

The Best Of Freebsd Basics

OpenBSD's stateful packet filter, PF, is the heart of the OpenBSD firewall. With more and more services placing high demands on bandwidth and an increasingly hostile Internet environment, no sysadmin can afford to be without PF expertise. The third edition of The Book of PF covers the most up-to-date developments in PF, including new content on IPv6, dual stack configurations, the "queues and priorities" traffic-shaping system, NAT and redirection, wireless networking, spam fighting, failover provisioning, logging, and more. You'll also learn how to:

- * Create rule sets for all kinds of network traffic, whether crossing a simple LAN, hiding behind NAT, traversing DMZs, or spanning bridges or wider networks
- * Set up wireless networks with access points, and lock them down using authpf and special access restrictions
- * Maximize flexibility and service availability via CARP, relayd, and redirection
- * Build adaptive firewalls to proactively defend against attackers and spammers
- * Harness OpenBSD's latest traffic-shaping system to keep your network responsive, and convert your existing ALTQ configurations to the new system
- * Stay in control of your traffic with monitoring and visualization tools (including NetFlow)

The Book of PF is the essential guide to building a secure network with PF. With a little effort and this book, you'll be well prepared to unlock PF's full potential. FreeBSD—the powerful, flexible, and free Unix-like operating system—is the preferred server for many enterprises. But it can be even trickier to use than either Unix or Linux, and harder still to master. Absolute FreeBSD, 2nd Edition is your complete guide to FreeBSD, written by FreeBSD committer Michael W. Lucas. Lucas considers this completely revised and rewritten second edition of his landmark work to be his best work ever; a true product of his love for FreeBSD and the support of the FreeBSD community. Absolute FreeBSD, 2nd Edition covers installation, networking, security, network services, system performance, kernel tweaking, filesystems, SMP, upgrading, crash debugging, and much more, including coverage of how to:

- Use advanced security features like packet filtering, virtual machines, and host-based intrusion detection
- Build custom live FreeBSD CDs and bootable flash
- Manage network services and filesystems
- Use DNS and set up email, IMAP, web, and FTP services for both servers and clients
- Monitor your system with performance-testing and troubleshooting tools
- Run diskless systems
- Manage schedulers, remap shared libraries, and optimize your system for your hardware and your workload
- Build custom network appliances with embedded FreeBSD
- Implement redundant disks, even without special hardware
- Integrate FreeBSD-specific SNMP into your network management system.

Whether you're just getting started with FreeBSD or you've been using it for years, you'll find this book to be the definitive guide to FreeBSD that you've been waiting for.

In the world of Unix operating systems, the various BSDs come with a long heritage of high-quality software without restrictions. Steeped in the venerable Unix traditions the immense power and flexibility of the BSDs are yours to hack. Of course, first you have to know what you have at hand and how to use it. Written by trainers, developers, hobbyists, and administrators, BSD Hacks collects 100 tips and tricks to fill your toolbox. Whether you're a new user, an administrator, or a power user looking for new ideas to take your knowledge to the next level, each hack will let you peek inside the mind of another Unix fan. Learn how to:

- Customize and install software exactly as you want it on one or dozens of machines
- Configure the command line the way you like it, to speed up common tasks and make difficult things easy
- Be a good network neighbor, even to other operating systems
- Make the most of the copious documentation or find (and document) answers when there's no documentation
- Allocate bandwidth by time, department, or use
- Secure your system with good passwords, intelligent firewall rules, proper logging, and a little foresight
- Plan for and recover from disaster, including catastrophic Internet loss and hardware failures
- Automate your backups, safely and securely.

BSD Hacks is for anyone using FreeBSD, OpenBSD, NetBSD, Darwin (under or alongside Mac OS X), or anything else BSD-flavored. Whether you're new to BSD or an old hand—even seasoned Linux folk can learn a lot from their cousins—you will reach new levels of understanding and have a lot of fun along the way.

