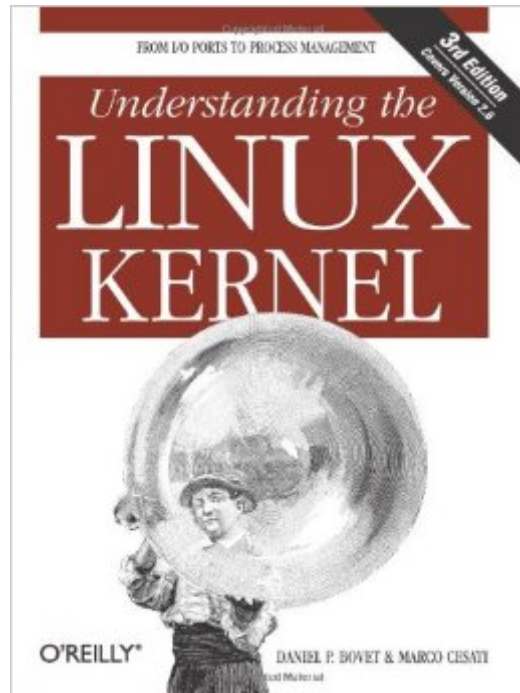


The book was found

Understanding The Linux Kernel, Third Edition



Synopsis

In order to thoroughly understand what makes Linux tick and why it works so well on a wide variety of systems, you need to delve deep into the heart of the kernel. The kernel handles all interactions between the CPU and the external world, and determines which programs will share processor time, in what order. It manages limited memory so well that hundreds of processes can share the system efficiently, and expertly organizes data transfers so that the CPU isn't kept waiting any longer than necessary for the relatively slow disks. The third edition of *Understanding the Linux Kernel* takes you on a guided tour of the most significant data structures, algorithms, and programming tricks used in the kernel. Probing beyond superficial features, the authors offer valuable insights to people who want to know how things really work inside their machine. Important Intel-specific features are discussed. Relevant segments of code are dissected line by line. But the book covers more than just the functioning of the code; it explains the theoretical underpinnings of why Linux does things the way it does. This edition of the book covers Version 2.6, which has seen significant changes to nearly every kernel subsystem, particularly in the areas of memory management and block devices. The book focuses on the following topics: Memory management, including file buffering, process swapping, and Direct memory Access (DMA) The Virtual Filesystem layer and the Second and Third Extended Filesystems Process creation and scheduling Signals, interrupts, and the essential interfaces to device drivers Timing Synchronization within the kernel Interprocess Communication (IPC) Program execution *Understanding the Linux Kernel* will acquaint you with all the inner workings of Linux, but it's more than just an academic exercise. You'll learn what conditions bring out Linux's best performance, and you'll see how it meets the challenge of providing good system response during process scheduling, file access, and memory management in a wide variety of environments. This book will help you make the most of your Linux system.

Book Information

Paperback: 944 pages

Publisher: O'Reilly Media; 3 edition (November 2005)

Language: English

ISBN-10: 0596005652

ISBN-13: 978-0596005658

Product Dimensions: 7 x 1.8 x 9.2 inches

Shipping Weight: 3.3 pounds (View shipping rates and policies)

Average Customer Review: 4.2 out of 5 stars Â Â See all reviews Â (75 customer reviews)

Best Sellers Rank: #67,802 in Books (See Top 100 in Books) #1 in Books > Computers & Technology > Programming > Algorithms > Memory Management #2 in Books > Computers & Technology > Operating Systems > Linux > Kernel & Peripherals #23 in Books > Computers & Technology > Operating Systems > Unix

Customer Reviews

This book deserves three stars for the following reasons: The three stars come from: 1.) The book does walk you through from the higher level kernel functions all the way to what happens to x86 register set during a process switch (....these details constitute the 'soul' of an OS IMHO). So you can gain some insight in how the 'naked' iron (x86) is made into a higher level LINUX virtual machine (using Tannenbaum's analogy). 2.) The book contains a tremendous wealth of information, far more than most of the other few and far between titles on the subject 3.) The book covers the aforementioned info in far more detail than most of the other few and far between titles on the subject The remaining two stars were not given because: 4.) The information in the book is organized in _the_ most haphazard and unorganized way possible....scattered all over the place with lot's of cross-references. 5.) There is a lack of effort (or perhaps ability ?) on the part of the authors to properly explain things. The information is presented more akin to a 'core -dump' of their brains. It's like "here are the facts folks.... ...you work it out on your own". Complex relationships and concepts are explained without the use of any didactics whatsoever. Each chapter is mostly just a statement of facts following one after the other ..."here is 'struct task_struct'.. it has member 'sighand' ..." e.t.c.Sure I worked my way through a lot of the information and `grepped` a lot of source code and found a lot of additional detail and info regarding the kernel all by myself..(.

[Download to continue reading...](#)

LINUX: Linux Command Line, Cover all essential Linux commands. A complete introduction to Linux Operating System, Linux Kernel, For Beginners, Learn Linux in easy steps, Fast! A Beginner's Guide Linux: Linux Guide for Beginners: Command Line, System and Operation (Linux Guide, Linux System, Beginners Operation Guide, Learn Linux Step-by-Step) Understanding the Linux Kernel, Third Edition Linux: Linux Mastery. The Ultimate Linux Operating System and Command Line Mastery (Operating System, Linux) uC/OS-III, The Real-Time Kernel, or a High Performance, Scalable, ROMable, Preemptive, Multitasking Kernel for Microprocessors, Microcontrollers & DSPs (Board NOT Included) Kernel of the Kernel (Suny Series in Islam) Understanding the LINUX Kernel: From I/O Ports to Process Management Third Eye: Awakening Your Third Eye Chakra: Beginner's Guide (Third Eye, Third Eye Chakra, Third Eye Awakening, Chakras) Third Eye: Third Eye

Activation Secrets (Third Eye Awakening, Pineal Gland, Third Eye Chakra, Open Third Eye) Linux Kernel Programming (3rd Edition) Linux Kernel Internals (2nd Edition) Linux Kernel Development (2nd Edition) Learning Linux Kernel - Process management and scheduling (Japanese Edition) Linux Kernel Development (3rd Edition) Professional Linux Kernel Architecture The Linux Kernel Book Linux System Programming: Talking Directly to the Kernel and C Library Understanding Bergson, Understanding Modernism (Understanding Philosophy, Understanding Modernism) Linux Apache Web Server Administration, Second Edition (Craig Hunt Linux Library) Linux: Linux Bash Scripting - Learn Bash Scripting In 24 hours or less

[Dmca](#)