Interprocess Communications In Linux The Nooks And Crannies By Gray John Shapley Prentice Hall 2003 Paperback Paperback

Linux Programming By Example: The FundamentalsDocker in ActionC++ Multithreading CookbookLearning AWK ProgrammingProgramming with POSIX ThreadsLinux Device DriversLinux Programming UnleashedPRACTICAL LINUX PROGRAMMING: Device Drivers, Embedded Systems, and the InternetThe Linux Programming InterfaceAdvanced Linux ProgrammingSELinux by ExampleProfessional Linux ProgrammingUnderstanding the Linux KernelLinux Device DriversThe Linux Programmer's ToolboxLearning Kali LinuxOperating SystemsLinux Device DriversOpen SourcesGo Systems ProgrammingInterprocess Communications in UNIXEfficient Android ThreadingLinux System ProgrammingSlackermediaBeginning Linux ProgrammingInterprocess Communications in LinuxLinux Programming by ExampleLinux Cluster ArchitecturePostgreSQL 11 Server Side Programming Quick Start GuideAndroid System ProgrammingUNIX Network Programming: The sockets networking APIUNIX Systems ProgrammingAdvanced Programming in the UNIX EnvironmentProfessional Linux Kernel ArchitectureThe Design of the UNIX Operating SystemC++ System Programming CookbookConcurrent Programming in JavaMastering Linux Kernel DevelopmentBeginning Linux ProgrammingPOSIX.4 Page 1/31

Programmers Guide

Linux Programming By Example: The Fundamentals

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.

Docker in Action

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 Page 2/31

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 crosscompilation, dynamic device insertion and removal, key Linux projects (such as Project Utopia), and the internationalization capabilities present in the GNOME desktop

C++ Multithreading Cookbook

Covers GNU development, system programming, file handling, interprocess communication, network programming, application programming interfaces, X Window programming, debugging, and memory management

Learning AWK Programming

SELinux: Bring World-Class Security to Any Linux Environment! SELinux offers Linux/UNIX integrators, administrators, and developers a state-of-the-art platform for building and maintaining highly secure solutions. Now that SELinux is included

in the Linux 2.6 kernel—and delivered by default in Fedora Core, Red Hat Enterprise Linux, and other major distributions—it's easier than ever to take advantage of its benefits. SELinux by Example is the first complete, hands-on guide to using SELinux in production environments. Authored by three leading SELinux researchers and developers, it illuminates every facet of working with SELinux, from its architecture and security object model to its policy language. The book thoroughly explains SELinux sample policies— including the powerful new Reference Policy—showing how to guickly adapt them to your unique environment. It also contains a comprehensive SELinux policy language reference and covers exciting new features in Fedora Core 5 and the upcoming Red Hat Enterprise Linux version 5. • Thoroughly understand SELinux's access control and security mechanisms • Use SELinux to construct secure systems from the ground up • Gain fine-grained control over kernel resources • Write policy statements for type enforcement, roles, users, and constraints • Use optional multilevel security to enforce information classification and manage users with diverse clearances • Create conditional policies that can be changed on-the-fly • Define, manage, and maintain SELinux security policies • Develop and write new SELinux security policy modules • Leverage emerging SELinux technologies to gain even greater flexibility • Effectively administer any SELinux system

Programming with POSIX Threads

Even small applications have dozens of components. Large applications may have thousands, which makes them challenging to install, maintain, and remove. Docker bundles all application components into a package called a container that keeps things tidy and helps manage any dependencies on other applications or infrastructure. Docker in Action, Second Edition teaches you the skills and knowledge you need to create, deploy, and manage applications hosted in Docker containers. This bestseller has been fully updated with new examples, best practices, and entirely new chapters. You'll start with a clear explanation of the Docker model and learn how to package applications in containers, including techniques for testing and distributing applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Linux Device Drivers

Provides a definitive resource for those who want to support computer peripherals under the Linux operating system, explaining how to write a driver for a broad spectrum of devices, including character devices, network interfaces, and block devices. Original. (Intermediate).

Linux Programming Unleashed

The revision of the definitive guide to Unix system programming is now available in a more portable format.

PRACTICAL LINUX PROGRAMMING:Device Drivers, Embedded Systems, and the Internet

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 realtime 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.

The Linux Programming Interface

Learning the new system's programming language for all Unix-type systems About This Book Learn how to write system's level code in Golang, similar to Unix/Linux Page 7/31

systems code Ramp up in Go quickly Deep dive into Goroutines and Go concurrency to be able to take advantage of Go server-level constructs Who This Book Is For Intermediate Linux and general Unix programmers. Network programmers from beginners to advanced practitioners. C and C++ programmers interested in different approaches to concurrency and Linux systems programming. What You Will Learn Explore the Go language from the standpoint of a developer conversant with Unix, Linux, and so on Understand Goroutines, the lightweight threads used for systems and concurrent applications Learn how to translate Unix and Linux systems code in C to Golang code How to write fast and lightweight server code Dive into concurrency with Go Write low-level networking code In Detail Go is the new systems programming language for Linux and Unix systems. It is also the language in which some of the most prominent cloud-level systems have been written, such as Docker. Where C programmers used to rule, Go programmers are in demand to write highly optimized systems programming code. Created by some of the original designers of C and Unix, Go expands the systems programmers toolkit and adds a mature, clear programming language. Traditional system applications become easier to write since pointers are not relevant and garbage collection has taken away the most problematic area for low-level systems code: memory management. This book opens up the world of high-performance Unix system applications to the beginning Go programmer. It does not get stuck on single systems or even system types, but tries to expand the original teachings from Unix system level programming to all types of servers, the cloud, and the

web. Style and approach This is the first book to introduce Linux and Unix systems programming in Go, a field for which Go has actually been developed in the first place.

Advanced Linux Programming

Text processing and pattern matching simplified Key Features -Master the fastest and most elegant big data munging language -Implement text processing and pattern matching using the advanced features of AWK and GAWK -Implement debugging and inter-process communication using GAWK Book Description AWK is one of the most primitive and powerful utilities which exists in all Unix and Unixlike distributions. It is used as a command-line utility when performing a basic textprocessing operation, and as programming language when dealing with complex text-processing and mining tasks. With this book, you will have the required expertise to practice advanced AWK programming in real-life examples. The book starts off with an introduction to AWK essentials. You will then be introduced to regular expressions, AWK variables and constants, arrays and AWK functions and more. The book then delves deeper into more complex tasks, such as printing formatted output in AWK, control flow statements, GNU's implementation of AWK covering the advanced features of GNU AWK, such as network communication, debugging, and inter-process communication in the GAWK programming language which is not easily possible with AWK. By the end of this book, the reader will have Page 9/31

worked on the practical implementation of text processing and pattern matching using AWK to perform routine tasks. What you will learn -Create and use different expressions and control flow statements in AWK -Use Regular Expressions with AWK for effective text-processing -Use built-in and user-defined variables to write AWK programs -Use redirections in AWK programs and create structured reports -Handle non-decimal input, 2-way inter-process communication with Gawk -Create small scripts to reformat data to match patterns and process texts Who this book is for This book is for developers or analysts who are inclined to learn how to do text processing and data extraction in a Unix-like environment. Basic understanding of Linux operating system and shell scripting will help you to get the most out of the book.

SELinux by Example

The Linux Programming Interface (TLPI) is the definitive guide to the Linux and UNIX programming interface—the interface employed by nearly every application that runs on a Linux or UNIX system. In this authoritative work, Linux programming expert Michael Kerrisk provides detailed descriptions of the system calls and library functions that you need in order to master the craft of system programming, and accompanies his explanations with clear, complete example programs. You'll find descriptions of over 500 system calls and library functions, and more than 200 example programs, 88 tables, and 115 diagrams. You'll learn Page 10/31

how to: -Read and write files efficiently -Use signals, clocks, and timers -Create processes and execute programs -Write secure programs -Write multithreaded programs using POSIX threads -Build and use shared libraries -Perform interprocess communication using pipes, message queues, shared memory, and semaphores -Write network applications with the sockets API While The Linux Programming Interface covers a wealth of Linux-specific features, including epoll, inotify, and the /proc file system, its emphasis on UNIX standards (POSIX.1-2001/SUSv3 and POSIX.1-2008/SUSv4) makes it equally valuable to programmers working on other UNIX platforms. The Linux Programming Interface is the most comprehensive single-volume work on the Linux and UNIX programming interface, and a book that's destined to become a new classic.

