WIND™

VXWORKS 653 3.X MULTI-CORE EDITION BOARD SUPPORT PACKAGES

COURSE DESCRIPTION

The VxWorks® 653 3.x Multi-Core Edition Board Support Packages course provides engineers with a fast, cost-effective way to acquire the skills necessary to modify and extend the BSP for an integrated modular avionics (IMA) VxWorks system.

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

- Develop drivers for the POS
- Understand the driver initialization sequence during system boot
- Pick an appropriate IMA driver model for a VxWorks 653 ARINC system

PRODUCTS SUPPORTED

- VxWorks 653 3.x Multi-core Edition (version 3.0.1.1)

COURSE FORMAT

- This two-day, expert-led course consists of lectures and lab sessions.
- Attendees use VxWorks 653 3.x Multi-core Edition to gain experience with the topics presented.
- Participants examine and exercise simulated network topologies in hands-on labs.
- Participants receive individual guidance from an expert engineer who has extensive experience with Wind River® technologies.

AUDIENCE

- Device driver developers
- BSP developers
- System architects

PREREQUISITE SKILLS

- Experience with VxWorks 653
- Understanding of PowerPC processor architecture

PREREQUISITE COURSES

- VxWorks 653 3.x Multi-core Essentials

Course title:	**VxWorks 653 3.x Multi-Core Edition Board Support Packages**
Duration:	Two days
Format:	Instructor-led lectures and hands-on lab sessions; instructor-led Live Remote delivery available
Content:	VxWorks 653 MCE Architecture; VxWorks 653 MCE Boot Sequence; VxWorks 653 MCE Device Drivers; VxWorks 653 MCE Inter-Partition Communication; VxWorks 653 MCE Debug Shell; VxWorks 653 MCE Health Monitoring; POS Device Driver Integration; VxWorks 653 MCE Hardware Monitor (optional lab)

RELATED COURSES

- VxWorks 653 3.x Multi-core Essentials

SYLLABUS

VXWORKS 653 MCE ARCHITECTURE

- Architectural design
- Platform variants
- Devices, contexts, and scheduler
- Interfaces and capabilities
- **LAB: Exploring a VxWorks 653 MCE Architecture**

WHEN IT MATTERS, IT RUNS ON **WIND RIVER**

VXWORKS 653 MCE BOOT SEQUENCE

- BSP structure
- Configuration
- Booting
- Building MOS BSP
- **LAB: Exploring a VxWorks 653 MCE Boot Sequence**

VXWORKS 653 MCE DEVICE DRIVERS

- Device types
- I/O model
- PAMU
- PCI
- Access to device resources
- **LAB: Adding a VxWorks 653 MCE Device Driver**

VXWORKS 653 MCE INTER-PARTITION COMMUNICATION

- Introduction
- Safe IPC
- MIPC
- **LAB: Communicating Between Partitions with Safe IPC**

VXWORKS 653 MCE DEBUG SHELL

- Debug agent
- wrdbg shell
- wrhv shell
- **LAB: Using VxWorks 653 MCE Debug Shells**

VXWORKS 653 MCE HEALTH MONITORING

- Health monitoring
- Adding a custom event handler
- **LAB: Using a VxWorks 653 MCE Health Monitor**

POS DEVICE DRIVER INTEGRATION

- Generic devices (IO model and custom driver)
- Serial devices (SIO model)
- Network devices (END model)
- **LAB: Polling the Serial Device**

VXWORKS 653 MCE HARDWARE MONITOR (OPTIONAL)

- **LAB: Using VxWorks 653 MCE Hardware Monitoring Tools**

GLOBAL REACH OF WIND RIVER EDUCATION SERVICES

With more than 30 years of experience delivering software for the Internet of Things, 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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