

Unix System Programming Using C

Extreme C Computer Programming Using C Modern C++ Programming Cookbook Systems Programming in Unix/Linux Hands-On System Programming with Linux Using C on the UNIX System Computerworld C Programming for UNIX C++ System Programming Cookbook UNIX System Programming Understanding Unix/Linux Programming Advanced Programming in the UNIX Environment UNIX System Programming Using C++ Hands-On System Programming with C++ UNIX Systems Programming Advanced Linux Programming UNIX System V Network Programming The UNIX Programming Environment Linux System Programming Go Systems Programming Java Application Development on Linux The Art of UNIX Programming Linux System Programming The Linux Programming Interface Portable C and UNIX System Programming An Executive's Guide to Information Technology UNIX System Security C Programming Language Lions' Commentary on UNIX 6th Edition with Source Code ABCs of z/OS System Programming POSIX Programmers Guide Learning the Unix Operating System Using C on the UNIX System Computerworld System Programming with C and Unix UNIX Systems Programming Hands-On System Programming with Go UNIX Systems Programming for SVR4 Objective-C Programming UNIX System V Commands

Extreme C

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.

Computer Programming Using C

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

Modern C++ Programming Cookbook

This text concentrates on the programming interface that exists between the UNIX kernel and applications software that runs in the UNIX environment - the UNIX system call interface. The techniques required by systems programmers are developed in depth and illustrated by a wealth of examples.

Systems Programming in Unix/Linux

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.

Hands-On System Programming with Linux

For the past 20 years, UNIX insiders have cherished and zealously guarded pirated photocopies of this manuscript, a "hacker trophy" of sorts. Now legal (and legible) copies are available. An international "who's who" of UNIX wizards, including Dennis Ritchie, have contributed essays extolling the merits and importance of this underground classic.

Using C on the UNIX System

Learn to write advanced C programs that are strongly type-checked, compact, and easy to maintain. This book focuses on real-life applications and problem solving in networking, database development, compilers, operating systems, and CAD.

Computerworld

Provides the nitty gritty details on how UNIX interacts with applications. Includes many extended examples on topics ranging from string manipulation to network programming

C Programming for UNIX

This guide, intended as an explanation of the POSIX standard and as a reference for the POSIX.1 programming library, helps you write more portable programs. Most UNIX systems today are POSIX compliant because the federal government requires it for its purchases. Even OSF and UI agree on support for POSIX. Unfortunately, given the manufacturer's documentation, it can be difficult to distinguish system-specific features from those features defined by POSIX. The POSIX Programmer's Guide is especially helpful if you are writing programs that must run on multiple UNIX platforms. This guide also helps you convert existing UNIX programs for POSIX compliance. Contents include: Introduction to POSIX. Basics of writing a POSIX-compliant program. Input/output facilities of the Standard C library. The file system as defined by POSIX. Operations of POSIX Input/Output system, pipes, and FIFOs. Creating and terminating processes and signals. Obtaining information about the environment. Communication line settings and a cu-like utility. POSIX and Standard C, including features and portability pitfalls. Internationalization. Complete list of library functions in alphabetic order. Complete list of data structures and their members. All error codes. Standard headers and the information that they define. Related publications.

C++ System Programming Cookbook

UNIX System Programming

Over 100 recipes to help you overcome your difficulties with C++ programming and gain a deeper understanding of the working of modern C++ About This Book Explore the most important language and library features of C++17, including containers, algorithms, regular expressions, threads, and more, Get going with unit testing frameworks Boost.Test, Google Test and Catch, Extend your C++ knowledge and take your development skills to new heights by making your applications