Professional Linux Programming

Complete and comprehensive reference with in-depth coverage of the core topics. Learn how to program core systems and find out about such topics as interprocess communications, user interfaces, device drives and X Windows system. Written by top Linux programming consultsnts Kurt Wall and Mark Watson and reviewed by Linux Journal writer and freelance developer, Michael Hamilton. Practical, tested examples of how to apply the best programming practices in the Linux environment.

Understanding the Linux Kernel

Multithreading is essential if you want to create an Android app with a great user experience, but how do you know which techniques can help solve your problem? This practical book describes many asynchronous mechanisms available in the Android SDK, and provides guidelines for selecting the ones most appropriate for the app you're building. Author Anders Goransson demonstrates the advantages and disadvantages of each technique, with sample code and detailed explanations for using it efficiently. The first part of the book describes the building blocks of asynchronous processing, and the second part covers Android libraries and constructs for developing fast, responsive, and well-structured apps. Understand multithreading basics in Java and on the Android platform Learn how threads communicate within and between processes Use strategies to reduce the risk of memory leaks Manage the lifecycle of a basic thread Run tasks sequentially in the background with HandlerThread Use Java's Executor Framework to control or cancel threads Handle background task execution with AsyncTask and IntentService Access content providers with AsyncQueryHandler Use loaders to update the UI with new data

Linux Device Drivers

The Linux Programmer's Toolbox

Extend PostgreSQL using PostgreSQL server programming to create, test, debug, and optimize a range of user-defined functions in your favorite programming language Key Features Learn the concepts of PostgreSQL 11 with lots of real-world datasets and examples Learn gueries, data replication, and database performance Extend the functionalities of your PostgreSQL instance to suit your organizational needs Book Description PostgreSQL is a rock-solid, scalable, and safe enterpriselevel relational database. With a broad range of features and stability, it is ever increasing in popularity. This book shows you how to take advantage of PostgreSQL 11 features for server-side programming. Server-side programming enables strong data encapsulation and coherence. The book begins with the importance of serverside programming and explains the risks of leaving all the checks outside the database. To build your capabilities further, you will learn how to write stored procedures, both functions and the new PostgreSQL 11 procedures, and create triggers to perform encapsulation and maintain data consistency. You will also learn how to produce extensions, the easiest way to package your programs for easy and solid deployment on different PostgreSQL installations. What you will learn Explore data encapsulation Write stored procedures in different languages Interact with transactions from within a function Get to grips with triggers and rules Create and manage custom data types Create extensions to package code and data Implement background workers and Inter-Process Communication (IPC) How Page 13/31

to deal with foreign languages, in particular Java and Perl Who this book is for This book is for database administrators, data engineers, and database engineers who want to implement advanced functionalities and master complex administrative tasks with PostgreSQL 11.

Learning Kali Linux

Master the Linux Tools That Will Make You a More Productive. Effective Programmer The Linux Programmer's Toolbox helps you tap into the vast collection of open source tools available for GNU/Linux. Author John Fusco systematically describes the most useful tools available on most GNU/Linux distributions using concise examples that you can easily modify to meet your needs. You'll start by learning the basics of downloading, building, and installing open source projects. You'll then learn how open source tools are distributed, and what to look for to avoid wasting time on projects that aren't ready for you. Next, you'll learn the ins and outs of building your own projects. Fusco also demonstrates what to look for in a text editor, and may even show you a few new tricks in your favorite text editor. You'll enhance your knowledge of the Linux kernel by learning how it interacts with your software. Fusco walks you through the fundamentals of the Linux kernel with simple, thought-provoking examples that illustrate the principles behind the operating system. Then he shows you how to put this knowledge to use with more advanced tools. He focuses on how to interpret output from tools like sar, vmstat, $P_{age \ 14/31}$

