

# VxWorks 5.x to 6.x Migration

Wind River Education Services enables you to unleash the power of Wind River's technology. Our training and mentoring empower developers with the knowledge and proficiency required to program and manage device software faster and more reliably. Reduce your project risks and shorten your development timelines by equipping your engineers with the right training by our experts.

### Course Description

The VxWorks 5.x to 6.x Migration training course increases the productivity of software engineers developing VxWorks applications with Wind River Workbench.

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

- Build and configure a VxWorks real-time system.
- Use the VxWorks API to design and develop real-time applications in kernel and user modes.
- Build, test, and debug real-time applications in a target-host development environment with Workbench and VxWorks.
- Migrate from Tornado 2.x to the Workbench Environment.
- Convert a VxWorks 5.5 Application into an RTP.

### Products Supported

- VxWorks 6.7
- Wind River Workbench 3.1
- Earlier product releases (topics may vary)

### Who Should Attend

- Engineers proficient in Tornado/VxWorks
- New project members on teams using Wind River products
- Senior engineers who will evaluate VxWorks technology

### Prerequisite Skills

- One year of C programming
- Basic understanding of operating systems and debugging techniques
- Functional knowledge of UNIX/Linux

### Prerequisite Courses

- Real-Time Programming for Embedded Systems

### Related Courses

- Workbench On-Chip Debugging Fundamentals for VxWorks and Linux
- VxWorks 6.x Board Support Package
- VxWorks 6.x Device Drivers

<b>Course Title:</b>	VxWorks 5.x to 6.x Migration
<b>Duration:</b>	Three days
<b>Format:</b>	Instructor-led lectures and hands-on lab sessions; instructor-led Live Remote delivery available
<b>Price:</b>	Contact your local sales representative

### Course Format

- This three-day instructor-led course consists of lectures and lab sessions.
- Students receive personal guidance from expert Wind River instructors.
- Students use VxWorks 6.7 and Wind River Workbench 3.1 to gain experience with the topics presented.
- Lab sessions allow hands-on application of course concepts.

### Global Reach of Wind River Education Services

With more than 20 years of device software experience, we provide education services in every region of the world. You can rely on our expertise—acquired by delivering hundreds of classes each year to thousands of students—to provide a highly effective learning experience, wherever your developers are located.

### Private Classes

Private classes are conducted at your location, scheduled for your convenience. Private classes include the use of a preconfigured laboratory environment that may consist of a connection to a remote lab environment or equipment that we bring to your facility. Private classes can be tailored to your specific needs by adding or removing topics from multiple courses, maximizing the benefit of your time in class.

## Mentoring

Our Rapid Integration and Mentoring programs provide coaching from a seasoned expert who can increase your team's productivity and reduce your project's risk. An experienced engineering specialist will review your specific goals, project environment, and challenges and address productivity obstacles. Whether you need assistance with product installation and configuration, advice on development workflow, debug assistance, or optimization best practices, mentoring can shorten your trial-and-error cycle, document recommended procedures, and ensure your developers are using tools and technology efficiently.

## Syllabus

### Day 1

#### Getting Started

- Available Tools
- Directory Structure
- Help Resources
- VxWorks Simulator
- Getting Started Lab

#### Managing Projects in Workbench

- Introduction to VxWorks Projects
- Project Explorer Overview
- Application Projects
- Build Specifications
- Project Management Lab

#### VxWorks Source Builds

- Introduction and Purpose of VSBs
- Workbench Projects
- Command-Line Usage
- VSB Options
- VSB Projects and VxWorks Builds
- VSB Lab

#### Using VxWorks Shells

- Host Shell and Shell Interpreters (Lab)
- Kernel Shell

### Day 2

#### Debugging

- Debugger
- Configuration
- GUI and Usage Overview (Setting Breakpoints, etc.)
- Kernel-Space Debugging and Application-Space Debugging
- Debugger Lab

#### Using Dynamic printf Event Points

- Using dprintf in the C and cmd Modes
- Using dprintf with RTPs

- Applying dprintf Through Workbench
- dprintf Lab

#### Real-Time Processes (RTPs)

- RTP File Generation
- Starting an Application
- Shared Data and Library Usage
- Real-Time Processes Lab

#### Overlapped RTP Virtual Memory

- RTP Virtual Memory Models
- RTP Code Regions
- Configuring VxWorks
- Identifying RTP Code Regions
- Building Absolutely Linked RTPs
- Memory Lab

### Day 3

#### Error Management

- Error Reporting Framework
- Persistent Memory
- Error Records
- Error Detection and Reporting Configuration
- Error Detection and Reporting Lab

#### System Viewer

- System Viewer
- System Viewer Configuration and Log Explanation
- Triggering
- User Events
- System Viewer Lab

#### Migration from Tornado 2.x

- Importing Tornado and SNIFF+ Projects
- Running a VxWorks 5.5 Application in the Kernel
- Converting a VxWorks 5.5 Application into an RTP
- BSP and Device Driver Migration Issues
- Migration Lab

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