fast, robust, and scalable. Who This Book Is For If you want to overcome difficult phases of development with C++ and leverage its features using modern programming practices, then this book is for you. The book is designed for both experienced C++ programmers as well as people with strong knowledge of OOP concepts. What You Will Learn Get to know about the new core language features and the problems they were intended to solve Understand the standard support for threading and concurrency and know how to put them on work for daily basic tasks Leverage C++'s features to get increased robustness and performance Explore the widely-used testing frameworks for C++ and implement various useful patterns and idioms Work with various types of strings and look at the various aspects of compilation Explore functions and callable objects with a focus on modern features Leverage the standard library and work with containers, algorithms, and iterators Use regular expressions for find and replace string operations Take advantage of the new filesystem library to work with files and directories Use the new utility additions to the standard library to solve common problems developers encounter including `string_view`, `any`, `optional` and `variant` types In Detail C++ is one of the most widely used programming languages. Fast, efficient, and flexible, it is used to solve many problems. The latest versions of C++ have seen programmers change the way they code, giving up on the old-fashioned C-style programming and adopting modern C++ instead. Beginning with the modern language features, each recipe addresses a specific problem, with a discussion that explains the solution and offers insight into how it works. You will learn major concepts about the core programming language as well as common tasks faced while building a wide variety of software. You will learn about concepts such as concurrency, performance, meta-programming, lambda expressions, regular expressions, testing, and many more in the form of recipes. These recipes will ensure you can make your applications robust and fast. By the end of the book, you will understand the newer aspects of C++11/14/17 and will be able to overcome tasks that are time-consuming or would break your stride while developing. Style and approach This book follows a recipe-based approach, with examples that will empower you to implement the core programming language features and explore the newer aspects of C++.

Understanding Unix/Linux Programming

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Beginning computing students often finish the introduction to programming course without having had exposure to various system tools, without knowing how to optimize program performance and without understanding how programs interact with the larger computer system. Adam Hoover's System Programming with C and Unix introduces students to commonly used system tools (libraries, debuggers, system calls, shells and scripting languages) and then explains how to utilize these tools to optimize program development. The text also examines lower level data types with an emphasis on memory and understanding how and why different data types are used.

Advanced Programming in the UNIX Environment

Because the UNIX system was originally designed by programmers for use by other programmers, it was used in an environment of open cooperation where security was of minimal concern. Now that its use has spread to universities, businesses, and government, the confidential and sensitive nature of the data stored on UNIX systems has made the security of these systems of paramount importance. Despite all the technical papers and workshops on UNIX security, this book is unique. "UNIX System Security" is the first up-to-date source to provide the UNIX system user or administrator with the information needed to protect the data and system from unauthorized use. By following the procedures described in this book and making use of the C programs and shell scripts provided as examples, you can protect your UNIX system from most attackers. The author begins by examining four high-profile breaches of UNIX security as illustrations of how a UNIX system can be attacked. He then provides the information necessary to protect against these forms of attack, and offers the tools that can be used to do so. Focusing on the most recent release of Berkeley and System V UNIX, and such vendor derivatives as SunOS and ULTRIX, the book gives information that can be applied to any version of UNIX since Seventh Edition. Issues discussed include account and password security, securing the file system, encryption and authentication systems, TCP/IP network security, the Network Information Service (NIS), NFS, RFS, workstation security, terminals and modems, and UUCP. Other chapters describe how to respond if your system is attacked and how to develop a comprehensive security policy for your organization. The book also gives comprehensive lists of freely available security software, and publications and mailing lists dealing with UNIX security.

UNIX System Programming Using C++

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.

Hands-On System Programming with C++

Your programming advisor for UNIX performance! This tutorial and reference introduces C programmers to programming with the UNIX operating system. Contains tips and notes to help readers add power to their programming.

UNIX Systems Programming

This ebook is the first authorized digital version of Kernighan and Ritchie's 1988 classic, *The C Programming Language* (2nd Ed.). One of the best-selling programming books published in the last fifty years, "K&R" has been called everything from the "bible" to "a landmark in computer science" and it has influenced generations of programmers. Available now for all leading ebook platforms, this concise and beautifully written text is a "must-have" reference for every serious programmer's digital library. As modestly described by the authors in the Preface to the First Edition, this "is not an introductory programming manual; it assumes some familiarity with basic programming concepts like variables, assignment statements, loops, and functions. Nonetheless, a novice programmer should be able to read along and pick up the language, although access to a more knowledgeable colleague will help."

Advanced Linux Programming

UNIX System V Network Programming

Assessing the most valuable technology for an organization is becoming a growing challenge for business professionals confronted with an expanding array of options. This 2007 book is an A-Z compendium of technological terms written for the non-technical executive, allowing quick identification of what the term is and why it is significant. This is more than a dictionary - it is a concise review of the most important aspects of information technology from a business perspective: the major advantages, disadvantages and business value propositions of each term are discussed, as well as sources for further reading, and cross-referencing with other terms where applicable. The essential elements of each concept are covered in a succinct manner so the reader can quickly obtain the required knowledge without wading through exhaustive descriptions. With over 200 terms, this is a valuable reference for non- and semi-technical managers, executives and graduate students in business and technology management.