valgrind, strace, and apply it to your application; how to take advantage of various programming APIs to develop your own tools; and how to write code that monitors itself. Next, Fusco covers tools that help you enhance the performance of your software. He explains the principles behind today's multicore CPUs and demonstrates how to squeeze the most performance from these systems. Finally, you'll learn tools and techniques to debug your code under any circumstances. Coverage includes Maximizing productivity with editors, revision control tools, source code browsers, and "beautifiers" Interpreting the kernel: what your tools are telling you Understanding processes-and the tools available for managing them Tracing and resolving application bottlenecks with gprof and valgrind Streamlining and automating the documentation process Rapidly finding help, solutions, and workarounds when you need them Optimizing program code with sar, vmstat, iostat, and other tools Debugging IPC with shell commands: signals, pipes, sockets, files, and IPC objects Using printf, gdb, and other essential debugging tools Foreword Preface Acknowledgments About the Author Chapter 1 Downloading and Installing Open Source Tools Chapter 2 Building from Source Chapter 3 Finding Help Chapter 4 Editing and Maintaining Source Files Chapter 5 What Every Developer Should Know about the Kernel Chapter 6 Understanding Processes Chapter 7 Communication between Processes Chapter 8 Debugging IPC with Shell Commands Chapter 9 Performance Tuning Chapter 10 Debugging Index

Operating Systems

A problem-solution-based guide to help you overcome hurdles effectively while working with kernel APIs, filesystems, networks, threads, and process communications Key Features Learn to apply the latest C++ features (from C++11, 14, 17, and 20) to facilitate systems programming Create robust and concurrent systems that make the most of the available hardware resources Delve into C++ inbuilt libraries and frameworks to design robust systems as per your business needs Book Description C++ is the preferred language for system programming due to its efficient low-level computation, data abstraction, and object-oriented features. System programming is about designing and writing computer programs that interact closely with the underlying operating system and allow computer hardware to interface with the programmer and the user. The C++ System Programming Cookbook will serve as a reference for developers who want to have ready-to-use solutions for the essential aspects of system programming using the latest C++ standards wherever possible. This C++ book starts out by giving you an overview of system programming and refreshing your C++ knowledge. Moving ahead, you will learn how to deal with threads and processes, before going on to discover recipes for how to manage memory. The concluding chapters will then help you understand how processes communicate and how to interact with the console (console I/O). Finally, you will learn how to deal with time interfaces, signals, and CPU scheduling. By the end of the book, you will become adept at developing robust systems applications using C++. What you will learn

Get up to speed with the fundamentals including makefile, man pages, compilation, and linking and debugging Understand how to deal with time interfaces, signals, and CPU scheduling Develop your knowledge of memory management Use processes and threads for advanced synchronizations (mutexes and condition variables) Understand interprocess communications (IPC): pipes, FIFOs, message queues, shared memory, and TCP and UDP Discover how to interact with the console (console I/O) Who this book is for This book is for C++ developers who want to gain practical knowledge of systems programming. Though no experience of Linux system programming is assumed, intermediate knowledge of C++ is necessary.

Linux Device Drivers

Build, customize, and debug your own Android system About This Book Master Android system-level programming by integrating, customizing, and extending popular open source projects Use Android emulators to explore the true potential of your hardware Master key debugging techniques to create a hassle-free development environment Who This Book Is For This book is for Android system programmers and developers who want to use Android and create indigenous projects with it. You should know the important points about the operating system and the C/C++ programming language. What You Will Learn Set up the Android development environment and organize source code repositories Get acquainted Page 17/31

with the Android system architecture Build the Android emulator from the AOSP source tree Find out how to enable WiFi in the Android emulator Debug the boot up process using a customized Ramdisk Port your Android system to a new platform using VirtualBox Find out what recovery is and see how to enable it in the AOSP build Prepare and test OTA packages In Detail Android system programming involves both hardware and software knowledge to work on system level programming. The developers need to use various techniques to debug the different components in the target devices. With all the challenges, you usually have a deep learning curve to master relevant knowledge in this area. This book will not only give you the key knowledge you need to understand Android system programming, but will also prepare you as you get hands-on with projects and gain debugging skills that you can use in your future projects. You will start by exploring the basic setup of AOSP, and building and testing an emulator image. In the first project, you will learn how to customize and extend the Android emulator. Then you'll move on to the real challenge—building your own Android system on VirtualBox. You'll see how to debug the init process, resolve the bootloader issue, and enable various hardware interfaces. When you have a complete system, you will learn how to patch and upgrade it through recovery. Throughout the book, you will get to know useful tips on how to integrate and reuse existing open source projects such as LineageOS (CyanogenMod), Android-x86, Xposed, and GApps in your own system. Style and approach This is an easy-to-follow guide full of handson examples and system-level programming tips.

