

Professional Linux Kernel Architecture Wrox Programmer To Programmer By Mauerer Wolfgang Published By John Wiley Sons 2008

Each book aims to teach an important technology or programming language and is designed to take a person from being a novice to a professional by including the most essential information and explaining step by step how to put together real-world projects. The comprehensive developer guide to the latest Android features and capabilities Professional Android, 4th Edition shows developers how to leverage the latest features of Android to create robust and compelling mobile apps. This hands-on approach provides in-depth coverage through a series of projects, each introducing a new Android platform feature and highlighting the techniques and best practices that exploit its utmost functionality. The exercises begin simply, and gradually build into advanced Android development. Clear, concise examples show you how to quickly construct real-world mobile applications. This book is your guide to smart, efficient, effective Android development. Learn the best practices that get more out of Android Understand the anatomy, lifecycle, and UI metaphor of Android apps Design for all mobile platforms, including tablets Utilize both the Android framework and Google Play services A guide to completing Python projects for those ready to take their skills to the next level Python Projects is the ultimate resource for the Python programmer with basic skills who is ready to move beyond tutorials and start building projects. The preeminent guide to bridge the gap between learning and doing, this book walks readers through the "where" and "how" of real-world Python programming with practical, actionable instruction. With a focus on real-world functionality, Python Projects details the ways that Python can be used to complete daily tasks and bring efficiency to businesses and individuals alike. Python Projects is written specifically for those who know the Python syntax and lay of the land, but may still be intimidated by larger, more complex projects. The book provides a walk-through of the basic set-up for an application and the building and packaging for a library, and explains in detail the functionalities related to the projects. Topics include: *How to maximize the power of the standard library modules *Where to get third party libraries, and the best practices for utilization *Creating, packaging, and reusing libraries within and across projects *Building multi-layered functionality including networks, data, and user interfaces *Setting up development environments and using virtualenv, pip, and more Written by veteran Python trainers, the book is structured for easy navigation and logical progression that makes it ideal for individual, classroom, or corporate training. For Python developers looking to apply their skills to real-world challenges, Python Projects is a goldmine of information and expert insight.

*The most updated PostgreSQL book on the market, covering version 8.0 *Highlights the most popular PostgreSQL APIs, including C, Perl, PHP, and Java *This is two books in one; it simultaneously covers key relational database design principles, while teaching PostgreSQL

Building PHP Applications with Symfony, CakePHP, and Zend Framework

Professional Visual Studio 2017

Professional Android™ Application Development

Professional DevExpress ASP.NET Controls

Patterns, Principles, and Practices of Domain-Driven Design

Team Foundation Server is now for everyone! Team Foundation Server is an integral part of Microsoft's Application Lifecycle Management suite for managing and delivering software projects. The 2013 update has opened up TFS for everyone by expanding capabilities to support iOS, MacOS, Android, and Java development. Professional Team Foundation Server 2013 covers the latest updates for Agile Project Management, Test-Case Management, Release Management, and shows new users the TFS workflow for managing and delivering products. The authors leverage their positions as MVP Microsoft insiders to guide you step-by-step through all things TFS, as well as help prepare you for the Team Foundation Server Certification Exam. Provides a broad overview of Team Foundation Server for developers, software project managers, testers, business analysts, and others wanting to learn how to use TFS Gives TFS administrators the tools they need to efficiently monitor and manage the TFS environment Covers core TFS functions including project management, work item tracking, version control, test case management, build automation, reporting Explains extensibility options and how to write extensions for TFS Helps certification candidates prepare for the Microsoft Team Foundation Server 2013 certification exam Professional Team Foundation Server 2013 is the ultimate guide to mastering this invaluable developer's tool. Learn to build fast and scalable software in JavaScript with Node.js Node.js is a powerful and popular new framework for writing scalable network programs using JavaScript. This no nonsense book begins with an overview of Node.js and then quickly dives into the code, core concepts, and

APIs. In-depth coverage pares down the essentials to cover debugging, unit testing, and flow control so that you can start building and testing your own modules right away. Covers node and asynchronous programming main concepts Addresses the basics: modules, buffers, events, and timers Explores streams, file systems, networking, and automated unit testing Goes beyond the basics, and shares techniques and tools for debugging, unit testing, and flow control If you already know JavaScript and are curious about the power of Node.js, then this is the ideal book for you.

