

LFD440 – Linux Kernel Debugging and Security (EN)

Course: LFD440 Linux Kernel Debugging and Security



About this Course:

- This instructor-led course focuses on the important tools used for debugging and monitoring the kernel, and how security features are implemented and controlled.
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Course Goals/Skills:

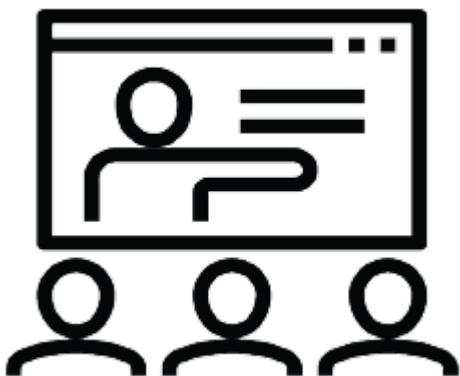
- This four day course includes extensive hands-on exercises and demonstrations designed to give you the necessary tools to develop and debug Linux kernel code.
- Introduction
 - Preliminaries
 - How to Work in OSS Projects **
 - Kernel Features
 - Monitoring and Debugging
 - Printk
 - The proc Filesystem **
 - kprobes
 - Ftrace
 - Perf
 - eBPF
 - Crash
 - kexec
 - Kernel Core Dumps
 - Virtualization**
 - QEMU
 - Linux Kernel Debugging Tools
 - Embedded Linux**
 - Notifiers**
 - CPU Frequency Scaling**
 - Netlink Sockets**
 - Kernel Deprecated Interfaces
 - Introduction to Linux Kernel Security
 - Linux Security Modules (LSM)
 - SELinux
 - AppArmor
 - Netfilter
 - The Virtual File System
 - Filesystems in User-Space (FUSE)**
 - Journaling Filesystems**
 - Closing and Evaluation Survey

Kernel Architecture I
Kernel Programming Preview
Modules
Kernel Architecture II
Kernel Configuration and Compilation
Kernel Style and General Considerations
Race Conditions and Synchronization Methods
Memory Addressing
Memory Allocation

Audience:

- This course is for experienced developers who need to understand the methods and internal infrastructure of the Linux kernel.
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Course Format:





Присъствен (Classroom)
Курс в Учебната ни зала
или В Офис на Клиент



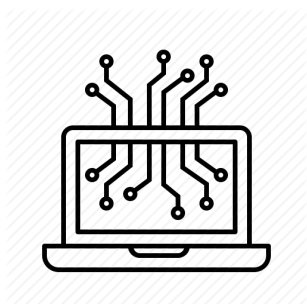
Онлайн (Online/Virtual)
Курс във виртуална зала
с инструктор

Course Language Option

| | |
|---|--|
|  |  |
| Български (Bulgarian) | Английски (English) |

You can choose the language in which the training will be conducted – Bulgarian or English. All our instructors are fluent in English.

Student Guides:



The training materials are available in electronic format. They can be used online / offline on any

device. Lifetime access.

Lab Environment:



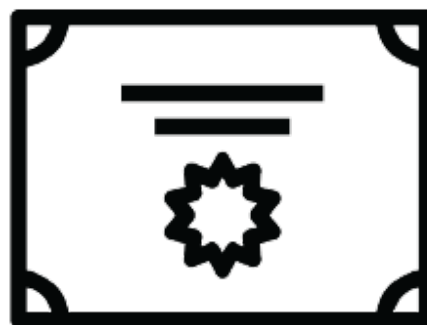
Each student has their own lab environment where the exercises are conducted, part of the course. You do not need to install software on a computer or special hardware requirements.

Participants in a face-to-face format in our Training Center have an individual computer during the training.

At Course Completion:



**Lifetime Access - Video
Archive 24/7**

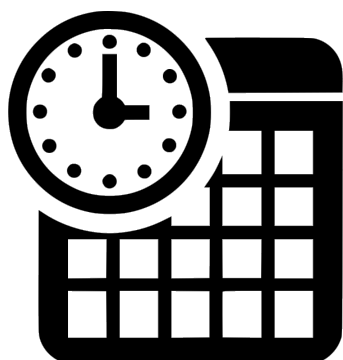


**Certificate of Course
Completion**

**Lifetime access to a video archive with recording
of each individual lecture.**

**Official internationally recognized certificate
for completed training course.**

Course Duration:



- 4 working days (09:00 – 17:00)
or
- 32 hours training (theory and practice) in non-working
hours lasting 4 weeks
Saturday and Sunday 10:00 – 14:00, 14:00 – 18:00, 18:00
– 22:00
Monday and Wednesday 19:00 – 23:00

Tuesday and Thursday 19:00 – 23:00

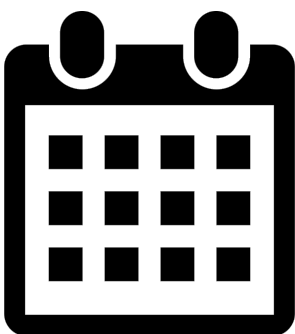
Payments :



An application for an invoice is accepted at the time of enrollment in the respective course.

An invoice is issued within 7 days of confirming the payment.

Next Class:



- There are no upcoming events.

For more information, use the contact format. We will contact you to confirm the data.

Prerequisites:

- To make the most of this course, you should:
 - Be proficient in the C programming language.
 - Be familiar with basic Linux (UNIX) utilities such as `ls`, `grep` and `tar`.
 - Be comfortable using any of the available text editors (e.g. `emacs`, `vi`, etc.).
 - Experience with any major Linux distribution is helpful but not strictly required.
 - Have experience equivalent to having taken LFD420: Linux Kernel Internals and Development.

Pre-class preparation material will be provided before class.

This Class will teach you how to pass the following exams: