

Understanding Unix Linux Programming A To Theory And Practice

Linux and the Unix Philosophy
Systems Programming in Unix/Linux
Understanding Unix/Linux Programming
UNIX Shell Programming
The Linux Command Line
Using C on the UNIX System
The Art of UNIX Programming
Unix for Mac OS X 10.4 Tiger
Fundamentals of Linux
Linux Kernel in a Nutshell
Hands-On System Programming with Linux
Mastering Embedded Linux Programming
Advanced Programming in the UNIX Environment
The UNIX-haters Handbook
UNIX Network Programming: The sockets networking API
Python for Unix and Linux System Administration
Shell Programming in Unix, Linux and OS X
Beginning Linux Programming
Beginning Linux Programming
Linux System Programming
Lions' Commentary on UNIX 6th Edition with Source Code
Linux Programming By Example: The Fundamentals
Shell Scripting Tutorial
Linux Application Development
Linux and UNIX Shell Programming
Unix/Linux
Understanding Unix/Linux Programming a Guide to Theory and Practice
The UNIX Programming Environment
Guide to UNIX Using Linux
The Linux Programming Interface
Unix
Learning the Unix Operating System
Understanding UNIX
Linux for Developers
Understanding the Linux Virtual Memory Manager
UNIX Systems Programming
The Design of the UNIX Operating System
Advanced Linux Programming
Understanding the Linux Kernel
Understanding Linux Network Internals
Linux Device Drivers

Linux and the Unix Philosophy

Systems Programming in Unix/Linux

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

Understanding Unix/Linux Programming

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.

UNIX Shell Programming

Linux for Developers shows you how to start writing great code for Linux, whether

Read Book Understanding Unix Linux Programming A To Theory And Practice

you're a Linux user with little or no coding experience, or an experienced Windows programmer. Leading IT trainer/author William "Bo" Rothwell begins with a clear and up-to-date review of modern open source software, including the licensing arrangements and tradeoffs all developers need to understand. He presents essential skills for both Linux command line and GUI environments, introducing text editors and other tools for efficient coding. Building on this knowledge, Rothwell introduces scripting tools such as Bash, Python, and Perl, as well as traditional object-oriented programming languages such as Java, C++, and C. Finally, he presents a full section on the powerful Git version control system, teaching skills you can use in Linux and many other environments. Access Linux systems, use GUIs, and work at the command line Learn how Linux organizes files and navigate its filesystem Use basic developer commands such as gzip and grep Edit programs with vi and vim, and explore alternative editors Perform basic sysadmin tasks that developers often need to handle Compare Linux languages to choose the best one for each task Write Bash scripts that interact with users or other shell features Program with Python and Perl: flow control, variables, and more Understand Linux features related to building C, C++, and Java programs Stay on top of complex projects with GIT revision control Work in GIT: staging, committing, branches, diffs, merges, and patches Manage local and remote GIT repositories This guide's modular coverage helps you quickly access whatever information you need right now.

The Linux Command Line

Understanding UNIX introduces the UNIX operating system, providing a basic understanding of its architecture and operating principles. Rather than attempting to explain all the uses of each command, the book concentrates on the most practical commands and options. It gives all the necessary information to set up, use, maintain, and optimize a UNIX system with a minimum of trouble.

Using C on the UNIX System

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.

The Art of UNIX Programming

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

Read Book Understanding Unix Linux Programming A To Theory And Practice

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.

Unix for Mac OS X 10.4 Tiger

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.

Fundamentals of Linux

A Bourne Shell Programming/Scripting Tutorial for learning about using the Unix shell. Learn Linux / Unix shell scripting by example along with the theory. We'll have you mastering Unix shell scripting in no time! This thorough yet practical tutorial with examples throughout has been written with extensive feedback from literally hundreds of students and professionals in the field, both with and without a Unix or Linux background. From the author of the Wiley book "Shell Scripting - Expert Recipes for Bash, Linux and more" and of "How to Build a LAMP Server," this is his best-read and most popular work to date.

