Linux Kernel Debugging (LFD445)

Course Duration : 32 Hours **Course code : LFD445**

1. Course Overview

The **Linux Kernel Debugging (LFD445)** course focuses on diagnosing, analyzing, and resolving issues within the Linux kernel. This course teaches advanced debugging techniques used to identify kernel crashes, performance issues, and system instability. Learners gain hands-on experience using kernel debugging tools and methods in real-world scenarios.

2. What you'll learn?

- Linux kernel architecture and internals
- Kernel crash analysis techniques
- Debugging kernel panics and hangs
- Performance analysis and tracing
- Using kernel debugging tools
- Root cause analysis

3. Target Audience

- Linux system administrators
- Kernel developers
- Embedded Linux engineers
- DevOps and platform engineers
- IT professionals working with Linux systems

Phone: +91-999-911-1686 **Mail Us:** info@ssdntech.com

4. Pre-Requisites

- Strong Linux administration knowledge
- Understanding of C programming basics
- Familiarity with operating system concepts

5. Course Content (Modules)

Module 1: Linux Kernel Architecture

- Kernel components and execution flow
- Memory and process management

Module 2: Kernel Debugging Tools

- printk, ftrace, and kprobes
- Debugging utilities overview

Module 3: Crash Dump Analysis

- Kernel panic analysis
- Using crash and vmcore

Module 4: Performance Debugging

- CPU, memory, and I/O tracing
- Performance bottleneck analysis

Module 5: Debugging Kernel Hangs and Deadlocks

- Locking and concurrency issues
- Deadlock detection

Module 6: Root Cause Analysis and Best Practices

- Identifying root causes
- Debugging best practices