Unlike high-level languages such as Java and C++, assembly language is much closer to the machine code that actually runs computers; it's used to create programs or modules that are very fast and efficient, as well as in hacking exploits and reverse engineering Covering assembly language in the Pentium microprocessor environment, this code-intensive guide shows programmers how to create stand-alone assembly language programs as well as how to incorporate assembly language libraries or routines into existing high-level applications Demonstrates how to manipulate data, incorporate advanced functions and libraries, and maximize application performance Examples use C as a high-level language, Linux as the development environment, and GNU tools for assembling, compiling, linking, and debugging

The first detailed, unbiased comparison of the three leading PHP frameworks Web developers have been eager for an impartial comparison of leading PHP frameworks so they can make educated decisions about the most effective tool for their needs. This guide uses Symfony, CakePHP, and Zend Framework to solve key problems, providing source code examples and comparisons for each. It explains the approach and reviews the similarities and differences in the three frameworks, providing reliable information on which to base your decisions. Symfony, CakePHP, and Zend Framework are considered the leading PHP frameworks; developers need an unbiased comparison to choose which one works best for their individual situations This guide uses each framework to solve the same problems, illustrating the solutions with source code examples and working applications Covers wide range of topics, from installation and configuration to most advanced features like AJAX, web services and automated testing. Includes an appendix of new PHP frameworks, including CodeIgniter, Lithium, and Agavi Bestselling PHP author Elizabeth Naramore serves as technical editor Comparison of PHP Web Frameworks provides the impartial, side-by-side comparison that developers have been looking for.

Beginning Linux Programming

Beginning Red Hat Linux 9

Beginning Linux?Programming

Linux Command Line and Shell Scripting Bible

Professional Node.js

This book is broken into four primary sections addressing key topics that Linux programmers need to master: Linux nuts and bolts, the Linux kernel, the Linux desktop, and Linux for the Web Effective examples help get readers up to speed with building software on a Linux-based system while using the tools and utilities that contribute to streamlining the software development process Discusses using emulation and virtualization technologies for kernel development and application testing Includes useful insights aimed at helping readers understand how their applications code fits in with the rest of the software stack Examines cross-compilation, dynamic device insertion and removal, key Linux projects (such as Project Utopia), and the internationalization capabilities present in the GNOME desktop

Describes the concepts of programming with Linux, covering such topics as shell programming, file structure, managing memory, using MySQL, debugging, processes and signals, and GNOME. Covering all major platforms—Linux, Unix, Mac OS X, and Windows—this guide shows programmers and power users how to customize an operating system, automate commands, and simplify administration tasks using shell scripts Offers complete shell-scripting instructions, robust code examples, and full scripts for OS customization Covers shells as a user interface, basic scripting techniques, script editing and debugging, graphing data, and simplifying administrative tasks In addition to Unix and Linux scripting, the book covers the latest Windows scripting techniques and offers a complete tutorial on Mac OS X scripting, including detailed coverage of mobile file systems, legacy applications, Mac text editors, video captures, and the Mac OS X Open Scripting Architecture

Market_Desc: · Programmers and Developers either looking to get into the application security space or looking for guidance to enhance the security of their work· Network Security Professional s looking to learn about, and get into, web application penetration testing Special Features: · Exclusive coverage: coverage includes basics of security and web applications for programmers and developers unfamiliar with security and then drills down to validation, testing and best practices, to ensure secure software development· Website: unique value-add (not found in any other book) showing the reader how to build his/her own pen testing lab, including installation of honey pots (a trap set to detect or deflect attempts at unauthorized use of information systems)—will be replicated on web site· Delivers on Programmer to Programmer promise· Author platform: author is an expert in all forms of penetration testing, in both government and corporate settings, with a reach into each audience About The Book: The first two chapters of the book reviews the basics of web applications and their protocols, especially authentication aspects, as a launching pad for understanding the inherent security

vulnerabilities, covered later in the book. Immediately after this coverage, the author gets right down to basics of information security, covering vulnerability analysis, attack simulation, and results analysis, focusing the reader on the outcomes aspects needed for successful pen testing. The author schools the reader on how to present findings to internal and external critical stakeholders, and then moves on to remediation or hardening of the code and applications, rather than the servers.