The UNIX Programming Environment

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 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.

Linux System Programming

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

Go Systems Programming

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.

Java Application Development on Linux

The Art of UNIX Programming

Don't miss this guide to building networked and distributed applications for UNIX® System V. Using many helpful examples, the author provides a solid introduction to networking and UNIX programming, plus information on the programming interfaces most important to building communication software in System V, such as STREAMS, the Transport Layer Interface library, Sockets, and Remote Procedure Calls. The book also explains how to write kernel-level communication software, including STREAMS drivers, modules, and multiplexors. A final chapter on SLIP is essential reading.

Linux System Programming

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 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.

The Linux Programming Interface

For intermediate to experienced C programmers who want to become UNIX system programmers. Explains system calls and special library routines available on the system. Annotation copyrighted by Book News, Inc., Portland, OR

Portable C and UNIX System Programming

An accessible, yet comprehensive text that clearly explains Unix programming and structuring by addressing the fundamentals of Unix and providing alternative solutions to problems in concrete terms.

An Executive's Guide to Information Technology

This practical guide contains a detailed set of C standards and UNIX system comparisons for the construction of highly portable software. Professionals will learn the underlying causes of portability problems as well as the techniques for creating portable UNIX system software. It shortens the software development and test cycle and enables the user to reduce the cost of long-term support.

UNIX System Security

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

C Programming Language

A handy book for someone just starting with Unix or Linux, and an ideal primer for Mac and PC users of the Internet who need to know a little about Unix on the systems they visit. The most effective introduction to Unix in print, covering Internet usage for email, file transfers, web browsing, and many major and minor updates to help the reader navigate the ever-expanding capabilities of the operating system.

Lions' Commentary on UNIX 6th Edition with Source Code

Want to write iOS apps or desktop Mac applications? This introduction to programming and the Objective-C language is your first step on the journey from someone who uses apps to someone who writes them. Based on Big Nerd Ranch's popular Objective-C Bootcamp, Objective-C Programming: The Big Nerd Ranch Guide covers C, Objective-C, and the common programming idioms that enable developers to make the most of Apple technologies. Compatible with Xcode 5, iOS 7, and OS X Mavericks (10.9), this guide features short chapters and an engaging style to keep you motivated and moving forward. At the same time, it encourages you to think critically as a programmer. Here are some of the topics covered: Using Xcode, Apple's documentation, and other tools Programming basics: variables, loops, functions, etc. Objects, classes, methods, and messages Pointers, addresses, and memory management with ARC Properties and Key-Value Coding (KVC) Class extensions Categories Classes from the Foundation framework Blocks Delegation, target-action, and notification design patterns Key-Value Observing (KVO) Runtime basics

ABCs of z/OS System Programming

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

POSIX Programmers Guide

Covering all the essential components of Unix/Linux, including process management, concurrent programming, timer and time service, file systems and network programming, this textbook emphasizes programming practice in the Unix/Linux environment. Systems Programming in Unix/Linux is intended as a textbook for systems programming courses in technically-oriented Computer Science/Engineering curricula that emphasize both theory and programming practice. The book contains many detailed working example programs with complete source code. It is also suitable for self-study by advanced programmers and computer enthusiasts. Systems programming is an indispensable part of Computer Science/Engineering education. After taking an introductory programming course, this book is meant to further knowledge by detailing how dynamic data structures are used in practice, using programming exercises and programming projects on such topics as C structures, pointers, link lists and trees. This book provides a wide range of knowledge about computer system software and advanced programming skills, allowing readers to interface with operating system kernel, make efficient use of system resources and develop application software. It also prepares readers with the needed background to pursue advanced studies in Computer Science/Engineering, such as operating systems, embedded systems, databases systems, data mining, artificial intelligence, computer networks, network security, distributed and parallel computing.