ZFS improves everything about systems administration. Once you peek under the hood, though, ZFS' bewildering array of knobs and tunables can overwhelm anyone. ZFS experts can make their servers zing—and now you can, too, with FreeBSD Mastery: Advanced ZFS. This small book teaches you to:

- Use boot environments to make the riskiest sysadmin tasks boring
- Delegate filesystem privileges to users
- Containerize ZFS datasets with jails
- Quickly and efficiently replicate data between machines
- split layers off of mirrors
- optimize ZFS block storage
- handle large storage arrays
- select caching strategies to improve performance
- manage next-generation storage hardware
- identify and remove bottlenecks
- build screaming fast database storage
- dive deep into pools, metaslabs, and more!

Whether you manage a single small server or international datacenters, simplify your storage with FreeBSD Mastery: Advanced ZFS.

The free book "Fundamentals of Computer Programming with C#" is a comprehensive computer programming tutorial that teaches programming, logical thinking, data structures and algorithms, problem solving and high quality code with lots of examples in C#. It starts with the first steps in programming and software development like variables, data types, conditional statements, loops and arrays and continues with other basic topics like methods, numeral systems, strings and string processing, exceptions, classes and objects. After the basics this fundamental programming book enters into more advanced programming topics like recursion, data structures (lists, trees, hash-tables and graphs), high-quality code, unit testing and refactoring, object-oriented principles (inheritance, abstraction, encapsulation and polymorphism) and their implementation the C# language. It also covers fundamental topics that each good developer should know like algorithm design, complexity of algorithms and problem solving. The book uses C# language and Visual Studio to illustrate the programming concepts and explains some C# / .NET specific technologies like lambda expressions, extension methods and LINQ. The book is written by a team of developers lead by Svetlin Nakov who has 20+ years practical software development experience. It teaches the major programming concepts and way of thinking needed to become a good software engineer and the C# language in the meantime. It is a great start for anyone who wants to become a skillful software engineer. The book does not teach technologies like databases, mobile and web development, but shows the true way to master the basics of programming regardless of the languages, technologies and tools. It is good for beginners and intermediate developers who want to put a solid base for a successful career in the software engineering industry. The book is accompanied by free video lessons, presentation slides and mind maps, as well as hundreds of exercises and live examples. Download the free C# programming book, videos, presentations and other resources from <http://introprogramming.info>. Title: Fundamentals of Computer Programming with C# (The Bulgarian C# Programming Book) ISBN: 9789544007737 ISBN-13: 978-954-400-773-7 (9789544007737) ISBN-10: 954-400-773-3 (9544007733) Author: Svetlin Nakov & Co. Pages: 1132 Language: English Published: Sofia, 2013 Publisher: Faber Publishing, Bulgaria Web site: <http://www.introprogramming.info> License: CC-Attribution-Share-Alike Tags: free, programming, book, computer programming, programming fundamentals, ebook, book programming, C#, CSharp, C# book, tutorial, C# tutorial; programming concepts, programming fundamentals, compiler, Visual Studio, .NET, .NET Framework, data types, variables, expressions, statements, console, conditional statements, control-flow logic, loops, arrays, numeral systems, methods, strings, text processing, StringBuilder, exceptions, exception handling, stack trace, streams, files, text files, linear data structures, list, linked list, stack, queue, tree, balanced tree, graph, depth-first search, DFS, breadth-first search, BFS, dictionaries, hash tables, associative arrays, sets, algorithms, sorting algorithm, searching algorithms, recursion, combinatorial algorithms, algorithm complexity, OOP, object-oriented programming, classes, objects, constructors, fields, properties, static members, abstraction, interfaces, encapsulation, inheritance, virtual methods, polymorphism, cohesion, coupling, enumerations, generics, namespaces, UML, design patterns, extension methods, anonymous types, lambda expressions, LINQ, code quality, high-quality code, high-quality classes, high-quality methods, code formatting, self-documenting code, code refactoring, problem solving, problem solving methodology, 9789544007737, 9544007733

The Best of Freebsd Basics

The FreeBSD operating system has become a popular OS choice for embedded systems due to its small size and the fact that it is free to users. However, detailed information on using FreeBSD is difficult to find. Author Paul Cevoli, an experienced embedded systems engineer, answers that need in this cookbook aimed at making life easier for engineers working with FreeBSD. Topics covered in the book include core operating system components, processes, process scheduling, virtual memory, device drivers and debugging, as these are the core features necessary for embedded system developers. Each chapter discusses basic components of FreeBSD, device drivers, Unix kernel, and C and GNU development tools, and provides the reader with the information needed to accomplish the stated task, along with sample source code. Provides numerous examples of system software with source code and debugging techniques that can provide starting points for your own designs Covers core operating system components, processes and process scheduling, system booting, virtual memory, device drivers, debugging, and much more

This introduction to networking on Linux now covers firewalls, including the use of ipchains and Netfilter, masquerading, and accounting. Other new topics in this second edition include Novell (NCP/IPX) support and INN (news administration).

When Practical Unix Security was first published more than a decade ago, it became an instant classic. Crammed with information about host security, it saved many a Unix system administrator from disaster. The second edition added much-needed Internet security coverage and doubled the size of the original volume. The third edition is a comprehensive update of this very popular book - a companion for the Unix/Linux system administrator who needs to secure his or her organization's system, networks, and web presence in an increasingly hostile world. Focusing on the four most popular Unix variants today--Solaris, Mac OS X, Linux, and FreeBSD--this book contains new information on PAM (Pluggable Authentication Modules), LDAP, SMB/Samba, anti-theft technologies, embedded systems, wireless and laptop issues, forensics, intrusion detection, chroot jails, telephone scanners and firewalls, virtual and cryptographic filesystems, WebNFS, kernel security levels, outsourcing, legal issues, new Internet protocols and cryptographic algorithms, and much more. Practical Unix & Internet Security consists of six parts: Computer security basics: introduction to security problems and solutions, Unix history and lineage, and the importance of security policies as a basic element of system security. Security building blocks: fundamentals of Unix passwords, users, groups, the Unix filesystem, cryptography, physical security, and personnel security. Network security: a detailed look at modem and dialup security, TCP/IP, securing individual network services, Sun's RPC, various host and network authentication systems (e.g., NIS, NIS+, and Kerberos), NFS and other filesystems, and the importance of secure programming. Secure operations: keeping up to date in today's changing security world, backups, defending against attacks, performing integrity management, and auditing. Handling security incidents: discovering a break-in, dealing with programmed threats and denial of service attacks, and legal aspects of computer security. Appendixes: a comprehensive security checklist and a detailed bibliography of paper and electronic references for further reading and research. Packed with 1000 pages of helpful text, scripts, checklists, tips, and warnings, this third edition remains the definitive reference for Unix administrators and anyone who cares about protecting their systems and data from today's threats.

This answer book provides complete workig solutions to the wxercises in the definitive Design and Implementation of the 4.3bsd UNIX Operating System. It covers the internal structure of the 4.3bsd system and the concepts, data structures, and algorithms used in implementing the system facilities.

This practical, tutorial-style book uses the Kali Linux distribution to teach Linux basics with a focus on how hackers would use them. Topics include Linux command line basics, filesystems, networking, BASH basics, package management, logging, and the Linux kernel and drivers. If you're getting started along the exciting path of hacking, cybersecurity, and pentesting, Linux Basics for Hackers is an excellent first step. Using Kali Linux, an advanced penetration testing distribution of Linux, you'll learn the basics of using the Linux operating system and acquire the tools and techniques you'll need to take control of a Linux environment. First, you'll learn how to install Kali on a virtual machine and get an introduction to basic Linux concepts. Next, you'll tackle broader Linux topics like manipulating text, controlling file and directory permissions, and managing user environment variables. You'll then focus in on foundational hacking concepts like security and anonymity and learn scripting skills with bash and Python. Practical tutorials and exercises throughout will reinforce and test your skills as you learn how to: - Cover your tracks by changing your network information and manipulating the rsyslog logging utility - Write a tool to scan for network connections, and connect and listen to wireless networks - Keep your internet activity stealthy using Tor, proxy servers, VPNs, and encrypted email - Write a bash script to scan open ports for potential targets - Use and abuse services like MySQL, Apache web server, and OpenSSH - Build your own hacking tools, such as a remote video spy camera and a password cracker Hacking is complex, and there is no single way in. Why not start at the beginning with Linux Basics for Hackers?

