

Linux System Programming

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Target group

Software developers from the field of system application development under Linux.

Prerequisites

Programming knowledge in C; program development knowledge.

Course description

In this course, the participants become acquainted with the programming interfaces of Linux and their application by using selected system programming examples. As operating system, the actual Linux Kernel is used. In this context, the students will develop and implement programs in C under Linux. Course materials are rounded up by practical exercises. After the course, the participant will become acquainted with the Linux structure. Moreover, he or she will be able to develop system applications.

Course material

- Course notes

Course topics

- Input/output functions
- Processes
- Process model
- Process life cycle
- Interprocess communication
- Threads - POSIX Threads
- Interthread communication
- Files and file systems
- System calls
- VFS - Virtual File System
- Network programming
- Socket programming
- Client/Server
- Complex data transmission
- Device drivers
- Interrupts
- Time
- Scheduler
- lp printer driver
- Kernel driver
- Modules