Learning the Unix Operating System

A hands-on guide to making system programming with C++ easy Key Features Write system-level code leveraging C++17 Learn the internals of the Linux Application Binary Interface (ABI) and apply it to system programming Explore C++ concurrency to take advantage of server-level constructs Book Description C++ is a general-purpose programming language with a bias toward system programming as it provides ready access to hardware-level resources, efficient compilation, and a versatile approach to higher-level abstractions. This book will help you understand the benefits of system programming with C++17. You will gain a firm understanding of various C, C++, and POSIX standards, as well as their respective system types for both C++ and POSIX. After a brief refresher on C++, Resource Acquisition Is Initialization (RAII), and the new C++ Guideline Support Library (GSL), you will learn to program Linux and Unix systems along with process management. As you progress through the chapters, you will become acquainted with C++'s support for IO. You will then study various memory management methods, including a chapter on allocators and how they benefit system programming. You will also explore how to program file input and output and learn about POSIX sockets. This book will help you get to grips with safely setting up a UDP and TCP server/client. Finally, you will be guided through Unix time interfaces,

multithreading, and error handling with C++ exceptions. By the end of this book, you will be comfortable with using C++ to program high-quality systems. What you will learn Understand the benefits of using C++ for system programming Program Linux/Unix systems using C++ Discover the advantages of Resource Acquisition Is Initialization (RAII) Program both console and file input and output Uncover the POSIX socket APIs and understand how to program them Explore advanced system programming topics, such as C++ allocators Use POSIX and C++ threads to program concurrent systems Grasp how C++ can be used to create performant system applications Who this book is for If you are a fresh developer with intermediate knowledge of C++ but little or no knowledge of Unix and Linux system programming, this book will help you learn system programming with C++ in a practical way.

Using C on the UNIX System

Push the limits of what C - and you - can do, with this high-intensity guide to the most advanced capabilities of C Key Features Make the most of C's low-level control, flexibility, and high performance A comprehensive guide to C's most powerful and challenging features A thought-provoking guide packed with hands-on exercises and examples Book Description There's a lot more to C than knowing the language syntax. The industry looks for developers with a rigorous, scientific understanding of the principles and practices. Extreme C will teach you to use C's advanced low-level power to write effective, efficient systems. This intensive, practical guide will help you become an expert C programmer. Building on your existing C knowledge, you will master preprocessor directives, macros, conditional compilation, pointers, and much more. You will gain new insight into algorithm design, functions, and structures. You will discover how C helps you squeeze maximum performance out of critical, resource-constrained applications. C still plays a critical role in 21st-century programming, remaining the core language for precision engineering, aviations, space research, and more. This book shows how C works with Unix, how to implement OO principles in C, and fully covers multi-processing. In Extreme C, Amini encourages you to think, question, apply, and experiment for yourself. The book is essential for anybody who wants to take their C to the next level. What you will learn Build advanced C knowledge on strong foundations, rooted in first principles Understand memory structures and compilation pipeline and how they work, and how to make most out of them Apply object-oriented design principles to your procedural C code Write low-level code that's close to the hardware and squeezes maximum performance out of a computer system Master concurrency, multithreading, multi-processing, and integration with other languages Unit Testing and debugging, build systems, and inter-process communication for C programming Who this book is for Extreme C is for C programmers who want to dig deep into the language and its capabilities. It will help you make the most of the low-level control C gives you.

Computerworld

The ABCs of z/OS System Programming is an eleven volume collection that provides an introduction to the z/OS operating system and the hardware architecture. Whether you are a beginner or an experienced system programmer, the ABCs collection provides the information that you need to start your research into z/OS and related subjects. If you would like to become more familiar with z/OS in your current environment, or if you are evaluating platforms to consolidate your e-business applications, the ABCs collection will serve as a powerful technical tool. This IBM Redbooks publication describes the functions of the Infoprint Server. It will help you install, tailor, configure, and use the z/OS Version 1 Release 7 version of Infoprint Server. Topics covered in this volume are the following: Infoprint Server UNIX System Services overview Infoprint Server customization Print Interface IP PrintWay NetSpool Infoprint Central User interfaces to Infoprint Server The contents of the volumes are as follows: Volume 1: Introduction to z/OS and storage concepts, TSO/E, ISPF, JCL, SDSF, and z/OS delivery and installation Volume 2: z/OS implementation and daily maintenance, defining subsystems, JES2 and JES3, LPA, LNKLST, authorized libraries, SMP/E, Language Environment Volume 3: Introduction to DFSMS, data set basics storage management hardware and software, catalogs, and DFSMSStvs Volume 4: Communication Server, TCP/IP, and VTAM Volume 5: Base and Parallel Sysplex, System Logger, Resource Recovery Services (RRS), global resource serialization (GRS), z/OS system operations, automatic restart management (ARM), Geographically Dispersed Parallel Sysplex (GDPS) Volume 6: Introduction to security, RACF, Digital certificates and PKI, Kerberos, cryptography, zSeries firewall technologies, LDAP, and Enterprise identity mapping (EIM) Volume 7: Printing in a z/OS environment, Infoprint Server and Infoprint Central Volume 8: An introduction to z/OS problem diagnosis Volume 9: z/OS UNIX System Services Volume 10: Introduction to z/Architecture, zSeries processor design, zSeries connectivity, LPAR concepts, HCD, and HMC Volume 11: Capacity planning, performance management, WLM, RMF, and SMF