Linux Kernel in a Nutshell

Python is an ideal language for solving problems, especially in Linux and Unix networks. With this pragmatic book, administrators can review various tasks that often occur in the management of these systems, and learn how Python can provide a more efficient and less painful way to handle them. Each chapter in Python for Unix and Linux System Administration presents a particular administrative issue, such as concurrency or data backup, and presents Python solutions through hands-on examples. Once you finish this book, you'll be able to develop your own set of command-line utilities with Python to tackle a wide range of problems. Discover how this language can help you: Read text files and extract information Run tasks concurrently using the threading and forking options Get information from one process to another using network facilities Create clickable GUIs to handle large and complex utilities Monitor large clusters of machines by interacting with SNMP programmatically Master the IPython Interactive Python shell to replace or augment Bash, Korn, or Z-Shell Integrate Cloud Computing into your infrastructure, and learn to write a Google App Engine Application Solve unique data backup challenges with customized scripts Interact with MySQL, SQLite, Oracle, Postgres, Django ORM, and SQLAlchemy With this book, you'll learn how to package and deploy your Python applications and libraries, and write code that runs equally well on multiple Unix platforms. You'll also learn about several Python-related technologies that will make your life much easier.

Hands-On System Programming with Linux

Read Book Understanding Unix Linux Programming A To Theory And Practice

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

Mastering Embedded Linux Programming

□□□□□□ Unix □□□□□□, □□□□□□□□□□ Unix □□□□□□□□□□, □□□□□□□□ Unix □□□□□□, □□□□□□□□ Unix □□□□□□□□□□

Advanced Programming in the UNIX Environment

You've experienced the shiny, point-and-click surface of your Linux computer—now dive below and explore its depths with the power of the command line. The Linux Command Line takes you from your very first terminal keystrokes to writing full programs in Bash, the most popular Linux shell. Along the way you'll learn the timeless skills handed down by generations of gray-bearded, mouse-shunning gurus: file navigation, environment configuration, command chaining, pattern matching with regular expressions, and more. In addition to that practical knowledge, author William Shotts reveals the philosophy behind these tools and the rich heritage that your desktop Linux machine has inherited from Unix supercomputers of yore. As you make your way through the book's short, easily-digestible chapters, you'll learn how to:

- * Create and delete files, directories, and symlinks
- * Administer your system, including networking, package installation, and process management
- * Use standard input and output, redirection, and pipelines
- * Edit files with Vi, the world's most popular text editor
- * Write shell scripts to automate common or boring tasks
- * Slice and dice text files with cut, paste, grep, patch, and sed

Once you overcome your initial "shell shock," you'll find that the command line is a natural and expressive way to communicate with your computer. Just don't be surprised if your mouse starts to gather dust. A featured resource in the Linux Foundation's "Evolution of a SysAdmin"

The UNIX-haters Handbook

Written with a clear, straightforward writing style and packed with step-by-step projects for direct, hands-on learning, Guide to UNIX Using Linux, 4E is the perfect resource for learning UNIX and Linux from the ground up. Through the use of practical examples, end-of-chapter reviews, and interactive exercises, novice users are transformed into confident UNIX/Linux users who can employ utilities, master files, manage and query data, create scripts, access a network or the Internet, and navigate popular user interfaces and software. The updated 4th edition incorporates coverage of the latest versions of UNIX and Linux, including new versions of Red Hat, Fedora, SUSE, and Ubuntu Linux. A new chapter has also been added to cover basic networking utilities, and several other chapters have been expanded to include additional information on the KDE and GNOME desktops, as well as coverage of the popular OpenOffice.org office suite. With a strong focus on universal UNIX and Linux commands that are transferable to all versions of Linux, this book is a must-have for anyone seeking to develop their knowledge of these systems. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

UNIX Network Programming: The sockets networking API

Unlike so many books that focus on how to use Linux, Linux and the Unix Philosophy explores the "way of thinking that is Linux" and why Linux is a superior implementation of this highly capable operating system. This book is a revision and expansion of a computer science classic. Every chapter has been thoroughly updated with Linux coverage. Linux and the Unix Philosophy falls squarely between the "softer" texts on iterative software design and project management and the "how-to" technical texts. Thus far, no one has come out with a book that addresses this topic, either in the Unix space or the Linux space. Linux and the Unix Philosophy covers the same ground as the first edition, while it also presents bold new ideas about Linux and Open Source. · Concise list of philosophy tenets makes it a handy quick reference · Anecdotal examples personalize the book for the reader · Conversational style makes it easy and joyful to read