OpenBSD, the elegant, highly secure Unix-like operating system, is widely used as the basis for critical DNS servers, routers, firewalls, and more. This long-awaited second edition of Absolute OpenBSD maintains author Michael Lucas's trademark straightforward and practical approach that readers have enjoyed for years. You'll learn the intricacies of the platform, the technical details behind certain design decisions, and best practices, with bits of humor sprinkled throughout. This edition has been completely updated for OpenBSD 5.3, including new coverage of OpenBSD's boot system, security features like W^X and ProPolice, and advanced networking techniques. You'll learn how to: -Manage network traffic with VLANs, trunks, IPv6, and the PF packet filter -Make software management quick and effective using the ports and packages system -Give users only the access they need with groups, sudo, and chroots -Configure OpenBSD's secure implementations of SNMP, DHCP, NTP, hardware sensors, and more -Customize the installation and upgrade processes for your network and hardware, or build a custom OpenBSD release Whether you're a new user looking for a complete introduction to OpenBSD or an experienced sysadmin looking for a refresher, Absolute OpenBSD, 2nd Edition will give you everything you need to master the intricacies of the world's most secure operating system.

FreeBSD and OpenBSD are increasingly gaining traction in educational institutions, non-profits, and corporations worldwide because they provide significant security advantages over Linux. Although a lot can be said for the robustness, clean organization, and stability of the BSD operating systems, security is one of the main reasons system administrators use these two platforms. There are plenty of books to help you get a FreeBSD or OpenBSD system off the ground, and all of them touch on security to some extent, usually dedicating a chapter to the subject. But, as security is commonly named as the key concern for today's system administrators, a single chapter on the subject can't provide the depth of information you need to keep your systems secure. FreeBSD and OpenBSD are rife with security "building blocks" that you can put to use, and Mastering FreeBSD and OpenBSD Security shows you how. Both operating systems have kernel options and filesystem features that go well beyond traditional Unix permissions and controls. This power and flexibility is valuable, but the colossal range of possibilities need to be tackled one step at a time. This book walks you through the installation of a hardened operating system, the installation and configuration of critical services, and ongoing maintenance of your FreeBSD and OpenBSD systems. Using an application-specific approach that builds on your existing knowledge, the book provides sound technical information on FreeBSD and Open-BSD security with plenty of real-world examples to help you configure and deploy a secure system. By imparting a solid technical foundation as well as practical know-how, it enables administrators to push their server's security to the next level. Even administrators in other environments--like Linux and Solaris--can find useful paradigms to emulate. Written by security professionals with two decades of operating system experience, Mastering FreeBSD and OpenBSD Security features broad and deep explanations of how how to secure your most critical systems. Where other books on BSD systems help you achieve functionality, this book will help you more thoroughly secure your deployments.

The FreeBSD Handbook is a comprehensive FreeBSD tutorial and reference. It covers installation, day-to-day use of FreeBSD, and mach

more, such as the Ports collection, creating a custom kernel, security topics, the X Window System, how to use FreeBSD's Linux binary compatibility, and how to upgrade your system from source using the 'make world' command, to name a few.

