RHD361 Red Hat Linux Kernel Internals

Course Summary

Description

This hands-on course provides an intensive and low-level examination of the Linux kernel architecture, including process scheduling, memory management, and I/O. Topics covered in this course are useful for understanding more advanced performance tuning concepts, like those presented in RH442 Red Hat Enterprise System Monitoring and Performance Tuning. You will also gain an understanding of how device drivers interact with the kernel.

Topics

- User and Kernel Mode
- Kernel Compilation
- Kernel Initialization
- Kernel Modules
- Introduction to Device Drivers
- Kernel API Overview
- Kernel Debugging
- System Tap
- Process Management
- Scheduling
- Real Time and RHEL RT
- Introduction to Virtualization
- Kernel Threads
- Timing
- Interrupts
- Locking
- Memory
- Storage
- Networking
- Working with the Linux Community

Audience

This course is designed for experienced developers who want to gain a thorough understanding of the Linux architecture, including the newest kernels.

Prerequisites

- Familiarity with basic tools, such as vi, Emacs, and file utilities
- Knowledge of systems programming in a UNIX or Linux environment (register-level hardware programming knowledge is recommended but not required)
- Some previous experience running Linux, compiling and installing kernels, and so forth
- Experience writing device drivers and kernel modules

Duration

Five days

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