Python for Unix and Linux System Administration

Develop a solid understanding of the important command-line tools and utilities in Linux Key Features Delve into the fundamentals of Linux Explore and work with virtualization, command lines, and Bash shell scripts Use special file permission flags such as setuid and setgid Book Description Linux is a Unix-like operating system assembled under the model of free and open source software development and distribution. Fundamentals of Linux will help you learn all the essentials of the Linux command line required to get you started. The book will start by teaching you how to work with virtualization software and install CentOS 7 Linux as a VM. Then, you will get to grips with the workings of various command line operations, such as cursor movement, commands, options, and arguments. As you make your way through the chapters, the book will not only focus on the most essential Linux commands but also give an introduction to Bash shell scripting. Finally, you will explore advanced topics, such as networking and troubleshooting your system, and you will get familiar with the advanced file permissions: ACL, setuid, and setgid. Fundamentals of Linux includes real-world tasks, use cases, and problems that, as a system administrator, you might encounter in your day-to-day activities. What you will learn Explore basic and advanced command-line concepts Install Linux, work with VirtualBox, and install CentOS 7 in VirtualBox Work with the command line efficiently and learn how to navigate through the Linux filesystem Create file and user group permissions and edit files Use Sticky bit to secure your Linux filesystem Define and remove ACL from Linux files Who this book is for Fundamentals of Linux is for individuals looking to work as a Linux system administrator.

Shell Programming in Unix, Linux and OS X

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

Read Book Understanding Unix Linux Programming A To Theory And Practice

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.

Beginning Linux Programming

This book is for all people who are forced to use UNIX. It is a humorous book--pure entertainment--that maintains that UNIX is a computer virus with a user interface. It features letters from the thousands posted on the Internet's "UNIX-Haters" mailing list. It is not a computer handbook, tutorial, or reference. It is a self-help book that will let readers know they are not alone.

Beginning Linux Programming

"The fascinating story of how Unix began and how it took over the world. Brian Kernighan was a member of the original group of Unix developers, the creator of several fundamental Unix programs, and the co-author of classic books like "The C Programming Language" and "The Unix Programming Environment."--

Linux System Programming

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

Lions' Commentary on UNIX 6th Edition with Source Code

To thoroughly understand what makes Linux tick and why it's so efficient, you need

Read Book Understanding Unix Linux Programming A To Theory And Practice

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.

Linux Programming By Example: The Fundamentals

Presents an overview of kernel configuration and building for version 2.6 of the Linux kernel.

Shell Scripting Tutorial

Shell Programming in Unix, Linux and OS X is a thoroughly updated revision of Kochan and Wood's classic Unix Shell Programming tutorial. Following the methodology of the original text, the book focuses on the POSIX standard shell, and teaches you how to develop programs in this useful programming environment, taking full advantage of the underlying power of Unix and Unix-like operating systems. After a quick review of Unix utilities, the book's authors take you step-by-step through the process of building shell scripts, debugging them, and understanding how they work within the shell's environment. All major features of the shell are covered, and the large number of practical examples make it easy for you to build shell scripts for your particular applications. The book also describes the major features of the Korn and Bash shells. Learn how to... Take advantage of the many utilities provided in the Unix system Write powerful shell scripts Use the shell's built-in decision-making and looping constructs Use the shell's powerful quoting mechanisms Make the most of the shell's built-in history

Read Book Understanding Unix Linux Programming A To Theory And Practice

and command editing capabilities Use regular expressions with Unix commands Take advantage of the special features of the Korn and Bash shells Identify the major differences between versions of the shell language Customize the way your Unix system responds to you Set up your shell environment Make use of functions Debug scripts Contents at a Glance 1 A Quick Review of the Basics 2 What Is the Shell? 3 Tools of the Trade 4 And Away We Go 5 Can I Quote You on That? 6 Passing Arguments 7 Decisions, Decisions 8 'Round and 'Round She Goes 9 Reading and Printing Data 10 Your Environment 11 More on Parameters 12 Loose Ends 13 Rolo Revisited 14 Interactive and Nonstandard Shell Features A Shell Summary B For More Information

Linux Application Development

Benvenuti describes the relationship between the Internet's TCP/IP implementation and the Linux Kernel so that programmers and advanced administrators can modify and fine-tune their network environment.

Linux and UNIX Shell Programming

A guide for programmers wanting to develop applications on the Linux platform includes an introduction to the operating system and discussions of documentation, compiling, linking and loading, Linux-specific debugging tools, the kernel interface, development tools, and dynamic loading at runtime. Original. (Intermediate).

Unix/Linux Programming/Understanding Unix/Linux Programming a Guide to Theory and Practice

Explains how to develop programs in the UNIX operating system, discussing how to perform tasks including building, debugging, and understanding how shell scripts work.