This book is the ultimate reference for both beginners and power users to PC-BSD—the free, easy-to-use operating system based on FreeBSD. Existing power users will learn how to look under the hood and contribute to the global PC-BSD community. PC-BSD is turning into a hassle-free alternative to Linux on the desktop. Enjoy secure, virus-free computing Quickly become a power user

This practical guidebook explains not only how to get a computer up and running with the FreeBSD operating system, but how to turn it into a highly functional and secure server that can host large numbers of users and disks, support remote access and provide key parts of the Inter

FreeBSD is one of the oldest and most featureful open-source Unix-like operating systems. **FreeBSD Mastery: Storage Essentials** takes you on a deep dive into FreeBSD's disk management systems. You'll learn about: identifying your storage hardware the Common Access Method GEOM-FreeBSD's powerful and flexible stackable storage system GUID Partition Tables, the modern disk partitioning standard MBR/disklabel partitioning, used by older and embedded systems avoiding common partitioning errors aligning partitions to the physical disk, for peak performance the high-performance Unix File System tuning UFS to fit your environment and load Two ways to journal filesystems, and when to use each The GELI and GBDE disk encryption systems, and when to use each Software-based disk mirroring, striping, RAID-5 and RAID-10. Custom FreeBSD installs And more! Don't just configure your storage. Understand it. Get **FreeBSD Mastery: Storage Essentials** today!

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.

CONFINE YOUR SOFTWARE Jails are FreeBSD's most legendary feature: known to be powerful, tricky to master, and cloaked in decades of dubious lore. Deploying jails calls upon every sysadmin skill you have, and more—but unleashing lightweight virtualization is so worth it. **FreeBSD Mastery: Jails** cuts through the clutter to expose the inner mechanisms of jails and unleash their power in your service. You will: · Understand how jails achieve lightweight virtualization · Understand the base system's jail tools and the iocage toolkit · Optimally configure jail hardware · Manage jails from the host and from within the jail · Optimize disk space usage to support hundreds or thousands of jails · Comfortably work within the limits of jails · Implement fine-grained control of jail features · Build virtual networks · Deploy hierarchical jails · Constrain jail resource usage · And more! Strip away the mystery. Read **FreeBSD Mastery: Jails** today! "This is the sequel to *Git Commit Murder*, right?" /phk, creator of the jail system

Learn how to use BSD UNIX systems from the command line with **BSD UNIX Toolbox: 1000+ Commands for FreeBSD, OpenBSD and NetBSD**. Learn to use BSD operation systems the way the experts do, by trying more than 1,000 commands to find and obtain software, monitor system health and security, and access network resources. Apply your newly developed skills to use and administer servers and desktops running FreeBSD, OpenBSD, NetBSD, or any other BSD variety. Become more proficient at creating file systems, troubleshooting networks, and locking down security.

"This book is organized around three concepts fundamental to OS construction: virtualization (of CPU and memory), concurrency (locks and condition variables), and persistence (disks, RAID5, and file systems"--Back cover.

Device drivers make it possible for your software to communicate with your hardware, and because every operating system has specific requirements, driver writing is nontrivial. When developing for FreeBSD, you've probably had to scour the Internet and dig through the kernel sources to figure out how to write the drivers you need. Thankfully, that stops now. In **FreeBSD Device Drivers**, Joseph Kong will teach you how to master everything from the basics of building and running loadable kernel modules to more complicated topics like thread synchronization. After a crash course in the different FreeBSD driver frameworks, extensive tutorial sections dissect real-world drivers like the parallel port printer driver. You'll learn: –All about Newbus, the infrastructure used by FreeBSD to manage the hardware devices on your system –How to work with ISA, PCI, USB, and other buses –The best ways to control and communicate with the hardware devices from user space –How to use Direct Memory Access (DMA) for maximum system performance –The inner workings of the virtual null modem terminal driver, the USB printer driver, the Intel PCI Gigabit Ethernet adapter driver, and other important drivers –How to use Common Access Method (CAM) to manage host bus adapters (HBAs) Concise descriptions and extensive annotations walk you through the many code examples. Don't waste time searching

man pages or digging through the kernel sources to figure out how to make that arcane bit of hardware work with your system. FreeBSD Device Drivers gives you the framework that you need to write any driver you want, now.