Professional Android

Professional Linux Programming

Professional C++

Professional Android 4 Application Development

Professional CUDA C Programming

As a Java programmer, how can you tackle the disruptive client-server approach to web development? With this comprehensive guide, you'll learn how today's client-side technologies and web APIs work with various Java tools. Author Casimir Saternos provides the big picture of client-server development, and then takes you through many practical client-server architectures. You'll work with hands-on projects in several chapters to get a feel for the topics discussed. User habits, technologies, and development methods have drastically altered web app design in recent years. But the Web itself hasn't changed. This book shows you how to build apps that conform to the web's underlying architecture. Learn the advantages of using separate client and server tiers, including code organization and speedy prototyping Explore the major tools, frameworks, and starter projects used in JavaScript development Dive into web API design and REST style of software architecture Understand Java's alternatives to traditional packaging methods and application server deployment Build projects with lightweight servers, using jQuery with Jython, and Sinatra with Angular Create client-server web apps with traditional Java web application servers and libraries

Professional Multicore Programming: Design and Implementation for C++ Developers presents the basics of multicore programming in a simple, easy-to-understand manner so that you can easily apply the concepts to your everyday projects. Learn the fundamentals of programming for multiprocessor and multithreaded architecture, progress to multi-core programming and eventually become comfortable with programming techniques that otherwise can be difficult to understand. Anticipate the pitfalls and traps of concurrency programming and synchronization before you encounter them yourself by finding them outlined in this indispensable guide to multicore programming.

FIDJI 2002 was an international forum for researchers and practitioners interested in the advances in, and applications of, software engineering for distributed application development. Concerning the technologies, the workshop focused on "Java-related" technologies. It was an opportunity to present and observe the latest research, results, and ideas in these areas. All papers submitted to this workshop were reviewed by at least two members of the International Program Committee. Acceptance was based primarily on the originality and contribution. We selected for these postworkshop proceedings 16 papers amongst 33 submitted, two tutorials, and two keynotes. FIDJI 2002 was aimed at promoting a scientific approach to software engineering. The scope of the workshop included the following topics: - design of distributed Java applications - Java-related technologies - software and system architecture engineering and development methodologies - development methodologies for UML - development methodologies for reliable distributed systems - component-based development methodologies - management of evolutions/iterations in the analysis, design, implementation, and test phases - dependability support during system lifecycle - managing inconsistencies during application development - atomicity and exception handling in system development - software architectures, frameworks, and design patterns for developing distributed systems - integration of formal techniques in the development process - formal analysis and grounding of modeling notation and techniques (e. g.

Describes the Linux operating system, covering such topics as installation, connecting to the Internet, software, applications, user accounts, networking, system administration, security, and Perl.

Professional Team Foundation Server 2013

Design and Implementation for C++ Developers

Python Projects

Linux Kernel Programming

International Workshop, FIDJI 2002, Luxembourg, Luxembourg, November 28-29, 2002, Revised Papers

A compendium of shell scripting recipes that can immediately be used, adjusted, and applied The shell is the primary way of communicating with the Unix and Linux systems, providing a direct way to program by automating simple-to-intermediate tasks. With this book, Linux expert Steve Parker shares a collection of shell scripting recipes that can be used as is or easily modified for a variety of environments or situations. The book covers shell programming, with a focus on Linux and the Bash shell; it provides credible, real-world relevance, as well as providing the flexible tools to get started immediately. Shares a collection of helpful shell scripting recipes that can immediately be used for various of real-world challenges Features recipes for system tools, shell features, and systems administration Provides a host of plug and play recipes for to immediately apply and easily modify so the wheel doesn't have to be reinvented with each challenge faced Come out of your shell and dive into this collection of tried and tested shell scripting recipes that you can start using right away!