The UNIX Programming Environment

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.

Guide to UNIX Using Linux

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

The Linux Programming Interface

As Unix spreads its tentacles across users' desktops, more and more Mac users are starting to pop the hood and learn about the operating system that's at the root of it all. And there's no better way to conquer that fear than by consulting this Visual

Read Book Understanding Unix Linux Programming A To Theory And Practice

QuickPro Guide. Matisse Enzer, who wrote the first edition of this book, Unix for Mac OS X: Visual QuickPro Guide has completely updated this guide to reflect all that's new in Tiger's version of Unix. Readers will learn everything they need to know to make sense of the commands and technical jargon surrounding Unix. In the process they'll find out about useful utilities, editing and printing files, security, and more--all through simple, step-by-step instructions that break the learning process into manageable chunks. Throughout, users will find plenty of the tips and visual references that have become the hallmark of Peachpit's popular Visual QuickPro Guides. Unix for Mac OS X 10.4: Visual QuickPro Guide is perfect for any Mac user interested in learning about the Unix operating system.

Unix

Learn how to create and develop shell scripts in a step-by-step manner increasing your knowledge as you progress through the book. Learn how to work the shell commands so you can be more productive and save you time.

Learning the Unix Operating System

Understanding UNIX

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.

Linux for Developers

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

Read Book Understanding Unix Linux Programming A To Theory And Practice

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.

Understanding the Linux Virtual Memory Manager

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.

UNIX Systems Programming

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.

The Design of the UNIX Operating System

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.

Advanced Linux Programming

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

Understanding the Linux Kernel

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

Read Book Understanding Unix Linux Programming A To Theory And Practice

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, database systems, data mining, artificial intelligence, computer networks, network security, distributed and parallel computing.

Understanding Linux Network Internals

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.

Linux Device Drivers

Master the techniques needed to build great, efficient embedded devices on Linux
About This Book Discover how to build and configure reliable embedded Linux devices This book has been updated to include Linux 4.9 and Yocto Project 2.2 (Morty) This comprehensive guide covers the remote update of devices in the field and power management Who This Book Is For If you are an engineer who wishes to understand and use Linux in embedded devices, this book is for you. It is also for Linux developers and system programmers who are familiar with embedded systems and want to learn and program the best in class devices. It is appropriate for students studying embedded techniques, for developers implementing embedded Linux devices, and engineers supporting existing Linux devices. What You Will Learn Evaluate the Board Support Packages offered by most manufacturers of a system on chip or embedded module Use Buildroot and the Yocto Project to create embedded Linux systems quickly and efficiently Update IoT devices in the field without compromising security Reduce the power budget of devices to make batteries last longer Interact with the hardware without having to write kernel device drivers Debug devices remotely using GDB, and see how to measure the performance of the systems using powerful tools such as `perf`, `ftrace`, and `valgrind` Find out how to configure Linux as a real-time operating system In Detail Embedded Linux runs many of the devices we use every day, from smart TVs to WiFi routers, test equipment to industrial controllers - all of them have Linux at their heart. Linux is a core technology in the implementation of the interconnected world of the Internet of Things. The comprehensive guide shows you the technologies and techniques required to build Linux into embedded systems. You will begin by learning about the fundamental elements that underpin all embedded Linux projects: the toolchain, the bootloader, the kernel, and the root filesystem. You'll see how to create each of these elements from scratch, and how to automate the process using Buildroot and the Yocto Project. Moving on, you'll find out how to implement an effective storage strategy for flash memory chips, and

Read Book Understanding Unix Linux Programming A To Theory And Practice

how to install updates to the device remotely once it is deployed. You'll also get to know the key aspects of writing code for embedded Linux, such as how to access hardware from applications, the implications of writing multi-threaded code, and techniques to manage memory in an efficient way. The final chapters show you how to debug your code, both in applications and in the Linux kernel, and how to profile the system so that you can look out for performance bottlenecks. By the end of the book, you will have a complete overview of the steps required to create a successful embedded Linux system. Style and approach This book is an easy-to-follow and pragmatic guide with in-depth analysis of the implementation of embedded devices. It follows the life cycle of a project from inception through to completion, at each stage giving both the theory that underlies the topic and practical step-by-step walkthroughs of an example implementation.

Read Book Understanding Unix Linux Programming A To Theory And Practice

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