All Your Unix Questions—Answered! Mastering Unix is your source for everything you need to know about today's most influential operating system. Inside, two Unix experts provide essential information on a wide range of Unix flavors, concentrating on Linux, FreeBSD, and Solaris8. Whether you're just getting started with Unix or want a resource to help you handle system administration's toughest chores, this example-filled book will answer all your questions and promote the skills you need to succeed. Coverage includes: Using the Unix shell Using X-Windows Configuring and using remote services Connecting to the Internet Creating user accounts Creating user groups Designing and building a network Using Unix utilities Programming the shell Setting up and administering a mail server Setting up and administering a news server Setting up and administering a Web server Implementing effective security practices Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

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

By its very nature, Unix is a " power tools " environment. Even beginning Unix users quickly grasp that immense power exists in shell programming, aliases and history mechanisms, and various editing tools. Nonetheless, few users ever really master the power available to them with Unix. There is just too much to learn! Unix Power Tools, Third Edition, literally contains thousands of tips, scripts, and techniques that make using Unix easier, more effective, and even more fun. This book is organized into hundreds of short articles with plenty of references to other sections that keep you flipping from new article to new article. You'll find the book hard to put down as you uncover one interesting tip after another. With the growing popularity of Linux and the advent of Mac OS X, Unix has metamorphosed into something new and exciting. With Unix no longer perceived as a difficult operating system, more and more users are discovering its advantages for the first time. The latest edition of this best-selling favorite is loaded with advice about almost every aspect of Unix, covering all the new technologies that users need to know. In addition to vital information on Linux, Mac OS X, and BSD, Unix Power Tools, Third Edition, now offers more coverage of bcash, zsh, and new shells, along with discussions about modern utilities and applications. Several sections focus on security and Internet access, and there is a new chapter on access to Unix from Windows, addressing the heterogeneous nature of systems today. You'll also find expanded coverage of software installation and packaging, as well as basic information on Perl and Python. The book's accompanying web site provides some of the best software available to Unix users, which you can download and add to your own set of power tools. Whether you are a newcomer or a Unix power user, you'll find yourself thumbing through the gold mine of information in this new edition of Unix Power Tools to add to your store of knowledge. Want to try something new? Check this book first, and you're sure to find a tip or trick that will prevent you from learning things the hard way.

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.

This book describes the design and implementation of the BSD operating system--previously known as the Berkeley version of UNIX. Today, BSD is found in nearly every variant of UNIX, and is widely used for Internet services and firewalls, timesharing, and multiprocessing systems. Readers involved in technical and sales support can learn the capabilities and limitations of the system; applications developers can learn effectively and efficiently how to interface to the system; systems programmers can learn how to maintain, tune, and extend the system. Written from the unique perspective of the system's architects, this book delivers the most comprehensive, up-to-date, and authoritative technical information on the internal structure of the latest BSD system. As in the previous book on 4.3BSD (with Samuel Leffler), the authors first update the history and goals of the BSD system. Next they provide a coherent overview of its design and implementation. Then, while explaining key design decisions, they detail the concepts, data structures, and algorithms used in implementing the system's facilities. As an in-depth study of a contemporary, portable operating system, or as a practical reference, readers will appreciate the wealth of insight and guidance contained in this book. Highlights of the book: Details major changes in process and memory management Describes the new extensible and stackable filesystem interface Includes an invaluable chapter on the new network filesystem Updates information on networking and interprocess communication

FreeBSD is a powerful, flexible, and cost-effective UNIX-based operating system, and the preferred server platform for many enterprises. Includes coverage of installation, networking, add-on software, security, network services, system performance, kernel tweaking, file systems, SCSI & RAID configurations, SMP, upgrading, monitoring, crash debugging, BSD in the office, and emulating other OSs.