System Programming with C and Unix

Get up and running with system programming concepts in Linux Key Features Acquire insight on Linux system architecture and its programming interfaces Get to grips with core concepts such as process management, signalling and pthreads Packed with industry best practices and dozens of code examples Book Description The Linux OS and its embedded and server applications are critical components of today's software infrastructure in a decentralized, networked universe. The industry's demand for proficient Linux developers is only rising with time. Hands-On System Programming with Linux gives you a solid theoretical base and practical industry-relevant descriptions, and covers the Linux system programming domain. It delves into the art and science of Linux application programming— system architecture, process memory and management, signaling, timers, pthreads, and file IO. This book goes beyond the use API X to do Y approach; it explains the concepts and theories required to understand programming interfaces and design decisions, the tradeoffs made by experienced developers when using them, and the rationale behind them. Troubleshooting tips and techniques are included in the concluding chapter. By the end of this book, you will have gained essential conceptual design knowledge and hands-

on experience working with Linux system programming interfaces. What you will learn Explore the theoretical underpinnings of Linux system architecture Understand why modern Oses use virtual memory and dynamic memory APIs Get to grips with dynamic memory issues and effectively debug them Learn key concepts and powerful system APIs related to process management Effectively perform file IO and use signaling and timers Deeply understand multithreading concepts, pthreads APIs, synchronization and scheduling Who this book is for Hands-On System Programming with Linux is for Linux system engineers, programmers, or anyone who wants to go beyond using an API set to understanding the theoretical underpinnings and concepts behind powerful Linux system programming APIs. To get the most out of this book, you should be familiar with Linux at the user-level logging in, using shell via the command line interface, the ability to use tools such as find, grep, and sort. Working knowledge of the C programming language is required. No prior experience with Linux systems programming is assumed.

UNIX Systems Programming

For intermediate to experienced C programmers who want to become UNIX system programmers. Explains system calls and special library routines available on the system. Annotation copyrighted by Book News, Inc., Portland, OR

Hands-On System Programming with Go

Explore the fundamentals of systems programming starting from kernel API and filesystem to network programming and process communications Key Features Learn how to write Unix and Linux system code in Golang v1.12 Perform inter-process communication using pipes, message queues, shared memory, and semaphores Explore modern Go features such as goroutines and channels that facilitate systems programming Book Description System software and applications were largely created using low-level languages such as C or C++. Go is a modern language that combines simplicity, concurrency, and performance, making it a good alternative for building system applications for Linux and macOS. This Go book introduces Unix and systems programming to help you understand the components the OS has to offer, ranging from the kernel API to the filesystem, and familiarize yourself with Go and its specifications. You'll also learn how to optimize input and output operations with files and streams of data, which are useful tools in building pseudo terminal applications. You'll gain insights into how processes communicate with each other, and learn about processes and daemon control using signals, pipes, and exit codes. This book will also enable you to understand how to use network communication using various protocols, including TCP and HTTP. As you advance, you'll focus on Go's best feature-concurrency helping you handle communication with channels and goroutines, other concurrency tools to synchronize shared resources, and the context package to write elegant applications. By the end of this book, you will have learned how to build concurrent system applications using Go What you will learn Explore concepts of system programming using Go and concurrency Gain

insights into Golang's internals, memory models and allocation Familiarize yourself with the filesystem and IO streams in general Handle and control processes and daemons' lifetime via signals and pipes Communicate with other applications effectively using a network Use various encoding formats to serialize complex data structures Become well-versed in concurrency with channels, goroutines, and sync Use concurrency patterns to build robust and performant system applications Who this book is for If you are a developer who wants to learn system programming with Go, this book is for you. Although no knowledge of Unix and Linux system programming is necessary, intermediate knowledge of Go will help you understand the concepts covered in the book

UNIX Systems Programming for SVR4

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

Objective-C Programming

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.

UNIX System V Commands

Describes Java application development on Linux, covering such topics as business-logic object analysis, Java servlet UIs, JSP, Swing GUIs, and database design.

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