WNDRVR

HELIX PLATFORM ADVANCED TOPICS FOR AEROSPACE AND DEFENSE

COURSE DESCRIPTION

The Helix Platform Advanced Topics for Aerospace and Defense course provides engineers with a fast, cost-effective way to acquire the advanced skills necessary to develop safety-critical applications with the Helix Platform hypervisor.

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

- Develop, test, and debug safety-critical applications with the Helix Platform hypervisor
- Use Helix Platform Workbench to configure and build applications, guest operating systems, and the Helix Platform hypervisor
- Accelerate the development and deployment of ARINC 653 safety-critical systems running on different guest operating systems
- Customize the Helix Platform hypervisor
- Understand the Helix Platform hypervisor internals

PRODUCTS SUPPORTED

- Wind River Helix Virtualization Platform

COURSE FORMAT

- This one-day expert-led course consists of lectures and hands-on lab sessions.
- Participants configure, build, and deploy various applications, guest operating systems, and the Helix Platform hypervisor on Simics-simulated targets.
- Participants receive individual guidance from an expert engineer who has extensive experience with Wind River technologies.

AUDIENCE

- Application developers creating standards-based safety-critical applications
- Developers developing safety critical partition-based applications using the Helix Platform hypervisor and VxWorks 653 or Linux partition operating system

PREREQUISITE SKILLS

- One year of C or C++ programming experience
- Familiarity with the Helix Platform hypervisor

Course title:	**Helix Platform Advanced Topics for Aerospace and Defense**
Duration:	One day
Format:	Instructor-led lectures and hands-on lab sessions; instructor-led Live Remote delivery available
Content:	Helix Platform BSP Structure and Boot Sequence; Helix Platform Debug Shell; Helix Platform Device Drivers; Custom Handler for Health and Error Management

PREREQUISITE COURSES

- None

RELATED COURSES

- None

SYLLABUS

HELIX PLATFORM BSP STRUCTURE AND BOOT SEQUENCE

- Hypervisor and managers internals
- BSP structure
- Module OS and partition operating systems
- Configuring the hypervisor system
- XML documents
- Booting the hypervisor system
- Key references

HELIX PLATFORM DEBUG SHELL

- Hypervisor debug shell
- Debug commands
- Hypervisor interface API
- Key references
- **LAB: Using the Hypervisor (MOS) Debug Shell**

HELIX PLATFORM DEVICE DRIVERS

- Device types
- Pass-through and emulated paravirtualized devices
- I/O model
- Interrupts
- VxWorks hypervisor interface API
- **LAB: Using a Custom Manager**

CUSTOM HANDLER FOR HEALTH AND ERROR MANAGEMENT

- Health monitoring review
- XML schema
- Event handlers
- Adding a custom event handler
- Key references
- **LAB: Using a Custom Health Monitoring Handler**

GLOBAL REACH OF WIND RIVER EDUCATION SERVICES

With more than 30 years of experience delivering software for the intelligent edge, 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 Wind River Learning Subscription provides around-the-clock access to advanced and specialized topics on demand. 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

For more information about Wind River Education Services, visit www.windriver.com/ip-services/technical-growth-services.

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

Wind River EMEA

Steinheilstrasse 10
85737 Ismaning
Germany
Tel.: +49 89 962 445 0
Fax: +49 89 962 445 999

emea-training@windriver.com

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Wind River is a global leader in delivering software for the intelligent edge. Its comprehensive portfolio is supported by world-class professional services and support and a broad partner ecosystem. Wind River is accelerating digital transformation of critical infrastructure systems that demand the highest levels of safety, security, and reliability.