VEDA Solutions
inspiring linux learning

Linux Driver and Embedded Developer

What you will Learn

- Know the art of writing Drivers for all Kernel types (*latest addition*)
- Know Breakthrough Device Driver Design trends (*latest addition*)
- Most detailed step by step approach for porting Linux on target platforms and addressing embedded software challenges and RTOS
- We will take you from being an ordinary programmer to an expert in System Development
- Notice radical improvements in your understanding of Linux from a developer's view
- Get the finest information from the master trainer Raghu Bharadwaj, with over a decades training experience in system programming, having trained over 13 corporates and over 3000 participants from 3 continents, he promises to deliver his best to you.

First in India to offer this course Online

Linux Driver & Embedded Developer

This course is a power packed combination of three training modules:

- Linux Programming Essentials
- Linux Device Drivers
- Embedded Linux

All these three modules are designed to perfectly synchronize with each other leading to an amazing learning experience. These modules were build and perfected over a period of 9 years and promises

you the very best in making you an advanced system programmer.

At the end of the program, participants will have a clear insight into:

- Linux programming environment
- Linux Kernel internals and programming
- Implementation and procedural details for writing Device Driver programs on Linux
- New Breakthrough information a Device Driver developer must know
- Building and deploying portable Kernel and applications
- Debugging skills
- Understanding and writing RTOS based applications

Duration
2 working months

Linux Programming Essentials

If you are:

- New to Linux and looking to make a solid career as a Linux System Programmer
- Working on other platforms but looking to master Linux System Programming
- Working on Linux and looking to completely understand Linux internals

Then this is where you precisely need to start. This course is designed to give you that turbo charged push which will zoom you into this fabulous world of hard core programming. Over the last 7 years each and every participant who underestimated this course on its face value, later came back and attended this course irrespective of him being a middle level programmer or even a senior programmer with over 10 years of experience. Hope we need not elaborate much on the importance of this course

Prerequisite

You must be good at C programming. Knowledge of Unix/Linux is a plus

Duration
3 weeks

Course Contents

- Looking at OS as a System Programmer
- Understanding the skills needed to become an effective system programmer
- Compiler tools and its functionalities
- Creating Libraries
- Implementing System Calls
- Using Make
- Source Control Tools

- Debugging applications
- Memory Management and Allocation
- Files and Filesystems in Linux
- File I/O
- Advanced File Operations
- Processes
- Pipes and Fifo's
- Asynchronous I/O
- Signals, its importance
- POSIX Threads
- More on POSIX Threads
- Inter Process Communication

Linux Device Drivers

After gaining a solid grounding with Linux Programming Essentials you are now ready to take on the most intriguing subject in system programming, Device Drivers. This is where you learn the core of Linux kernel and system programming. This course is carefully designed to cover each and every technical concepts with equal importance to practice leading to effective understanding and mastery of writing Driver programs for Linux subsystems.

Prerequisite

Linux Programming Essentials from Veda Solutions **or** Working experience as Linux programmer

Duration
4 weeks

Course Contents

- Introduction to Device Drivers
- Module Programming
- Kernel Configuration and Compilation
- Character Drivers
- Kernel Features
- Interrupts and Exceptions
- Debugging
- Timers
- Synchronization techniques
- ioctl's
- The proc filesystem
- Unified Device Model and sysfs
- Memory Management and Allocation
- User and Kernel Space communication
- Sleep and Wait Queues
- Interrupt Handling
- Block Drivers

- PCI
- Direct Memory Access
- Network Drivers
- USB Drivers
- MTD
- Asynchronous I/O
- I/O Scheduling

Embedded Linux and RTOS

This program deals with building an Embedded Linux system. It looks into all the aspects of porting the Linux kernel on to a target hardware and working with it.

Prerequisite

Linux Programming Essentials from Veda Solutions **or** Familiarity with building/installing Linux based tools and kernel

Duration

2 weeks

Course Contents

- Introduction to Embedded Linux
- A Brief Description of ARM Architecture
- Embedded System Booting Process
- Building a compiler tool-chain (Cross-compiler)
- Building an Embedded Linux
- Linux Kernel
- The Root file system
- Porting Linux Kernel and Root file system to the ARM boards
- Booting the Kernel
- Space & Speed Optimization Techniques
- Linux as Real Time
- More on RTOS
- RTOS comparative analysis

Register now for the next batch