VxBus (VxWorks 6.6) Device Drivers for Existing VxWorks Driver Developers

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 (VxWorks 6.6) Device Drivers for Existing VxWorks 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
Wind River General Purpose Platform, VxWorks Edition 3.6

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
• General Purpose Platform, VxWorks Edition for New Users
• General Purpose Platform, VxWorks Edition for Existing Tornado Users

Course Title: VxBus (VxWorks 6.6) Device Drivers for Existing VxWorks Driver Developers
Duration: Two days
Format: Instructor-led lectures and hands-on lab sessions
Price: Contact your local sales representative

Related Courses
• General Purpose Platform, VxWorks Edition 3.6, Device Drivers
• General Purpose Platform, VxWorks Edition, Board Support Package
• General Purpose Platform, VxWorks Edition, SMP

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
• 20+ years of device software experience

Onsite courses are conducted at your location and include the use of preconfigured laptops and target boards, plus shipping and travel costs. Visit education.windriver.com for registration and schedule information.
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

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