Open Sources

Cluster computers provide a low-cost alternative to multiprocessor systems for many applications. Building a cluster computer is within the reach of any computer user with solid C programming skills and a knowledge of operating systems, hardware, and networking. This book leads you through the design and assembly of such a system, and shows you how to mearsure and tune its overall performance. A cluster computer is a multicomputer, a network of node computers running distributed software that makes them work together as a team. Distributed software turns a collection of networked computers into a distributed system. It presents the user with a single-system image and gives the system its personality. Software can turn a network of computers into a transaction processor, a supercomputer, or even a novel design of your own. Some of the techniques used in this book's distributed algorithms might be new to many readers, so several of the chapters are dedicated to such topics. You will learn about the hardware needed to network several PCs, the operating system files that need to be changed to support that network, and the multitasking and the interprocess communications skills needed to put the network to good use. Finally, there is a simple distributed transaction processing application in the book. Readers can experiment with it, customize it, or use it as a basis for something completely different.

Go Systems Programming

With more than 600 security tools in its arsenal, the Kali Linux distribution can be overwhelming. Experienced and aspiring security professionals alike may find it challenging to select the most appropriate tool for conducting a given test. This practical book covers Kali's expansive security capabilities and helps you identify the tools you need to conduct a wide range of security tests and penetration tests. You'll also explore the vulnerabilities that make those tests necessary. Author Ric Messier takes you through the foundations of Kali Linux and explains methods for conducting tests on networks, web applications, wireless security, password vulnerability, and more. You'll discover different techniques for extending Kali tools and creating your own toolset. Learn tools for stress testing network stacks and applications Perform network reconnaissance to determine what's available to attackers Execute penetration tests using automated exploit tools such as Metasploit Use cracking tools to see if passwords meet complexity requirements Test wireless capabilities by injecting frames and cracking passwords Assess web application vulnerabilities with automated or proxy-based tools Create advanced attack techniques by extending Kali tools or developing your own Use Kali Linux to generate reports once testing is complete

Interprocess Communications in UNIX

Nwely updated to include new calls and techniques introduced in Versions 2.2 and 2.4 of the Linux kernel, a definitive resource for those who want to support computer peripherals under the Linux operating system explains how to write a driver for a broad spectrum of devices, including character devices, network interfaces, and block devices. Original. (Intermediate)

Efficient Android Threading

Learn how to build your own multimedia workstation, and how to use it! Slackermedia is a multimedia guidebook for people looking to get away from operating systems that tell them what they can or can't do in their art. But it doesn't stop there! In this volume, you'll find detailed guides on the most important multimedia applications on Linux today: the Kdenlive video editor and the Qtractor digital audio workstation. You'll also get tips and resources on other great multimedia applications of Linux, like Blender, Audacity, Jamin, CALF, LADSPA, GIMP, Inkscape, ffmpeg, sox, Qsynth, fluidsynth, soundfonts, Xsynth, whySynth, QJack Control, Font Matrix, and many many more. By the end of your journey with Slackermedia, you'll know everything you need to know to create original multimedia content and any kind of digital art on the powerful, free operating system of GNU Linux. So put your nerd glasses on, roll up your sleeves, and prepare yourself for creativity like you've never experienced.

Linux System Programming

Freely available source code, with contributions from thousands of programmers around the world: this is the spirit of the software revolution known as Open Source. Open Source has grabbed the computer industry's attention. Netscape has opened the source code to Mozilla; IBM supports Apache; major database vendors haved ported their products to Linux. As enterprises realize the power of the opensource development model, Open Source is becoming a viable mainstream alternative to commercial software.Now in Open Sources, leaders of Open Source come together for the first time to discuss the new vision of the software industry they have created. The essays in this volume offer insight into how the Open Source movement works, why it succeeds, and where it is going. For programmers who have labored on open-source projects, Open Sources is the new gospel: a powerful vision from the movement's spiritual leaders. For businesses integrating open-source software into their enterprise, Open Sources reveals the mysteries of how open development builds better software, and how businesses can leverage freely available software for a competitive business advantage. The contributors here have been the leaders in the open-source arena: Brian Behlendorf (Apache) Kirk McKusick (Berkeley Unix) Tim O'Reilly (Publisher, O'Reilly & Associates) Bruce Perens (Debian Project, Open Source Initiative) Tom Paguin and Jim Hamerly (mozilla.org, Netscape) Eric Raymond (Open Source Initiative) Richard Stallman (GNU, Free Software Foundation, Emacs) Michael Tiemann (Cygnus Solutions) Linus

