

Course Description: Red Hat Linux Device Drivers is designed to teach experienced programmers how to develop device drivers for Linux systems. Upon completion of the course, students will understand the Linux architecture, hardware and memory management, modularization, and the layout of the kernel source, and will have practiced key concepts and skills for development of character, block, and network drivers.

Who Should Attend: This course is for developers of hardware device drivers who need to ramp up quickly on how to develop drivers for Linux.

Prerequisites: Experience in C programming is required. Students should also have taken RHD143 - Red Hat Linux Programming Essentials or have equivalent experience.

Benefits of Attendance: Upon completion of this course, students will be able to:

- Build concepts and skills in kernel essentials.
- Build practical skills in developing device drivers for various types of hardware.
- Deploy and manage highly available storage data to the mission-critical enterprise computing environment.

Course Outline:

How Device Drivers Work With The Linux Kernel

How To Configure And Install The Kernel

Compiling And Loading A Module And Exporting Symbols

Working With Character And Block Device Drivers

Memory Management

IOCTLS

Data Transfer Between User And Kernel Space

Memory Management

Tracing And Debugging

Time Management, Wait And Task Queues

Dealing With I/O Ports And Interrupts

Accessing PCI Hardware

Network Drivers

SMP Issues

Virtual File System And The Ext2/Ext3 Filesystems