

Robert Love Linux Kernel Development 3rd Edition

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Python Essential Reference O'Reilly & Associates Incorporated

This is an expert guide to the 2.6 Linux Kernel's most important component: the Virtual Memory Manager.

Linux System Programming Addison-Wesley Professional

Unlike some operating systems, Linux doesn't try to hide the important bits from you—it gives you full control of your computer. But to truly master Linux, you need to understand its internals, like how the system boots, how networking works, and what the kernel actually does. In this completely revised second edition of the perennial best seller *How Linux Works*, author Brian Ward makes the concepts behind Linux internals accessible to anyone curious about the inner workings of the operating system. Inside, you'll find the kind of knowledge that normally comes from years of experience doing things the hard way. You'll learn: –How Linux boots, from boot loaders to init implementations (systemd, Upstart, and System V) –How the kernel manages devices, device drivers, and processes –How networking, interfaces, firewalls, and servers work –How development tools work and relate to shared libraries –How to write effective shell scripts You'll also explore the kernel and examine key system tasks inside user space, including system calls, input and output, and filesystems. With its combination of background, theory, real-world examples, and patient explanations, *How Linux Works* will teach you what you need to know to solve pesky problems and take control of your operating system.

The Linux Kernel Module Programming Guide Pearson Educación

Over the last few years, Linux has grown both as an operating system and a tool for personal and business use. Simultaneously becoming more user friendly and more powerful as a back-end system, Linux has achieved new plateaus: the newer filesystems have solidified, new commands and tools have appeared and become standard, and the desktop—including new desktop environments—have proved to be viable, stable, and readily accessible to even those who don't consider themselves computer gurus. Whether you're using Linux for personal software projects, for a small office or home office (often termed the SOHO environment), to provide services to a small group of colleagues, or to administer a site responsible for millions of email and web connections each day, you need quick access to information on a wide range of tools. This book covers all aspects of administering and making effective use of Linux systems. Among its topics are booting, package management, and revision control. But foremost in *Linux in a Nutshell* are the utilities and commands that make Linux one of the most powerful and flexible systems available. Now in its fifth edition, *Linux in a Nutshell* brings users up-to-date with the current state of Linux. Considered by many to be the most complete and authoritative command reference for Linux available, the book covers all substantial user, programming, administration, and networking commands for the most common Linux distributions. Comprehensive but concise, the fifth edition has been updated to cover new features of major Linux distributions. Configuration information for the rapidly growing commercial network services and community update services is one of the subjects covered for the first time. But that's just the beginning. The book covers editors, shells, and LILO and GRUB boot options. There's also coverage of Apache, Samba, Postfix, sendmail, CVS, Subversion, Emacs, vi, sed, gawk, and much more. Everything that system administrators, developers, and power users need to know about Linux is referenced here, and they will turn to this book again and again.

Talking Directly to the Kernel and C Library Addison-Wesley Professional

Up-to-the-Minute. Complete Guidance for Developing Embedded Solutions with Linux Linux has emerged as today's #1 operating system for embedded products. Christopher Hallinan's *Embedded Linux Primer* has proven itself as the definitive real-world guide to building efficient, high-value, embedded systems with Linux. Now, Hallinan has thoroughly updated this highly praised book for

the newest Linux kernels, capabilities, tools, and hardware support, including advanced multicore processors. Drawing on more than a decade of embedded Linux experience, Hallinan helps you rapidly climb the learning curve, whether you're moving from legacy environments or you're new to embedded programming. Hallinan addresses today's most important development challenges and demonstrates how to solve the problems you're most likely to encounter. You'll learn how to build a modern, efficient embedded Linux development environment, and then utilize it as productively as possible. Hallinan offers up-to-date guidance on everything from kernel configuration and initialization to bootloaders, device drivers to file systems, and BusyBox utilities to real-time configuration and system analysis. This edition adds entirely new chapters on UDEV, USB, and open source build systems. Tour the typical embedded system and development environment and understand its concepts and components. Understand the Linux kernel and userspace initialization processes. Preview bootloaders, with specific emphasis on U-Boot. Configure the Memory Technology Devices (MTD) subsystem to interface with flash (and other) memory devices. Make the most of BusyBox and latest open source development tools. Learn from expanded and updated coverage of kernel debugging. Build and analyze real-time systems with Linux. Learn to configure device files and driver loading with UDEV. Walk through detailed coverage of the USB subsystem. Introduces the latest open source embedded Linux build systems. Reference appendices include U-Boot and BusyBox commands.

