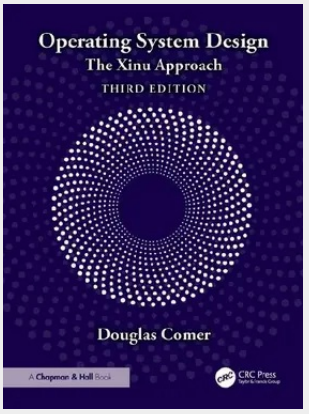
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Operating System Design

The Xinu Approach



136,50 €
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Nicht mehr lieferbar

Lauded for avoiding the typical vague, high-level survey approach found in many texts, earlier editions of this bestselling book removed the mystery by explaining the internal structure of an operating system in clear, readable prose. The third edition of Operating System Design: The Xinu Approach expands and extends the text to include new chapters on a pipe mechanism, multicore operating systems, and considerations of operating systems being used in unexpected ways. The text covers all major operating system components, including the key topics of scheduling and context switching, physical and virtual memory management, file systems, device drivers, device-independent I/O, Internet communication, and user interfaces. More important, the book follows a logical architecture that places each component in a multi-level hierarchy. It simplifies learning about operating systems by allowing a reader to understand one level at a time without needing forward references. It starts with a bare machine and builds the system level by level. In the end, a reader will appreciate how all the components of an operating system work together to form a unified, integrated platform that allows arbitrary application programs to run concurrently. The text uses a small, elegant system named Xinu as an example to illustrate the concepts and principles and make the discussion concrete. Because an operating system must deal with the underlying hardware, the text shows examples for the two basic computer architectural approaches used in the computer industry: CISC and RISC. Readers will see that most of the code remains identical across the two architectures, and they can easily compare the differences among the machine-dependent pieces, such as hardware initialization code, device interface code, and context switch code. Xinu code is freely available, and readers are strongly encouraged to download the system and experiment by making modifications or extensions. The Xinu web page, https://xinu.cs.purdue.edu, contains links to the code from the book as well as instructions on how to run Xinu on experimenter hardware boards. The page also provides links to a version that runs on the (free) VirtualBox hypervisor. A reader can install VirtualBox on their laptop or desktop, and then run Xinu without the need for additional hardware. Companion resources found here: https://www.cs.purdue.edu/homes/comer/downloads/private/Xinu_Book_Slides

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