Learn the basics of do-it-yourself ZFS storage on Linux. This book delivers explanations of key features and provides best practices for planning, creating and sharing your storage. ZFS as a file system simplifies many aspects of the storage administrator's day-to-day job and solves a lot of problems that administrators face, but it can be confusing. Introducing ZFS on Linux addresses some of these issues and shows you how to resolve them. This book explains the

technical side of ZFS, through planning the hardware list to planning the physical and logical layout of the storage. What You'll Learn Understand the gains ZFS gives system and storage administrators and utilize its features Install and configure ZFS software Create and maintain ZFS pool Administer ZFS storage, including sharing Who This Book is For This book is ideal for those who already have experience working with Linux systems but want to understand the bare basics of ZFS before moving further.

A major revision of the classic TCP/IP bestseller that has sold more than 162,000 units! * *W. Richard Stevens' legendary TCP/IP guide, now updated by top network protocol developer and instructor Kevin Fall. *Shows how each protocol actually operates, and explains why they work that way. *New coverage includes RPC, access control, authentication, privacy, NFS, SMB/CIFS, DHCP, NAT, firewalls, email, Web, web services, wireless, wireless security, and much more More than 162,000 networking professionals have relied on W. Richard Stevens' classic TCP/IP Illustrated, Volume 1 to gain the detailed understanding of TCP/IP they need to be effective. Now, the world's leading TCP/IP bestseller has been thoroughly updated to reflect a new generation of TCP/IPbased networking technologies. TCP/IP Illustrated, Volume 1, Second Edition doesn't just describe protocols: it enables readers to observe how these protocols operate under different conditions, using publicly available tools, and explains why key design decisions were made. The result: readers gain a deep understanding of how TCP/IP protocols function, and why they function that way. Now thoroughly updated by long-time networking expert Kevin Fall, this brand-new second edition's extensive new coverage includes: * *Remote procedure call. *Identity management (access control / authentication). *Network and transport layer security (authentication / privacy). *File access protocols, including NFS and SMB/CIFS. *Host initialization and DHCP. *NAT and firewalls. *E-mail. *Web and web services. *Wireless and wireless security. *New tools, including Ethereal, nmap and netcat

The first book to deal with the whole life cycle of porting, from obtaining software to building the documentation, Porting UNIX Software offers complete coverage of porting issues, including how to obtain and load the software and make changes in programs to get them working. Includes summaries of major UNIX features that vary between systems. The classic guide to UNIX® programming-completely updated! UNIX application programming requires a mastery of system-level services. Making sense of the many functions-more than 1,100 functions in the current UNIX specification-is a daunting task, so for years programmers have turned to Advanced UNIX Programming for its clear, expert advice on how to use the key functions reliably. An enormous number of changes have taken place in the UNIX environment since the landmark first edition. In Advanced UNIX Programming, Second Edition, UNIX pioneer Marc J. Rochkind brings the book fully up to date, with all-new, comprehensive coverage including: POSIX Solaris™ Linux® FreeBSD Darwin, the Mac™ OS X kernel And more than 200 new system calls Rochkind's fully updated classic explains all the UNIX system calls you're likely to need, all in a single volume! Interprocess communication, networking (sockets), pseudo terminals, asynchronous I/O, advanced signals, realtime, and threads Covers the system calls you'll actually use-no need to plow through hundreds of improperly implemented, obsolete, and otherwise unnecessary system calls! Thousands of lines of example code include a Web browser and server, a keystroke recorder/player, and a shell complete with pipelines, redirection, and background processes Emphasis on the practical-ensuring portability, avoiding pitfalls, and much more! Since 1985, the one book to have for mastering UNIX application programming has been Rochkind's Advanced UNIX Programming. Now completely updated, the second edition remains the choice for up-to-the-minute, in-depth coverage of the essential system-level services of the UNIX family of operating systems.