Addison-Wesley Professional

Explore Implementation of core kernel subsystems About This Book Master the design, components, and structures of core kernel subsystems Explore kernel programming interfaces and related algorithms under the hood Completely updated material for the 4.12.10 kernel Who This Book Is For If you are a kernel programmer with a knowledge of kernel APIs and are looking to build a comprehensive understanding, and eager to explore the implementation, of kernel subsystems, this book is for you. It sets out to unravel the underlying details of kernel APIs and data structures, piercing through the complex kernel layers and gives you the edge you need to take your skills to the next level. What You Will Learn Comprehend processes and fles—the core abstraction mechanisms of the Linux kernel that promote effective simplification and dynamism Decipher process scheduling and understand effective capacity utilization under general and real-time dispositions Simplify and learn more about process communication techniques through signals and IPC mechanisms Capture the rudiments of memory by grasping the key concepts and principles of physical and virtual memory management Take a sharp and precise look at all the key aspects of interrupt management and the clock subsystem Understand concurrent execution on SMP platforms through kernel synchronization and locking techniques In Detail Mastering Linux Kernel Development looks at the Linux kernel, its internal arrangement and design, and various core subsystems, helping you to gain significant understanding of this open source marvel. You will look at how the Linux kernel, which possesses a kind of collective intelligence thanks to its scores of contributors, remains so elegant owing to its great design. This book also looks at all the key kernel code, core data structures, functions, and macros, giving you a comprehensive foundation of the implementation details of the kernel's core services and mechanisms. You will also look at the Linux kernel as well-designed software, which gives us insights into software design in general that are easily scalable yet fundamentally strong and safe. By the end of this book, you will have considerable understanding of and appreciation for the Linux kernel. Style and approach Each chapter begins with the basic conceptual know-how for a subsystem and extends into the details of its implementation. We use appropriate code excerpts of critical routines and data structures for subsystems.

Linux Kernel Development, Second Edition Apress

Linux Kernel Development details the design and implementation of the Linux kernel, presenting the content in a manner that is beneficial to those writing and developing kernel code, as well as to

programmers seeking to better understand the operating system and become more efficient and productive in their coding. The book details the major subsystems and features of the Linux kernel, including its design, implementation, and interfaces. It covers the Linux kernel with both a practical and theoretical eye, which should appeal to readers with a variety of interests and needs. The author, a core kernel developer, shares valuable knowledge and experience on the 2.6 Linux kernel. Specific topics covered include process management, scheduling, time management and timers, the system call interface, memory addressing, memory management, the page cache, the VFS, kernel synchronization, portability concerns, and debugging techniques. This book covers the most interesting features of the Linux 2.6 kernel, including the CFS scheduler, preemptive kernel, block I/O layer, and I/O schedulers. The third edition of Linux Kernel Development includes new and updated material throughout the book: An all-new chapter on kernel data structures Details on interrupt handlers and bottom halves Extended coverage of virtual memory and memory allocation Tips on debugging the Linux kernel In-depth coverage of kernel synchronization and locking Useful insight into submitting kernel patches and working with the Linux kernel community

[Jumpstart Your Linux Programming Skills](#) Packt Publishing Ltd

Find an introduction to the architecture, concepts and algorithms of the Linux kernel in Professional Linux Kernel Architecture, a guide to the kernel sources and large number of connections among subsystems. Find an introduction to the relevant structures and functions exported by the kernel to userland, understand the theoretical and conceptual aspects of the Linux kernel and Unix derivatives, and gain a deeper understanding of the kernel. Learn how to reduce the vast amount of information contained in the kernel sources and obtain the skills necessary to understand the kernel sources.

[Linux Kernel in a Nutshell](#) Pearson Education

This book follows on from Linux Kernel Programming, helping you explore the Linux character device driver framework and enables you to write 'misc' class drivers. You'll learn how to efficiently interface with user apps, perform I/O on hardware memory, handle hardware interrupts, and leverage kernel delays, timers, kthreads, and workqueues.

[Programming in Objective-C 2.0](#) Packt Publishing Ltd

If you are an embedded developer learning about embedded Linux with some experience with the Yocto project, this book is the ideal way to become proficient and broaden your knowledge with examples that are immediately applicable to your embedded developments. Experienced embedded Yocto developers will find new insight into working methodologies and ARM specific development competence.