Advance your understanding of the Linux command line with this invaluable resource Linux Command Line and Shell Scripting Bible, 4th Edition is the newest installment in the indispensable series known to Linux developers all over the world. Packed with concrete strategies and practical tips, the latest edition includes brand-new content covering: Understanding the Shell Writing Simple Script Utilities Producing Database, Web & Email Scripts Creating Fun Little Shell Scripts Written by accomplished Linux professionals Christine Bresnahan and Richard Blum, Linux Command Line and Shell Scripting Bible, 4th Edition teaches readers the fundamentals and advanced topics necessary for a comprehensive understanding of shell scripting in Linux. The book is filled with real-world examples and usable scripts, helping readers navigate the challenging Linux environment with ease and convenience. The book is perfect for anyone who uses Linux at home or in the office and will quickly find a place on every Linux enthusiast's bookshelf.

This book presents you with a complete foundation on the Xen technology and shows you how Xen virtualization offers faster response times for new server and service requests, a simplified system administration for multiple systems, and better availability for critical computing resources. Packed with detailed examples of Xen configuration files, system configuration files, and system-level configuration information, this book shows you why Xen virtualization is among the leading emerging technologies on the Linux platform and is being integrated into virtually every commercial distribution.

A hands-on guide to building mobile applications, Professional Android Application Development features concise and compelling examples that show you how to quickly construct real-world mobile applications for Android phones. Fully up-to-date for version 1.0 of the Android software development kit, it covers all the essential features, and explores the advanced capabilities of Android (including GPS, accelerometers, and background Services) to help you construct increasingly complex, useful, and innovative mobile applications for Android phones. What this

book includes An introduction to mobile development, Android, and how to get started. An in-depth look at Android applications and their life cycle, the application manifest, Intents, and using external resources. Details for creating complex and compelling user interfaces by using, extending, and creating your own layouts and Views and using Menus. A detailed look at data storage, retrieval, and sharing using preferences, files, databases, and Content Providers. Instructions for making the most of mobile portability by creating rich map-based applications as well as using location-based services and the geocoder. A look at the power of background Services, using threads, and a detailed look at Notifications. Coverage of Android's communication abilities including SMS, the telephony APIs, network management, and a guide to using Internet resources Details for using Android hardware, including media recording and playback, using the camera, accelerometers, and compass sensors. Advanced development topics including security, IPC, advanced 2D / 3D graphics techniques, and user – hardware interaction. Who this book is for This book is for anyone interested in creating applications for the Android mobile phone platform. It includes information that will be valuable whether you're an experienced mobile developer or making your first foray, via Android, into writing mobile applications. It will give the grounding and knowledge you need to write applications using the current SDK, along with the flexibility to quickly adapt to future enhancements.

Linux Kernel Development

Concept and Programming

Containerization Is the New Virtualization

Professional Assembly Language

Operating Systems for Supercomputers and High Performance Computing

Covering all aspects of the Unix operating system and assuming no prior knowledge of Unix, this book begins with the fundamentals and works from the ground up to some of the more advanced programming techniques. The authors provide a wealth of real-world experience with the Unix operating system, delivering actual examples while showing some of the common misconceptions and errors that new users make. Special emphasis is placed on the Apple Mac OS X environment as well as Linux, Solaris, and migrating from Windows to Unix. A unique conversion section of the book details specific advice and instructions for transitioning Mac OS X, Windows, and Linux users.

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. Advanced Linux Programming is divided into two parts. The first covers generic UNIX system services, but with a particular eye towards Linux specific information. This portion of the book will be of use even to advanced programmers who have worked with other Linux systems since it will cover Linux specific details and differences. For programmers without UNIX experience, it will be even more valuable. The second section covers material that is entirely Linux specific. These are truly advanced topics, and are the techniques that the gurus use to build great applications. While this book will focus mostly on the Application Programming Interface (API) provided by the Linux kernel and the C library, a preliminary introduction to the development tools available will allow all who purchase the book to make immediate use of Linux.

