VxWorks 7
- Wind River Workbench 4

COURSE FORMAT

- This two-day expert-led course consists of lectures and lab sessions.
- Attendees use VxWorks 7, Wind River Workbench 4 for VxWorks 7, and the wrtool.
- Participants utilize simulated hardware (with Wind River Simics®) during hands-on labs.
- Participants receive individual guidance from an expert engineer who has extensive experience with Wind River technologies.

AUDIENCE

- Engineers proficient in VxWorks 6.x
- New project members on teams using Wind River products
- Senior engineers evaluating VxWorks technology

PREREQUISITE SKILLS

- One year of C programming
- Basic understanding of operating systems
- Experience with BSP and device drivers

Course title:	**VxWorks 6.9 to VxWorks 7 Migration**
Duration:	Two days
Format:	Instructor-led lectures and hands-on lab sessions; instructor-led live remote delivery available
Format:	**Day 1:** Getting Started with VxWorks 7; VxWorks Targets and Connections; Managing Projects in Workbench; Debugging in Workbench **Day 2:** System Viewer; Analysis Tools; VxWorks Memory; Migrating BSPs and Device Drivers to VxWorks 7

PREREQUISITE COURSES

- Real-Time Programming for Embedded Systems

RELATED COURSES

- VxWorks 6.x Board Support Package
- VxWorks 6.x Device Drivers
- VxWorks 7 and Workbench Essentials

SYLLABUS

Day 1

GETTING STARTED WITH VXWORKS 7

- Product overview
- Workbench 4 features
- VxWorks 7 features

VXWORKS TARGETS AND CONNECTIONS

- Hardware target configuration
- Booting the hardware target
- Workbench tools architecture
- Configuring and connecting the TCF server
- VxWorks Simulator – a high-level VxWorks simulator
- Simics – a true hardware simulation

MANAGING PROJECTS IN WORKBENCH

- Introduction to projects and workspaces

- VxWorks 7 installation and directory structure
- VxWorks layers and package management
- The wrtool utility
- VxWorks source build projects
- VxWorks image projects
- Configuring the kernel
- ROMFS
- Configuring application projects
- Importing and exporting
- Building projects
- **LAB: Managing VxWorks 7 Image Projects**

DEBUGGING VXWORKS IN WORKBENCH

- Debugger overview
- Application mode and stop mode
- Setting breakpoints
- Downloading code
- Attaching to running tasks
- Attaching to a system
- **LAB: Debugging VxWorks 7 in Stop Mode**

Day 2

SYSTEM VIEWER

- System Viewer overview
- Configuring System Viewer
- Collecting and displaying event data
- User-defined events
- Additional analysis views

ANALYSIS TOOLS

- Overview
- System Browser
- CPU Profiler
- Memory Analyzer
- **LAB: Using VxWorks Analysis Tools**

VXWORKS MEMORY

- Introduction
- Physical memory layout
- Virtual memory layout
- Heap memory allocation
- Virtual memory allocation
- Examining memory
- **LAB: Managing VxWorks Memory**

MIGRATING BSPS AND DEVICE DRIVERS TO VXWORKS 7

- VxWorks 6.9 vs. VxWorks 7 BSPs
- Migrating to a VxWorks 7 BSP
- Reusing a VxWorks 6.9 BSP in pre-SR0600 VxWorks 7
- VxWorks 6.9 vs. VxWorks 7 device drivers
- Probing and configuring devices
- Methods, device resources, and driver structure
- Migrating a legacy VxBus device driver
- **LAB: Migrating Device Drivers to VxWorks 7**

GLOBAL REACH OF WIND RIVER EDUCATION SERVICES

With more than 30 years of experience delivering software for intelligent systems, 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.

CONTACT US

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