[Mobile with Python](#) CRC Press

Provides information on writing a driver in Linux, covering such topics as character devices, network interfaces, driver debugging, concurrency, and interrupts.

[Mastering Linux Kernel Development](#) "O'Reilly Media, Inc."

Linux Kernel Networking takes you on a guided in-depth tour of the current Linux networking implementation and the theory behind it. Linux kernel networking is a complex topic, so the book won't burden you with topics not directly related to networking. This book will also not overload you with cumbersome line-by-line code walkthroughs not directly related to what you're searching for; you'll find just what you need, with in-depth explanations in each chapter and a quick reference at the end of each chapter. Linux Kernel Networking is the only up-to-date reference guide to understanding how networking is implemented, and it will be indispensable in years to come since so many devices now use Linux or operating systems based on Linux, like Android, and since Linux is so prevalent in the data center arena, including Linux-based virtualization technologies like Xen and KVM.

[Windows Kernel Programming](#) Createspace Independent Publishing Platform

This text is a practical overview and guide to LINUX kernel programming. It includes coverage of LINUX 1.2 and provides an introduction to kernel programming in C. The accompanying CD-ROM contains a complete version of LINUX OS for PCs, with development and Internet tools and program sources.

[A Comprehensive Guide to Building, Programming, and Administering PostgreSQL Databases](#) Linux Kernel Development

"PostgreSQL" leads users through the internals of an open-source database. Throughout the book are explanations of data structures and algorithms, each backed by a concrete example from the actual source code. Each section contains information about performance implications, debugging techniques, and pointers to more information (on the Web and in book form).

[The Art of UNIX Programming](#) Pearson Education

The Art of UNIX Programming poses the belief that understanding the unwritten UNIX engineering tradition and mastering its design patterns will help programmers of all stripes to become better programmers. This book attempts to capture the engineering wisdom and design philosophy of the UNIX, Linux, and Open Source software development community as it has evolved over the past three decades, and as it is applied today by the most experienced programmers. Eric Raymond offers the next generation of "hackers" the unique opportunity to learn the connection between UNIX philosophy and practice through careful case studies of the very best UNIX/Linux programs.

[Understanding the Linux Virtual Memory Manager](#) Pearson Education

The authoritative guide to the latest Linux kernel: fully updated, with an all-new chapter on kernel data structures. * * Authored by a well-known member of the Linux kernel development team with a reputation for clarity, readability, and insight. * Covers all major subsystems and features of the latest version of the Linux 2.6.xx kernel. * Provides examples based on real kernel code: samples that developers can use to modify and improve the Linux kernel on their own. Linux Kernel Development, 3/e, is a start-to-finish guide to the design and implementation of the latest Linux 2.6.xx kernel, written specifically for programmers who want to understand the existing kernel, write new kernel code, and write software that relies on the kernel's behavior. Author Robert Love is respected worldwide for his contributions to the Linux kernel: contributions that have improved everything from Linux preemption and process scheduling to virtual memory. In this book, he illuminates every major subsystem and feature of the current Linux kernel: their purpose, goals, design, implementation, and programming interfaces. He covers the kernel both from a theoretical and applied standpoint, helping programmers gain deep insights into operating system design as they master the skills of writing Linux kernel code. Love covers all important algorithms, relevant subsystems, process management, scheduling, time management and timers, system call interface, memory addressing, memory management, paging strategies, caching layers, VFS, kernel synchronization, signals, and more. This edition has been updated throughout to reflect changes since the original Linux kernel 2.6 was released. It also contains an entirely new chapter on kernel data structures.

[PHP and MySQL Web Development](#) Pearson Education

The Definitive Guide to Using, Programming, and Administering MySQL 5.0 and 5.1 MySQL is an open source relational database management system that has experienced a phenomenal growth in popularity and use. Known for its speed and ease of use, MySQL has proven itself to be particularly well-suited for developing database-backed websites and applications. In MySQL, Paul DuBois provides a comprehensive guide to using and administering MySQL effectively and productively. He