Few works are as timely and critical to the advancement of high performance computing than is this new up-to-date treatise on leading-edge directions of operating systems. It is a first-hand product of many of the leaders in this rapidly evolving field and possibly the most comprehensive. This new and important book masterfully presents the major alternative concepts driving the future of operating system design for high performance computing. In particular, it describes the major advances of monolithic operating systems such as Linux and Unix that dominate the TOP500 list. It also presents the state of the art in lightweight kernels that exhibit high efficiency and scalability at the loss of generality. Finally, this work looks forward to possibly the most promising strategy of a hybrid structure combining full service functionality with lightweight kernel operation. With this, it is likely that this new work will find its way on the shelves of almost everyone who is in any way engaged in the multi-discipline of high performance computing. (From the foreword by Thomas Sterling)

This book covers the fundamentals of machine learning with Python in a concise and dynamic manner. It covers data mining and large-scale machine learning using Apache Spark. About This Book Take your first steps in the world of data science by understanding the tools and techniques of data analysis Train efficient Machine Learning models in Python using the supervised and unsupervised learning methods Learn how to use Apache Spark for processing Big Data efficiently Who This Book Is For If you are a budding data scientist or a data analyst who wants to analyze and gain actionable insights from data using Python, this book is for you.

Programmers with some experience in Python who want to enter the lucrative world of Data Science will also find this book to be very useful, but you don't need to be an expert Python coder or mathematician to get the most from this book. What You Will Learn Learn how to clean your data and ready it for analysis Implement the popular clustering and regression methods in Python Train efficient machine learning models using decision trees and random forests Visualize the results of your analysis using Python's Matplotlib library Use Apache Spark's MLlib package to perform machine learning on large datasets In Detail Join Frank Kane, who worked on Amazon and IMDb's machine learning algorithms, as he guides you on your first steps into the world of data science. Hands-On Data Science and Python Machine Learning gives you the tools that you need to understand and explore the core topics in the field, and the confidence and practice to build and analyze your own machine learning models. With the help of interesting and easy-to-follow practical examples, Frank Kane explains potentially complex topics such as Bayesian methods and K-means clustering in a way that anybody can understand them. Based on Frank's successful data science course, Hands-On Data Science and Python Machine Learning empowers you to conduct data analysis and perform efficient machine learning using Python. Let Frank help you unearth the value in your data using the various data mining and data analysis techniques available in Python, and to develop efficient predictive models to predict future results. You will also learn how

to perform large-scale machine learning on Big Data using Apache Spark. The book covers preparing your data for analysis, training machine learning models, and visualizing the final data analysis. Style and approach This comprehensive book is a perfect blend of theory and hands-on code examples in Python which can be used for your reference at any time.

Professional Android 2 Application Development

Professional Linux Kernel Architecture

Scientific Engineering for Distributed Java Applications

Expert Recipes for Linux, Bash, and more

A hands-on guide to leveraging NoSQL databases NoSQL databases are an efficient and powerful tool for storing and manipulating vast quantities of data. Most NoSQL databases scale well as data grows. In addition, they are often malleable and flexible enough to accommodate semi-structured and sparse data sets. This comprehensive hands-on guide presents fundamental concepts and practical solutions for getting you ready to use NoSQL databases. Expert author Shashank Tiwari begins with a helpful introduction on the subject of NoSQL, explains its characteristics and typical uses, and looks at where it fits in the application stack. Unique insights help you choose which NoSQL solutions are best for solving your specific data storage needs. **Professional NoSQL: Demystifies the concepts that relate to NoSQL databases, including column-family oriented stores, key/value databases, and document databases. Delves into installing and configuring a number of NoSQL products and the Hadoop family of products. Explains ways of storing, accessing, and querying data in NoSQL databases through examples that use MongoDB, HBase, Cassandra, Redis, CouchDB, Google App Engine Datastore and more. Looks at architecture and internals. Provides guidelines for optimal usage, performance tuning, and scalable configurations. Presents a number of tools and utilities relating to NoSQL, distributed platforms, and scalable processing, including Hive, Pig, RRDtool, Nagios, and more.**