This book contains comprehensive, up-to-date, and authoritative technical information on the internal structure of the FreeBSD open-source operating system. Coverage includes the capabilities of the system; how to effectively and efficiently interface to the system; how to maintain, tune, and configure the operating system; and how to extend and enhance the system. The authors provide a concise overview of FreeBSD's design and implementation. Then, while explaining key design decisions, they detail the concepts, data structures, and algorithms used in implementing the systems facilities. As a result, this book can be used as an operating systems textbook, a practical reference, or an in-depth study of a contemporary, portable, open-source operating system. -- Provided by publisher.

Provides information on the X Window System, covering such topics as X.org configuration, the X Server, utility programs, remote access, VNC, and keyboard configuration.

The FreeBSD Handbook is the definitive FreeBSD tutorial and reference. This revised third edition has been expanded into a two Volume set filled with updated information on the latest FreeBSD technologies. This first volume provides step by step instructions and installing FreeBSD on a PC, setting up a graphical desktop environment, and installing additional third party software.

For over seven years, computer networking and security instructor and consultant, Dru Lavigne, meticulously documented her learning experiences with FreeBSD administration and open source software usage in a series of over 110 articles. Many readers praised and recommended the author's informative tutorials. The Best of FreeBSD Basics book contains most of these articles - many updated from FreeBSD 4 and 5 to reflect the usage on FreeBSD 6 and 7. The Best of FreeBSD Basics provides practical advice for completing common tasks on FreeBSD and is a great way to get to know FreeBSD - and Unix in general. Darwin, DragonFly, Linux, Mac OS X, NetBSD, and OpenBSD fans will also find a lot of the book invaluable and useful. Covering a huge range of FreeBSD and open source topics, The Best of FreeBSD Basics includes step-by-step directions, things to watch out for, and hints for success. A sampling of the book's topics include installing an X11 server and setting up an desktop environment, comparing common tasks with Linux, playing audio and video files, user administration, system startup, finding and using documentation, managing backups, networking basics, IPsec, setting up several servers, filtering spam, improving security, enabling firewalls, and a lot more. "As this book shows, Linux systems are just as functional, secure, and reliable as their proprietary counterparts. Thanks

to the ongoing efforts of thousands of Linux developers, Linux is more ready than ever for deployment at the frontlines of the real world. The authors of this book know that terrain well, and I am happy to leave you in their most capable hands.” –Linus Torvalds “The most successful sysadmin book of all time—because it works!” –Rik Farrow, editor of ;login: “This book clearly explains current technology with the perspective of decades of experience in large-scale system administration. Unique and highly recommended.” –Jonathan Corbet, cofounder, LWN.net “Nemeth et al. is the overall winner for Linux administration: it’s intelligent, full of insights, and looks at the implementation of concepts.” –Peter Salus, editorial director, Matrix.net Since 2001, Linux Administration Handbook has been the definitive resource for every Linux® system administrator who must efficiently solve technical problems and maximize the reliability and performance of a production environment. Now, the authors have systematically updated this classic guide to address today’s most important Linux distributions and most powerful new administrative tools. The authors spell out detailed best practices for every facet of system administration, including storage management, network design and administration, web hosting, software configuration management, performance analysis, Windows interoperability, and much more. Sysadmins will especially appreciate the thorough and up-to-date discussions of such difficult topics such as DNS, LDAP, security, and the management of IT service organizations. Linux® Administration Handbook, Second Edition, reflects the current versions of these leading distributions: Red Hat® Enterprise Linux® Fedora™ Core SUSE® Linux Enterprise Debian® GNU/Linux Ubuntu® Linux Sharing their war stories and hard-won insights, the authors capture the behavior of Linux systems in the real world, not just in ideal environments. They explain complex tasks in detail and illustrate these tasks with examples drawn from their extensive hands-on experience.

"Designing BSD Rootkits" introduces the fundamentals of programming and developing rootkits under the FreeBSD operating system. Written in a friendly, accessible style and sprinkled with geek humor and pop culture references, the author favors a "learn by example" approach that assumes no prior kernel hacking experience.

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