Wind River Education Services enables clients to unleash the power of Wind River tools by creating developers skilled in our technology. We provide the knowledge you need to meet your commitments and exceed your company’s expectations. With Wind River Education Services, you will develop, run, and manage your application software faster, better, at lower cost, and more reliably.

Course Description
The VxBus Device Driver for Existing VxWorks 6.x Driver Developers course provides engineers with a fast, cost-effective way to develop device drivers using the VxBus device driver model.

After taking this workshop, students will have the knowledge and skills to do the following:

- Optimize the development of a new device driver from scratch
- Distinguish between legacy VxWorks and VxBus drivers and determine which driver model is appropriate for a particular application
- Design and integrate custom VxBus drivers
- Migrate proprietary and legacy drivers to VxBus

Products Supported
- VxWorks 6.6
- Wind River Workbench 3.0

Who Should Attend
Developers needing to learn the VxBus VxWorks device driver models

Prerequisite Skills
- Three to five years OS/programming experience
- One year embedded device programming experience
- Familiarity with legacy VxWorks device drivers
- Basic understanding of reading and writing device registers

Prerequisite Courses
- VxWorks 6.x and Workbench Fundamentals
- VxWorks 5 to 6.x Migration

Course Title: VxBus Device Driver for Existing VxWorks 6.x Driver Developers
Duration: Two days
Format: Instructor-led lectures and hands-on lab sessions
Price: Contact your local sales representative

Related Courses
- VxWorks 6.x Device Drivers
- VxWorks 6.x Board Support Package
- VxWorks 6.x Symmetric Multiprocessing
- Workbench On-Chip Debugging Fundamentals for VxWorks

Course Format
- Our two-day instructor-led courses consist of lectures and lab sessions that allow hands-on application of course concepts.
- Students receive personal guidance from expert Wind River instructors.
- Students examine details of the Wind River Workbench environment, focusing on the most commonly used areas.
- Specific questions are addressed.

Global Reach of Wind River Education Services
- 4,000 students per year
- 400 classes delivered per year
- 36 instructors worldwide
- Access to 200 subject-matter experts
- 24 training centers worldwide
- More than 20 years of device software experience

Courses are conducted at your location and include the use of laptops and target boards. Courses can be tailored to your specific needs by adding or removing topics from one or multiple courses. Visit education.windriver.com for registration and schedule information.
Skills and Topics
- VxBus Driver Model
  - VxBus General Overview
  - Design of a Custom VxBus-Based Driver
  - Driver Organization and Initialization
  - Integrating a VxBus Driver into VxWorks
- Migration to VxBus
  - Migration of Existing VxWorks Drivers to the VxWorks VxBus Driver Model
  - Porting of Proprietary OS Drivers to the VxBus Driver Model

Day 1
VxWorks Device Drivers, Getting Started
- Overview
- Driver Models
- Driver Resources
- Device Design Considerations
- Sample Drivers
- Getting Started: Booting, Shells Lab

Introduction to the VxBus Model
- Introduction to VxBus
- Terminology
- Driver Organization
- VxBus Methods
- Introduction to the VxBus Lab

VxBus Configuration and Initialization
- Services Available to VxBus Drivers
- BSP Configuration
- Show Routines
- Driver Initialization Sequence
- Integrating a VxBus Driver Lab

Day 2
VxBus Class-Specific Drivers
- Interrupt Handling
- Interrupt Controllers
- PLB and PCI Busses
- VxBus-Compliant Serial Drivers
- VxBus-Compliant Network Drivers
- VxBus-Compliant Timer Drivers
- Migrating a Timer Driver Lab

Migration to VxBus
- Generic Migration Strategy
- Porting OS Agnostic Drivers to VxBus
- Migrating a Legacy LED Driver to VxBus Lab

Wind River World Headquarters
500 Wind River Way
Alameda, CA 94501
USA
Toll-free: 800-545-9463
Tel.: 510-748-4100
Fax: 510-749-2454
training@windriver.com
NASDAQ: WIND

Wind River EMEA
Osterfeldstrasse 84
85737 Ismaning
Germany
Tel.: +49 89 962 445 0
Fax: +49 89 962 445 999
emea-training@windriver.com

Wind River is the global leader in Device Software Optimization (DSO). We enable companies to develop, run, and manage device software faster, better, at lower cost, and more reliably. www.windriver.com

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