Skip the basics and delve right into Visual Studio 2017 advanced features and tools Professional Visual Studio 2017 is the industry-favorite guide to getting the most out of Microsoft's primary programming technology. From touring the new UI to exploiting advanced functionality, this book is designed to help professional developers become more productive. A unique IDE-centric approach provides a clear path through the typical workflow while exploring the nooks and crannies that can make your job easier. Visual Studio 2017 includes a host of features aimed at improving developer productivity and UI, and this book covers them all with clear explanation, new figures, and expert insight. Whether you're new to VS or just upgrading, this all-inclusive guide is an essential resource to keep within arm's reach. Visual Studio 2017 fixes the crucial issues that kept professionals from adopting VS 2015, and includes new features and tools that streamline the developer's job. This book provides the straightforward answers you need so you can get up to speed quickly and get back to work. Master the core functionality of Visual Studio 2017 Dig into the tools that make writing code easier Tailor the environment to your workflow, not the other way around Work your way through configuration, debugging, building, deployment, customizing, and more Microsoft is changing their release cadence—it's only been about two years since the last release—so developers need to quickly get a handle on new tools and features if they hope to remain productive. The 2017 release is designed specifically to help you get more done, in less time, with greater accuracy and attention to detail. If you're ready to get acquainted, Professional Visual Studio 2017 is your ideal guide.

Numerous people still believe that learning and acquiring expertise in Linux is not easy, that only a professional can understand how a Linux system works. Nowadays, Linux has gained much popularity both at home and at the workplace. **Linux Yourself: Concept and Programming** aims to help and guide people of all ages by offering a deep insight into the concept of Linux, its usage, programming, administration, and several other connected topics in an easy approach. This book can also be used as a textbook for undergraduate/postgraduate engineering students and others who have a passion to gain expertise in the field of computer science/information technology as a Linux developer or administrator. The word "Yourself" in the title refers to the fact that the content of this book is designed to give a good foundation to understand the Linux concept and to guide yourself as a good Linux professional in various platforms. There are no prerequisites to understand the contents from this book, and a person with basic knowledge of C programming language will be able to grasp the concept with ease. With this mindset, all the topics are presented in such a way that it should be simple, clear, and straightforward with many examples and figures. Linux is distinguished by its own power and flexibility, along with open-source accessibility and community as compared to other operating systems, such as Windows and macOS. It is the author's sincere view that readers of all levels will find this book worthwhile and will be able to learn or sharpen their skills. **KEY FEATURES** Provides a deep conceptual learning and expertise in programming skill for any user about Linux, UNIX, and their features. Elaborates GUI and CUI including Linux commands, various shells, and the vi editor Details file management and file systems to understand Linux system architecture easily Promotes hands-on practices of regular expressions and advanced filters, such as sed and awk through many helpful examples Describes an insight view of shell scripting, process, thread, system calls, signal, inter-process communication, X Window System, and many more aspects to understand the system programming in the Linux environment Gives a detailed description of Linux administration by elaborating LILO, GRUB, RPM-based package, and program installation and compilation that can be very helpful in managing the Linux system in a very efficient way Reports some famous Linux distributions to understand the similarity among all popular available Linux and other features as case studies

Professional Linux Kernel Architecture John Wiley & Sons

The Docker Book

Professional Xen Virtualization

Building Javascript Based Scalable Software

Hands-On Data Science and Python Machine Learning

A comprehensive guide to kernel internals, writing kernel modules, and kernel synchronization

Methods for managing complex software construction following the practices, principles and patterns of Domain-Driven Design with code examples in C# This book presents the philosophy of Domain-Driven Design (DDD) in a down-to-earth and practical manner for experienced developers building applications for complex domains. A focus is placed on the principles and practices of decomposing a complex problem space as well as the implementation patterns and best practices for shaping a maintainable solution space. You will learn how to build effective domain

models through the use of tactical patterns and how to retain their integrity by applying the strategic patterns of DDD. Full end-to-end coding examples demonstrate techniques for integrating a decomposed and distributed solution space while coding best practices and patterns advise you on how to architect applications for maintenance and scale. Offers a thorough introduction to the philosophy of DDD for professional developers Includes masses of code and examples of concept in action that other books have only covered theoretically Covers the patterns of CQRS, Messaging, REST, Event Sourcing and Event-Driven Architectures Also ideal for Java developers who want to better understand the implementation of DDD