describes everything from the basics of getting information into a database and formulating queries, to using MySQL with PHP or Perl to generate dynamic web pages, to writing your own programs that access MySQL databases, to administering MySQL servers. The fourth edition of this bestselling book has been meticulously revised and updated to thoroughly cover the latest features and capabilities of MySQL 5.0, as well as to add new coverage of features introduced with MySQL 5.1. "One of the best technical books I have read on any subject." -Gregory Haley, C Vu, The Association of C & C++ Users "A top-notch user's guide and reference manual, and in my opinion, the only book you'll need for the daily operation and maintenance of MySQL databases." -Eugene Kim, Web Techniques Introduction 1 Part I: General MySQL Use Chapter 1: Getting Started with MySQL 13 Chapter 2: Using SQL to Manage Data 101 Chapter 3: Data Types 201 Chapter 4: Stored Programs 289 Chapter 5: Query Optimization 303 Part II: Using MySQL Programming Interfaces Chapter 6: Introduction to MySQL Programming 341 Chapter 7: Writing MySQL Programs Using C 359 Chapter 8: Writing MySQL Programs Using Perl DBI 435 Chapter 9: Writing MySQL Programs Using PHP 527 Part III: MySQL Administration Chapter 10: Introduction to MySQL Administration 579 Chapter 11: The MySQL Data Directory 585 Chapter 12: General MySQL Administration 609 Chapter 13: Access Control and Security 699 Chapter 14: Database Maintenance, Backups, and Replication 737 Part IV: Appendixes Appendix A: Obtaining and Installing Software 777 Appendix B: Data Type Reference 797 Appendix C: Operator and Function Reference 813 Appendix D: System, Status, and User Variable Reference 889 Appendix E: SQL Syntax Reference 937 Appendix F: MySQL Program Reference 1037 Note: Appendixes G, H, and I are located online and are accessible either by registering this book at informit.com/register or by visiting www.kitebird.com/mysql-book. Appendix G: C API Reference 1121 Appendix H: Perl DBI API Reference 1177 Appendix I: PHP API Reference 1207 Index 1225 *The Definitive Guide to the Xen Hypervisor* "O'Reilly Media, Inc."

PHP and MySQL Web Development, Fourth Edition The definitive guide to building database-driven Web applications with PHP and MySQL and MySQL are popular open-source technologies that are ideal for quickly developing database-driven Web applications. PHP is a powerful scripting language designed to enable developers to create highly featured Web applications quickly, and MySQL is a fast, reliable database that integrates well with PHP and is suited for dynamic Internet-based applications. PHP and MySQL Web Development shows how to use these tools together to produce effective, interactive Web applications. It clearly describes the basics of the PHP language, explains how to set up and work with a MySQL database, and then shows how to use PHP to interact with the database and the server. The fourth edition of PHP and MySQL Web Development has been thoroughly updated, revised, and expanded to cover developments in PHP 5 through version 5.3, such as namespaces and closures, as well as features introduced in MySQL 5.1. This is the eBook version of the title. To gain access to the contents on the CD bundled with the printed book, please register your product at informit.com/register

[Essential Linux Device Drivers](#) Pearson Education

To thoroughly understand what makes Linux tick and why it's so efficient, you need to delve deep into the heart of the operating system--into the Linux kernel itself. The kernel is Linux--in the case of the Linux operating system, it's the only bit of software to which the term "Linux" applies. The kernel handles all the requests or completed I/O operations and determines which programs will share its processing time, and in what order. Responsible for the sophisticated memory management of the whole system, the Linux kernel is the force behind the legendary Linux efficiency. The new edition of Understanding the Linux Kernel takes you on a guided tour through the most significant data structures, many algorithms, and programming tricks used in the kernel. Probing beyond the superficial features, the authors offer valuable insights to people who want to know how things really work inside their machine. Relevant segments of code are dissected and discussed line by line. The book covers more than just the functioning of the code, it explains the theoretical underpinnings for why Linux does things the way it does. The new edition of the book has been updated to cover version 2.4 of the kernel, which is quite different from version 2.2: the virtual memory system is entirely new, support for multiprocessor systems is improved, and whole new classes of hardware devices have been added. The authors explore each new feature in detail. Other topics in the book include: Memory management including file buffering, process swapping, and Direct memory Access (DMA) The Virtual Filesystem and the Second Extended Filesystem Process creation and scheduling Signals, interrupts, and the essential interfaces to device drivers Timing Synchronization in the kernel Interprocess Communication (IPC) Program execution Understanding the Linux Kernel, Second Edition will acquaint you with all the inner workings of Linux, but is 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. If knowledge is power, then this book will help you make the most of your Linux system.

[Creating Apps in Kivy](#) "O'Reilly Media, Inc."

