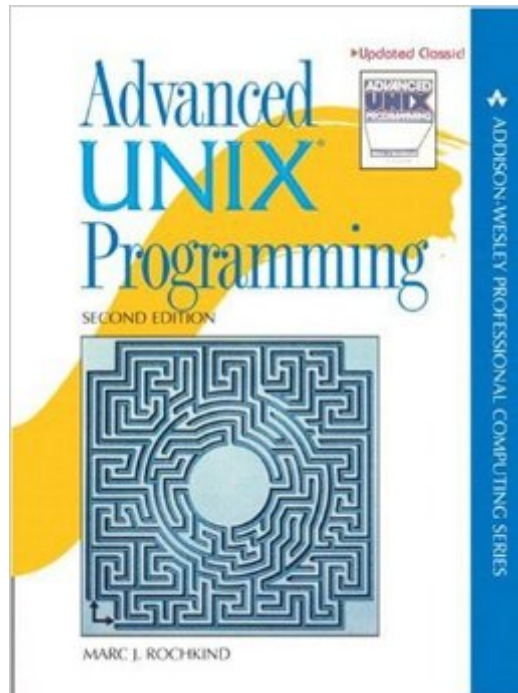# Advanced UNIX Programming (2nd Edition)

Synopsis

Helping UNIX programmers have a one-volume guide to the essential system-level services provided to them by the UNIX family of operating systems, this edition includes Linux, FreeBSD, and the Mac OS X kernel. Because mastering application programs is essential for successful UNIX programming, it helps programmers with emphasis on portability.

Book Information

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Customer Reviews

This book is truly exceptional - it covered the UNIX programming environment from beginning to the end very well. Marc Rochkind has done an amazing job updating his classic book.A brief history of UNIX and a history of various UNIX standards such as POSIX, SUS and pretty much all the others plus a 30 minute crash course in the underlying structure of UNIX get the readers going. If you are anything like me that hasn't as much a thought about how process ID's are used and the creation child processes and how permission plays a role in process creation, you will enjoy this section. I learned that its one thing to "use" UNIX, and another to really understand it deep down. The standards that are out there really throws you off though as there are so many of them. How and which one to choose? It gets rather complicated. Marc spends the first section talking about all the difficulties of "choosing a standard", and then gives you a header file that you can plug into your code and off you go. I was pleased by that. I have already started using that header file in my code and I find it rather useful.Starting from the basics of files and file access, every one of the function calls are depicted in full and example is given for each one of them. This book is like a big "how-to"

notebook that one can pick and choose what to read where to get valuable information from as one needs it. Another thing that the author does throughout his book, which made me very happy, was the little tables of "stats comparisons" between the various options and settings that were just discussed. No more guessing games as to what to expect or what to test. It's all right there.

(reviewed for the Calgary Linux Users Group Guild)There is a saying which goes, "UNIX is user-friendly; it's just picky about who its friends are." Upon reading Advanced UNIX Programming, I get the impression that Marc Rochkind may at one time have been a close friend of UNIX, but having become a little disillusioned by what UNIX has become in the 19 years since his first edition, is willing to settle for being a calm, professional acquaintance. His opening chapter provides two main reasons why this has happened: first, the UNIX kernel has grown from providing 70 or so system calls, to over 600 for an implementation that provides Single UNIX Specification and POSIX compliance; and second, there are so many flavours of UNIX out there (including Linux) that none of them implement exactly the same set of system calls. Thus the increasing complexity and diversity of UNIX implementations makes it difficult to know all that can be called UNIX intimately. Rochkind's book presents enough material to make the reader an acquaintance, leaving the building of a friendship as an exercise for the highly committed.Rochkind makes a careful selection of just over 300 of the most important system calls and groups them into a handful of broad topics: I/O (file and terminal), processes and threads, inter-process communication (including sockets), signals, and timers. He takes great care to highlight what is available in Solaris (version 8), Linux (SuSE 8), BSD (FreeBSD 4.6), and Darwin (6.8; MacOS 10.2.8), and how to write something that has a hope of running on all of them. The system calls he describes are the ones anyone writing UNIX applications must know about. That is his target audience, and he meets that target squarely.

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