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. You'll start the journey by learning how to build the kernel from the source. Next, you'll write your first kernel module using the powerful Loadable Kernel Module (LKM) framework. The following chapters will cover key kernel internals topics including Linux kernel architecture, memory management, and CPU scheduling. During the course of this book, 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. If you're a Linux kernel and driver developer looking to overcome frequent and common kernel development issues, or understand kernel internals, you'll find plenty of useful information. You'll need a solid foundation of Linux CLI and C programming before you can jump in. Beginning Linux Programming, Fourth Edition continues its unique approach to teaching UNIX programming in a simple and structured way on the Linux platform. Through the use of detailed and realistic examples, students learn by doing, and are able to move from being a Linux beginner to creating custom applications in Linux. The book introduces fundamental concepts beginning with the basics of writing Unix programs in C, and including material on basic system calls, file I/O, interprocess communication (for getting programs to work together), and shell programming. Parallel to this, the book introduces the toolkits and libraries for working with user interfaces, from simpler terminal mode applications to X and GTK+ for graphical user interfaces. Advanced topics are covered in detail such as processes, pipes, semaphores, socket programming, using MySQL, writing applications for the GNOME or the KDE desktop, writing device drivers, POSIX Threads, and kernel programming for the latest Linux Kernel.

Break into the powerful world of parallel GPU programming with this down-to-earth, practical guide Designed for professionals across multiple industrial sectors, Professional CUDA C Programming presents CUDA -- a parallel computing platform and programming model designed to ease the development of GPU programming -- fundamentals in an easy-to-follow format, and teaches readers how to think in parallel and implement parallel algorithms on GPUs. Each chapter covers a specific topic, and includes workable examples that demonstrate the development process, allowing readers to explore both the "hard" and "soft" aspects of GPU programming. Computing architectures are experiencing a fundamental shift toward scalable parallel computing motivated by application requirements in industry and science. This book demonstrates the challenges of efficiently utilizing compute resources at peak performance, presents modern techniques for tackling these challenges, while increasing accessibility for professionals who are not necessarily parallel programming experts. The CUDA programming model and tools empower developers to write high-performance applications on a scalable, parallel computing platform: the GPU. However, CUDA itself can be difficult to learn without extensive programming experience. Recognized CUDA authorities John Cheng, Max Grossman, and Ty McKercher guide readers through essential GPU programming skills and best practices in Professional CUDA C Programming, including: CUDA Programming Model GPU Execution Model GPU Memory model Streams, Event and Concurrency Multi-GPU Programming CUDA Domain-Specific Libraries Profiling and Performance Tuning The book makes complex CUDA concepts easy to understand for anyone with knowledge of basic software development with exercises designed to be both readable and high-performance. For the professional seeking entrance to parallel computing and the high-performance computing community, Professional CUDA C Programming is an invaluable resource, with the most current information available on the market.

Beginning Android Programming with Android Studio

From Novice to Professional

Beginning Databases with PostgreSQL

Professional Multicore Programming

Shell Scripting

Updated for Docker Community Edition v18.09! Docker book designed for SysAdmins, SREs, Operations staff, Developers and DevOps who are interested in deploying the open source container service Docker. In this book, we'll walk you through installing, deploying, managing, and extending Docker. We're going to do that by first introducing you to the basics of Docker and its components. Then we'll start to use Docker to build containers and services to perform a variety of tasks. We're going to take you through the development lifecycle, from testing to production, and see where Docker fits in and how it can make your life easier. We'll make use of Docker to build test environments for new projects, demonstrate how to integrate Docker with continuous integration workflow, and then how to build application services and platforms. Finally, we'll show you how to use Docker's API and how to extend Docker yourself. We'll teach you how to: * Install Docker. * Take your first steps with a Docker container. * Build Docker images. * Manage and share Docker images. * Run and manage more complex Docker containers. * Deploy Docker containers as part of your testing pipeline. * Build multi-container applications and environments. * Learn about orchestration using Compose and Swarm for the orchestration of Docker containers and Consul for service discovery. * Explore the Docker API. * Getting Help and Extending Docker.