Learn how to write high-quality kernel module code, solve common Linux kernel programming issues, and understand the fundamentals of Linux kernel internals Key Features Discover how to write kernel code using the Loadable Kernel Module framework Explore industry-grade techniques to perform efficient memory allocation and data synchronization within the kernel Understand the essentials of key internals topics such as kernel architecture, memory management, CPU scheduling, and kernel synchronization Book Description Linux Kernel Programming is a comprehensive introduction for those new to Linux kernel and module development. This easy-to-follow guide will have you up and running with writing kernel code in next-to-no time. This book uses the latest 5.4 Long-Term Support (LTS) Linux kernel, which will be maintained from November 2019 through to December 2025. By working with the 5.4 LTS kernel throughout the book, you can be confident that your knowledge will continue to be valid for years to come. This Linux book begins by showing you how to build the kernel from the source. Next, you'll learn how to write your first kernel module using the powerful Loadable Kernel Module (LKM) framework. The book then covers key kernel internals topics including Linux kernel architecture, memory management, and CPU scheduling. Next, you'll delve into the fairly complex topic of concurrency within the kernel, understand the issues it can cause, and learn how they can be addressed with various locking technologies (mutexes, spinlocks, atomic, and refcount operators). You'll also benefit from more advanced material on cache effects, a primer on lock-free techniques within the kernel, deadlock avoidance (with lockdep), and kernel lock debugging techniques. By the end of this kernel book, you'll have a detailed understanding of the fundamentals of writing Linux kernel module code for real-world projects and products. What you will learn Write high-quality modular kernel code (LKM framework) for 5.x kernels Configure and build a kernel from source Explore the Linux kernel architecture Get to grips with key internals regarding memory management within the kernel Understand and work with various dynamic kernel memory alloc/dealloc APIs Discover key internals aspects regarding CPU scheduling within the kernel Gain an understanding of kernel concurrency issues Find out how to work with key kernel synchronization primitives Who this book is for This book is for Linux programmers beginning to find their way with Linux kernel development. Linux kernel and driver developers looking to overcome frequent and common kernel development issues, as well as understand kernel internals, will benefit from this book. A basic understanding of Linux CLI and C programming is required.

Linux Kernel Programming Part 2 - Char Device Drivers and Kernel Synchronization Packt Publishing Ltd

This book is about writing software that makes the most effective use of the system you're running on -- code that interfaces directly with the kernel and core system libraries, including the shell, text editor, compiler, debugger, core utilities, and system daemons. The majority of both Unix and Linux code is still written at the system level, and Linux System Programming focuses on everything above the kernel, where applications such as Apache, bash, cp, vim, Emacs, gcc, gdb, glibc, ls, mv, and X exist. Written primarily for engineers looking to program (better) at the low level, this book is an ideal teaching tool for any programmer. Even with the trend toward high-level development, either through web software (such as PHP) or managed code (C#), someone still has to write the PHP interpreter and the C# virtual machine. Linux System Programming gives you an understanding of core internals that makes for better code, no matter where it appears in the stack. Debugging high-

level code often requires you to understand the system calls and kernel behavior of your operating system, too. Key topics include: An overview of Linux, the kernel, the C library, and the C compiler Reading from and writing to files, along with other basic file I/O operations, including how the Linux kernel implements and manages file I/O Buffer size management, including the Standard I/O library Advanced I/O interfaces, memory mappings, and optimization techniques The family of system calls for basic process management Advanced process management, including real-time processes File and directories-creating, moving, copying, deleting, and managing them Memory management -- interfaces for allocating memory, managing the memory you have, and optimizing your memory access Signals and their role on a Unix system, plus basic and advanced signal interfaces Time, sleeping, and clock management, starting with the basics and continuing through POSIX clocks and high resolution timers With Linux System Programming, you will be able to take an in-depth look at Linux from both a theoretical and an applied perspective as you cover a wide range of programming topics.

Best Sellers - Books :

- [To Kill A Mockingbird](#)
- [I'm Glad My Mom Died](#)
- [The Woman In Me](#)
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- [Rich Dad Poor Dad: What The Rich Teach Their Kids About Money That The Poor And Middle Class Do Not!](#)
- [Things We Never Got Over \(knockemout\)](#)
- [The Summer Of Broken Rules By K. L. Walther](#)
- [Goodnight Moon](#)
- [Bluey And Bingo's Fancy Restaurant Cookbook: Yummy Recipes, For Real Life](#)
- [The Creative Act: A Way Of Being](#)