

LINUX Device Drivers

Synopsis & Objective of Course

This exclusive course will help a trainee simplify the difficult task of writing Device Drivers. Experienced trainers help a trainee understand the concept kernel compilation, the various kinds of drivers (character, block, network) and the art of writing such drivers.

Target Audience

Programmers and developers who wish to customise their OS or develop their own device drivers.

Prerequisites

Attendees should have a basic knowledge of unix/linux system programming. A good understanding of C Programming & Data Structures is essential.

Delivery

The training will be instructor led, with each section of the material being covered by the trainer and followed by hands-on practical exercises. The training will focus on practical implementation & the trainee will be assigned challenging tasks for his study even beyond the course.

Duration : 2 days

Course Contents

| Day | Topic | Sub topics |
|-------|------------------------------------|---|
| Day 1 | Linux Kernel And character device. | Reconfigure, build and install a custom kernel and modules Introduction to Device Drivers Modules Character Drivers Major and Minor Numbers Debugging Synchronization and Race Conditions Timers and delays Tasklets Workqueues Memory allocation Interrupt Handling Interrupt-Driven I/O |

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|--------------|----------------------------------|---|
| Day 2 | Block and Network Drivers | Block Drivers Registration The Block Device Operations Request Processing Network Drivers How snull Is Designed Connecting to the Kernel The net_device Structure in Detail Opening and Closing Packet Transmission Packet Reception The Interrupt Handler Receive Interrupt Mitigation Changes in Link State The Socket Buffers MAC Address Resolution Custom ioctl Commands Statistical Information Multicast |
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Trainers' Profile

Corporate Trainer(s) with more than 6 years of experience in embedded development & corporate training in CMM level5 companies.

Scheduled & On-site Training

Apart from in-house training programs, comprehensive training can be also provided as per the requirement & will be optimally customized as per the client's needs.

Please note: For In-house Training, trainers will have to be informed of all the details if the trainee wants to develop any specific driver, so that the trainer can customise the training accordingly

For training calendar, availability of seats & other details please mail us at training@sigmasolutions.co.in