An in-depth look into Mac OS X and iOS kernels Powering Macs, iPhones, iPads and more, OS X and iOS are becoming ubiquitous. When it comes to documentation, however, much of them are shrouded in mystery. Cocoa and Carbon, the application frameworks, are neatly described, but system programmers find the rest lacking. This indispensable guide illuminates the darkest corners of those systems, starting with an architectural overview, then drilling all the way to the core. Provides you with a top down view of OS X and iOS Walks you through the phases of system startup—both Mac (EFi) and mobile (iBoot) Explains how processes, threads, virtual memory, and filesystems are maintained Covers the security architecture Reviews the internal APIs used by the system—BSD and Mach Dissects the kernel, XNU, into its sub components: Mach, the BSD Layer, and I/o kit, and explains each in detail Explains the inner workings of device drivers From architecture to implementation, this book is essential reading if you want to get serious about the internal workings of Mac OS X and iOS.

What is this book about? Professional Red Hat Enterprise Linux 3 is a complete professional guide to setting up, configuring, and deploying Red Hat Enterprise Linux in the corporate production environment. The book focuses on Enterprise Server and Advanced Server features, including the key areas of high availability with the Red Hat Cluster Suite, Red Hat Network Control Center, and Red Hat Enterprise applications such as the Content Management System and portal server. Other key unique features include kernel tuning for various performance profiles; advanced Apache configuration; Tux installation/maintenance; building high-performance FTP servers; building high-performance mail servers (which means replacing Sendmail); Mailing list management; how to efficiently add, remove, or modify 100 users at the same time; and a discussion of disk quota management and monitoring. What does this book cover? The key features of the book include the following: How to install and setup RHEL 3 How to deploy RHEL 3 in production environment How to manage an RHEL system using Perl and shell scripting Advanced administration tools How to use Red Hat network service Details on installation and setup of security tools Ability to use and deploy High Availability solutions provided with RHEL 3 Performance tuning How to use monitoring tools Ability to use RHEL to provide scalable infrastructure solutions.

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 Yourself

Beginning Unix

To the Apple's Core

Mac OS X and iOS Internals

Client-Server Web Apps with JavaScript and Java

Geared to experienced C++ developers who may not be familiar with the more advanced features of the language, and therefore it to its full capabilities Teaches programmers how to think in C++-that is, how to design effective solutions that maximize the language The authors drill down into this notoriously complex language, explaining poorly understood elements of the C++ feature set, as common pitfalls to avoid Contains several in-depth case studies with working code that's been tested on Windows, Linux, and other platforms

Developers, build mobile Android apps using Android 4 The fast-growing popularity of Android smartphones and tablets create new opportunities for developers. If you're an experienced developer, you can start creating robust mobile Android apps right away with this professional guide to Android 4 application development. Written by one of Google's lead Android developer advocates, this practical guide walks you through a series of hands-on projects that illustrate the features of the Android SDK. That includes all the new APIs in Android 3 and 4, including building for tablets, using the Action Bar, Wi-Fi Direct, NFC Beam, and more. Shows experienced developers how to create mobile applications for Android smartphones and tablets Revised and expanded to cover all the Android SDK releases from Android 4.0 (Ice Cream Sandwich), including all updated APIs, and the latest changes to the Android platform. Explains new Android features such as drag and drop, fragments, the action bar, enhanced multitouch support, new environmental sensor support, and improvements to the animation framework, and a range of new communications techniques including NFC and Wi-Fi direct. Provides guidance on publishing and marketing your applications, best practices for user experience, and more This book helps you learn the design, lifecycle, and UI of an Android app through practical exercises, which you can then use as a basis for developing your own apps.

Advanced Linux Programming

Professional Red Hat Enterprise Linux 3

Beginning Shell Scripting

Professional NoSQL

Professional Pen Testing for Web Applications