Torvalds (Linux) Paul Vixie (Bind) Larry Wall (Perl) This book explains why the majority of the Internet's servers use open- source technologies for everything from the operating system to Web serving and email. Key technology products developed with open-source software have overtaken and surpassed the commercial efforts of billion dollar companies like Microsoft and IBM to dominate software markets. Learn the inside story of what led Netscape to decide to release its source code using the open-source mode. Learn how Cygnus Solutions builds the world's best compilers by sharing the source code. Learn why venture capitalists are eagerly watching Red Hat Software, a company that gives its key product -- Linux -- away.For the first time in print, this book presents the story of the open- source phenomenon told by the people who created this movement.Open Sources will bring you into the world of free software and show you the revolution.

Slackermedia

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, Page 23/31

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.

Beginning Linux Programming

Interprocess Communications in Linux

UNIX, UNIX LINUX & UNIX TCL/TK. Write software that makes the most effective use of the Linux system, including the kernel and core system libraries. The majority of both Unix and Linux code is still written at the system level, and this book helps you focus 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 at the low level, this updated edition of Linux System Programming gives you an understanding of core internals that makes for better code, no matter where it appears in the stack. -- Provided by publisher.

Linux Programming by Example

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

Linux Cluster Architecture

Software -- Programming Languages.

PostgreSQL 11 Server Side Programming Quick Start Guide

Matthews offers a revised edition of the bestselling Linux programming tutorial, which features code tested with the latest 2.2 kernel and tool version, and subject coverage updated and expanded.

Android System Programming

This book describes the internal algorithms and the structures that form the basis of the UNIX operating system and their relationship to the programmer interface. The system description is based on UNIX System V Release 2 supported by AT&T, with some features from Release 3.

UNIX Network Programming: The sockets networking API

UNIX Systems Programming

"The clearest, most complete guide to UNIX interprocess communications! When it comes to UNIX interprocess communications techniques that are essential to distributed client/server computing, no other book offers this much depth - or this much clarity. Starting with the basics, Interprocess Communications in UNIX, Second Edition explains exactly what UNIX processes are, how they are generated, and how they can access their own environments. This new edition also includes unprecedented practical coverage of multithreading with POSIX threads."--BOOK JACKET.Title Summary field provided by Blackwell North America, Inc. All Rights Reserved

Advanced Programming in the UNIX Environment

The book is an easy-to-follow guide for creating multi-threaded applications using C++. Each topic is thoroughly explained with multiple illustrations. Many algorithms, such as Dinning Philosophers Problem give you thorough explanations that will help you to understand and solve concurrent tasks. The book is intended

for enterprise developers and programmers who wish to make use of C++ capabilities to learn the multithreaded approach. Knowledge of multithreading along with experience in C++ is an added advantage. However it is not a prerequisite.

Professional Linux Kernel Architecture

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.

The Design of the UNIX Operating System

Written in an informal, informative style, this authoritative guide goes way beyond the standard reference manual. It discusses each of the POSIX.4 facilities and what they mean, why and when you would use each of these facilities, and trouble spots

you might run into. c.

C++ System Programming Cookbook

bull; Learn UNIX essentials with a concentration on communication, concurrency, and multithreading techniques bull; Full of ideas on how to design and implement good software along with unique projects throughout bull; Excellent companion to Stevens' Advanced UNIX System Programming

Concurrent Programming in Java

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.

Mastering Linux Kernel Development

To build today's highly distributed, networked applications and services, you need deep mastery of sockets and other key networking APIs. One book delivers comprehensive, start-to-finish guidance for building robust, high-performance networked systems in any environment: UNIX Network Programming, Volume 1, Third Edition.

Beginning Linux Programming

Software -- Operating Systems.

POSIX.4 Programmers Guide

Interprocess Communications in Linux explains exactly how to use Linux processes and interprocess communications to build robust, high-performance systems. Coverage includes: named/unnamed pipes, message queues, semaphores, shared memory, RPC and the rpcgen compiler, sockets-based communication, the /proc file system, LinuxThreads POSIX support, multithreading, and much more. Includes detailed exercises, plus dozens of downloadable program examples compiled with GNU C/C++ 2.96 & 3.2 and tested with Red Hat Linux 7.3 & 8.0.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION