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C14 - TESSA JAXSON

Firewalls, Network Address Translation (NAT), network logging and accounting are all provided by Linux's Netfilter system, also known by the name of the command used to administer it, iptables. The iptables interface is the most sophisticated ever offered on Linux and makes Linux an extremely flexible system for any kind of network filtering you might do. Large sets of filtering rules can be grouped in ways that makes it easy to test them and turn them on and off. Do you watch for all types of ICMP traffic--some of them quite dangerous? Can you take advantage of stateful filtering to simplify the management of TCP connections? Would you like to track how much traffic of various types you get? This pocket reference will help you at those critical moments when someone asks you to open or close a port in a hurry, either to enable some important traffic or to block an attack. The book will keep the subtle syntax straight and help you remember all the values you have to enter in order to be as secure as possible. The book has an introductory section that describes applications, followed by a reference/encyclopaedic section with all the matches and targets arranged alphabetically.

Many Linux and Unix developers are familiar with the GNU debugger (GDB), the invaluable open source tool for testing, fixing, and retesting software. And since GDB can be ported to Windows, Microsoft developers and others who use this platform can also take advantage of this amazing free software that allows you to see exactly what's going on inside of a program as it's executing. This new pocket guide gives you a convenient quick reference for using the debugger with several different programming languages, including C, C++, Java, Fortran and Assembly. The GNU debugger is the most useful tool during the testing phase of the software development cycle because it helps you catch bugs in the act. You can see what a program was doing at the moment it crashed, and then readily pinpoint and correct problem code. With the GDB Pocket Reference on hand, the process is quick and painless. The book covers the essentials of using GDB in a testing environment, including how to specify a target for debugging and how to make a program stop on specified conditions. This handy guide also provides details on using the debugger to examine the stack, source files and data to find the cause of program failure--and then explains ways to use GDB to make quick changes to the program for further testing and debugging. The ability to spot a bug in real time with GDB can save you hours of frustration, and having a quick way to refer to GDB's essential functions is key to making the process work. Once you get your hands on the GDB Pocket Reference, you'll never let go!

The official book on the Rust programming language, written by the Rust development team at the Mozilla Foundation, fully updated for Rust 2018. The Rust Programming Language is the official book on Rust: an open source systems programming language that helps you write faster, more reliable software. Rust offers control over low-level details (such as memory usage) in combination with high-level ergonomics, eliminating the hassle traditionally associated with low-level languages. The authors of The Rust Programming Language, members of the Rust Core Team, share their knowledge and experience to show you how to take full advantage of Rust's features--from installation to creating robust and scalable programs. You'll begin with basics like creating functions, choosing data types, and binding variables and then move on to more advanced concepts, such as:

- Ownership and borrowing, lifetimes, and traits
- Using Rust's memory safety guarantees to build fast, safe programs
- Testing, error handling, and effective refactoring
- Generics, smart pointers, multithreading, trait objects, and advanced pattern matching
- Using Cargo, Rust's built-in package manager, to build, test, and document your code and manage dependencies
- How best to use Rust's advanced compiler with compiler-led programming techniques

You'll find plenty of code examples throughout the book, as well as three chapters dedicated to building complete projects to test your learning: a number guessing game, a Rust implementation of a command line tool, and a multithreaded server. New to this edition: An extended section on Rust macros, an expanded chapter on modules, and appendixes on Rust development tools and editions.

Essential System Administration, 3rd Edition is the definitive guide for Unix system administration, covering all the fundamental and essential tasks required to run such divergent Unix systems as AIX, FreeBSD, HP-UX, Linux, Solaris, Tru64 and more. Essential System Administration provides a clear, concise, practical guide to the real-world issues that anyone responsible for a Unix system faces daily. The new edition of this indispensable reference has been fully updated for all the latest operating systems. Even more importantly, it has been extensively revised and expanded to consider the current system administrative topics that administrators need most. Essential System Administration, 3rd Edition covers: DHCP, USB devices, the latest automation tools, SNMP and network management, LDAP, PAM, and recent security tools and techniques. Essential System Administration is comprehensive. But what has made this book the guide system administrators turn to over and over again is not just the sheer volume of valuable information it provides, but the clear, useful way the information is presented. It discusses the underlying higher-level concepts, but it also provides the details of the procedures needed to carry them out. It is not organized around the features of the Unix operating system, but around the various facets of a system administrator's job. It describes all the usual administrative tools that Unix provides, but it also shows how to use them intelligently and efficiently. Whether you use a standalone Unix system, routinely provide administrative support for a larger shared system, or just want an understanding of basic administrative functions, Essential System Administration is for you. This comprehensive and invaluable book combines the author's years of practical experience with technical expertise to help you manage Unix systems as productively and painlessly as possible.

An introduction to Linux (a free UNIX-compatible operating system developed by volunteers on the internet) that covers installation and configuration; basic UNIX commands; system administration and maintenance; editors, text tools, and printing; applications; programming; and telecommunication. Annotation copyrighted by Book News, Inc., Portland, OR

"If you're a developer trying to figure out why your application is not responding at 3 am, you need this book! This is now my go-to book when diagnosing production issues. It has saved me hours in troubleshooting complicated operations problems." --Trotter Cashion, cofounder, Mashion DevOps can help developers, QAs, and admins work together to solve Linux server problems far more rapidly, significantly improving IT performance, availability, and efficiency. To gain these benefits, however, team members need common troubleshooting skills and practices. In DevOps Troubleshooting: Linux Server Best Practices, award-winning Linux expert Kyle Rankin brings together all the standardized, repeatable techniques your team needs to stop finger-pointing, collaborate effectively,

and quickly solve virtually any Linux server problem. Rankin walks you through using DevOps techniques to troubleshoot everything from boot failures and corrupt disks to lost email and downed websites. You'll master indispensable skills for diagnosing high-load systems and network problems in production environments. Rankin shows how to Master DevOps' approach to troubleshooting and proven Linux server problem-solving principles Diagnose slow servers and applications by identifying CPU, RAM, and Disk I/O bottlenecks Understand healthy boots, so you can identify failure points and fix them Solve full or corrupt disk issues that prevent disk writes Track down the sources of network problems Troubleshoot DNS, email, and other network services Isolate and diagnose Apache and Nginx Web server failures and slowdowns Solve problems with MySQL and Postgres database servers and queries Identify hardware failures--even notoriously elusive intermittent failures

It's simple: if you want to interact deeply with Mac OS X, Linux, and other Unix-like systems, you need to know how to work with the Bash shell. This concise little book puts all of the essential information about Bash right at your fingertips. You'll quickly find answers to the annoying questions that generally come up when you're writing shell scripts: What characters do you need to quote? How do you get variable substitution to do exactly what you want? How do you use arrays? Updated for Bash version 4.4, this book has the answers to these and other problems in a format that makes browsing quick and easy. Topics include: Invoking the shell Syntax Functions and variables Arithmetic expressions Command history Programmable completion Job control Shell options Command execution Co-processes Restricted shells Built-in commands

If you use Linux in your day-to-day work, this popular pocket guide is the perfect on-the-job reference. The third edition features new commands for processing image files and audio files, running and killing programs, reading and modifying the system clipboard, and manipulating PDF files, as well as other commands requested by readers. You'll also find powerful command-line idioms you might not be familiar with, such as process substitution and piping into bash. Linux Pocket Guide provides an organized learning path to help you gain mastery of the most useful and important commands. Whether you're a novice who needs to get up to speed on Linux or an experienced user who wants a concise and functional reference, this guide provides quick answers. Selected topics include: The filesystem and shell File creation and editing Text manipulation and pipelines Backups and remote storage Viewing and controlling processes User account management Becoming the superuser Network connections Audio and video Installing software Programming with shell scripts.

O'Reilly's Pocket Guides have earned a reputation as inexpensive, comprehensive, and compact guides that have the stuff but not the fluff. Every page of Linux Pocket Guide lives up to this billing. It clearly explains how to get up to speed quickly on day-to-day Linux use. Once you're up and running, Linux Pocket Guide provides an easy-to-use reference that you can keep by your keyboard for those times when you want a fast, useful answer, not hours in the man pages. Linux Pocket Guide is organized the way you use Linux: by function, not just alphabetically. It's not the 'bible of Linux'; it's a practical and concise guide to the options and commands you need most. It starts with general concepts like files and directories, the shell, and X windows, and then presents detailed overviews of the most essential commands, with clear examples. You'll learn each command's purpose, usage, options, location on disk, and even the RPM package that installed it. The Linux Pocket Guide is tailored to Fedora Linux--the latest spin-off of Red Hat Linux--but most of the information applies to any Linux system. Throw in a host of valuable power user tips and a friendly and accessible style, and you'll quickly find this practical, to-the-point book a small but mighty resource for Linux users.

XML, the Extensible Markup Language, is everywhere: the syntax of choice for newly designed document formats across almost all computer applications. Now used daily by developers, XML is living up to its reputation as one of the most important developments in document interchange in the history of computing. A perennial bestseller, the handy XML Pocket Reference from O'Reilly has been revised once again to give you quick access to the latest goods. In addition to its comprehensive look at XML, this third edition has been updated with new material on Namespaces and XML Schema--considered among the most important elements in current XML use--along with RELAX NG and Schema-tron, additional powerful tools for describing XML document structures. Like other titles in O'Reilly's Pocket Reference series, the XML Pocket Reference, 3rd Edition features a well-organized format that gets right to the point. As a result, it's already won over the allegiance of developers everywhere. If you need XML answers quick and on the fly, this compact book is most definitely the book for you.

A complete guide and reference to five major Linux distributions Linux continues to grow in popularity worldwide as a low-cost, reliable operating system for enterprise use. Nine minibooks in this guide cover everything administrators need to know about the five leading versions: Ubuntu, Fedora Core, OpenSUSE, Mint, and Mandriva. The companion DVD includes full Ubuntu installations and ISO images for the other four, saving hours of downloading time. The open source Linux operating system is gaining market share around the world for both desktop and server use; this soup-to-nuts guide covers installation and everything else administrators need to know about Ubuntu, Fedora Core, OpenSUSE, Mint, and Mandriva Nine self-contained minibooks cover Linux basics, desktops, networking, Internet, administration, security, Linux servers, programming, and scripting Updated to cover the newest versions of the five top distributions, with complete installation instructions and a DVD including the full Ubuntu installations and ISO images for the others Linux users and administrators will be able to install and sample five popular Linux flavors with the information in Linux All-in-One For Dummies. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

A companion for any system administrator interested in integrating Linux into their Windows environment. This book takes an in-depth look at exactly how Linux can be brought into an organization that's currently based on Microsoft Windows system. With tips and techniques, it has the practical advice you need to migrate to this software.

A guide to Linux for system administrators covers such topics as user management, software, file systems, RAID and LVM, device files, modules, and kernel administration.

The Linux Command Line Beginner's Guide gives users new to Linux an introduction to the command line environment. In the Guide, you'll learn how to: -Copy, move, and delete files and directories. -Create, delete, and manage users. -Create, delete, and manage groups. -Use virtual terminals. -Use the bash shell. -Safely use the root account with su and sudo. -Change permissions and ownership of files and directories. -Create and edit text files from the command line, without using a graphical editor. -Diagnose network connectivity problems. -And many other topics. ABOUT THE AUTHOR Stand-

ing over six feet tall, Jonathan Moeller has the piercing blue eyes of a Conan of Cimmeria, the bronze-colored hair a Visigothic warrior-king, and the stern visage of a captain of men, none of which are useful in his career as a computer repairman, alas. He has written the "Demonsouled" trilogy of sword-and-sorcery novels, and continues to write the "Ghosts" sequence about assassin and spy Caina Amalas, the "Computer Beginner's Guide" series of computer books, and numerous other works.

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

Take your Linux skills to the next level! Whether you're a system administrator, software developer, site reliability engineer, or enthusiastic hobbyist, this practical, hands-on book will help you work faster, smarter, and more efficiently. You'll learn how to create and run complex commands that solve real business problems, process and retrieve information, and automate manual tasks. You'll also truly understand what happens behind the shell prompt, so no matter which commands you run, you can be more successful in everyday Linux use and more competitive on the job market. As you build intermediate to advanced command-line skills, you'll learn how to: Choose or construct commands that get your work done quickly Run commands efficiently and navigate the Linux filesystem with ease Build powerful, complex commands out of simpler ones Transform text files and query them like databases to achieve business goals Control Linux point-and-click features from the command line

Unlock the secrets of the Terminal and discover how this powerful tool solves problems the Finder can't handle. With this handy guide, you'll learn commands for a variety of tasks, such as killing programs that refuse to quit, renaming a large batch of files in seconds, or running jobs in the background while you do other work. Get started with an easy-to-understand overview of the Terminal and its partner, the shell. Then dive into commands neatly arranged into two dozen categories, including directory operations, file comparisons, and network connections. Each command includes a concise description of its purpose and features. Log into your Mac from remote locations Search and modify files in powerful ways Schedule jobs for particular days and times Let several people use one Mac at the same time Compress and uncompress files in a variety of formats View and manipulate Mac OS X processes Combine multiple commands to perform complex operations Download and install additional commands from the Internet

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 (or command line). Along the way you'll learn the timeless skills handed down by generations of experienced, 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.

Using Linux doesn't have to be hard. The book introduces you to the five most popular desktop distributions and covers essential topics such as configuring video cards screen resolution, sound, and wireless networking. Laptop issues are covered, too. Explore desktop apps, including browsers, IM, and email clients with the same functionality as those used on Windows.

Linux Pocket Guide is organized the way you use Linux: by function, not just alphabetically. It's not the 'bible of Linux; it's a practical and concise guide to the options and commands you need most. It starts with general concepts like files and directories, the shell, and X windows, and then presents detailed overviews of the most essential commands, with clear examples. You'll learn each command's purpose, usage, options, location on disk, and even the RPM package that installed it.

O'Reilly's Pocket Guides have earned a reputation as inexpensive, comprehensive, and compact guides that have the stuff but not the fluff. Every page of Linux Pocket Guide lives up to this billing. It clearly explains how to get up to speed quickly on day-to-day Linux use. Once you're up and running, Linux Pocket Guide provides an easy-to-use reference that you can keep by your keyboard for those times when you want a fast, useful answer, not hours in the man pages. Linux Pocket Guide is organized the way you use Linux: by function, not just alphabetically. It's not the 'bible of Linux; it's a practical and concise guide to the options and commands you need most. It starts with general concepts like files and directories, the shell, and X windows, and then presents detailed overviews of the most essential commands, with clear examples. You'll learn each command's purpose, usage, options, location on disk, and even the RPM package that installed it. The Linux Pocket Guide is tailored to Fedora Linux—the latest spin-off of Red Hat Linux—but most of the information applies to any Linux system. Throw in a host of valuable power user tips and a friendly and accessible style, and you'll quickly find this practical, to-the-point book a small but mighty resource for Linux users.

Are you serious about network security? Then check out SSH, the Secure Shell, which provides key-based authentication and transparent encryption for your network connections. It's reliable, robust, and reasonably easy to use, and both free and commercial implementations are widely available for most operating systems. While it doesn't solve every privacy and security problem, SSH eliminates several of them very effectively. Everything you want to know about SSH is in our second edition of SSH, The Secure Shell: The Definitive Guide. This updated book thoroughly covers the latest SSH-2 protocol for system administrators and end users interested in using this increasingly popular TCP/IP-based solution. How does it work? Whenever data is sent to the network, SSH automatically encrypts it. When data reaches its intended recipient, SSH decrypts it. The result is "transparent" encryption—users can work normally, unaware that their communications are already encrypted. SSH supports secure file transfer between computers, secure remote logins, and a unique "tunneling" capability that adds encryption to otherwise insecure network applications. With SSH, users can freely navigate the Internet, and system administrators can secure their networks or perform remote administration. Written for a wide, technical audience, SSH, The Secure Shell: The Definitive Guide covers several implementations of SSH for different operating systems and computing environments.

Whether you're an individual running Linux machines at home, a corporate network administrator with thousands of users, or a PC/Mac owner who just wants a secure way to telnet or transfer files between machines, our indispensable guide has you covered. It starts with simple installation and use of SSH, and works its way to in-depth case studies on large, sensitive computer networks. No matter where or how you're shipping information, SSH, The Secure Shell: The Definitive Guide will show you how to do it securely.

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

"A great resource covering Ubuntu from A to Z without all the extra fluff" -- Ryan Troy, administrator, Ubuntuforums.org. Read by over 500,000 people, Ubuntu Pocket Guide and Reference is the world's most popular Ubuntu book. Written by award-winning expert Keir Thomas, it will quickly transform you into a power user. In its clear and concise pages, you'll learn step-by-step about installation, the Ubuntu desktop, the tricks and techniques of efficient day-to-day usage, the command-line, software management, and, finally, system security. Appendixes provide a glossary of terms, and a guide to technical documentation.

For many users, working in the UNIX environment means using vi, a full-screen text editor available on most UNIX systems. Even those who know vi often make use of only a small number of its features. The vi Editor Pocket Reference is a companion volume to O'Reilly's updated sixth edition of Learning the vi Editor, a complete guide to text editing with vi. New topics in Learning the vi Editor include multi-screen editing and coverage of four vi clones: vim, elvis, nvi, and vile. This small book is a handy reference guide to the information in the larger volume, presenting movement and editing commands, the command-line options, and other elements of the vi editor in an easy-to-use tabular format.

This pocket guide is the perfect on-the-job companion to Git, the distributed version control system. It provides a compact, readable introduction to Git for new users, as well as a reference to common commands and procedures for those of you with Git experience. Written for Git version 1.8.2, this handy task-oriented guide is organized around the basic version control functions you need, such as making commits, fixing mistakes, merging, and searching history. Examine the state of your project at earlier points in time Learn the basics of creating and making changes to a repository Create branches so many people can work on a project simultaneously Merge branches and reconcile the changes among them Clone an existing repository and share changes with push/pull commands Examine and change your repository's commit history Access remote repositories, using different network protocols Get recipes for accomplishing a variety of common tasks

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 network - 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?

One of the fastest ways to learn Linux is with this perennial favorite Eight previous top-selling editions of Linux For Dummies can't be wrong. If you've been wanting to migrate to Linux, this book is the best way to get there. Written in easy-to-follow, everyday terms, Linux For Dummies 9th Edition gets you started by concentrating on two distributions of Linux that beginners love: the Ubuntu LiveCD distribution and the gOS Linux distribution, which comes pre-installed on Everex computers. The book also covers the full Fedora distribution. Linux is an open-source operating system and a low-cost or free alternative to Microsoft Windows; of numerous distributions of Linux, this book covers Ubuntu Linux, Fedora Core Linux, and gOS Linux, and includes them on the DVD. Install new open source software via Synaptic or RPM package managers Use free software to browse the Web, listen to music, read e-mail, edit photos, and even run Windows in a virtualized environment Get acquainted with the Linux command line If you want to get a solid foundation in Linux, this popular, accessible book is for you. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

Learn over 116 Linux commands to develop the skills you need to become a professional Linux system administrator Key Features Explore essential Linux commands and understand how to use Linux help tools Discover the power of task automation with bash scripting and Cron jobs Get to grips with various network configuration tools and disk management techniques Book Description Linux is one of the most sought-after skills in the IT industry, with jobs involving Linux being increasingly in demand. Linux is by far the most popular operating system deployed in both public and private clouds; it is the processing power behind the majority of IoT and embedded devices. Do you use a mobile device that runs on Android? Even Android is a Linux distribution. This Linux book is a practical guide that lets you explore the power of the Linux command-line interface. Starting with the history of Linux, you'll quickly progress to the Linux filesystem hierarchy and learn a variety of basic Linux commands. You'll then understand how to make use of the extensive Linux documentation and help

tools. The book shows you how to manage users and groups and takes you through the process of installing and managing software on Linux systems. As you advance, you'll discover how you can interact with Linux processes and troubleshoot network problems before learning the art of writing bash scripts and automating administrative tasks with Cron jobs. In addition to this, you'll get to create your own Linux commands and analyze various disk management techniques. By the end of this book, you'll have gained the Linux skills required to become an efficient Linux system administrator and be able to manage and work productively on Linux systems. What you will learn Master essential Linux commands and analyze the Linux filesystem hierarchy Find out how to manage users and groups in Linux Analyze Linux file ownership and permissions Automate monotonous administrative tasks with Cron jobs and bash scripts Use aliases to create your own Linux commands Understand how to interact with and manage Linux processes Become well-versed with using a variety of Linux networking commands Perform disk partitioning, mount filesystems, and create logical volumes Who this book is for This book doesn't assume any prior Linux knowledge, which makes it perfect for beginners. Intermediate and advanced Linux users will also find this book very useful as it covers a wide range of topics necessary for Linux administration.

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"

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 Inter-process 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.

Unlike some operating systems, Linux doesn't try to hide the important bits from you—it gives you full control of your computer. But to truly master Linux, you need to understand its internals, like how the system boots, how networking works, and what the kernel actually does. In this completely revised second edition of the perennial best seller How Linux Works, author Brian Ward makes the concepts behind Linux internals accessible to anyone curious about the inner workings of the operating system. Inside, you'll find the kind of knowledge that normally comes from years of experience doing things the hard way. You'll learn: -How Linux boots, from boot loaders to init implementations (systemd, Upstart, and System V) -How the kernel manages devices, device drivers, and processes -How networking, interfaces, firewalls, and servers work -How development tools work and relate to shared libraries -How to write effective shell scripts You'll also explore the kernel and examine key system tasks inside user space, including system calls, input and output, and filesystems. With its combination of background, theory, real-world examples, and patient explanations, How Linux Works will teach you what you need to know to solve pesky problems and take control of your operating system.

Describes the general concepts of the Linux operating system along with information on such topics as the file system, the shell, network connections, email, and programming.

Computer security is an ongoing process, a relentless contest between system administrators and intruders. A good administrator needs to stay one step ahead of any adversaries, which often involves a continuing process of education. If you're grounded in the basics of security, however, you won't necessarily want a complete treatise on the subject each time you pick up a book. Sometimes you want to get straight to the point. That's exactly what the new Linux Security Cookbook does. Rather than provide a total security solution for Linux computers, the authors present a series of easy-to-follow recipes—short, focused pieces of code that administrators can use to improve security and perform common tasks securely. The Linux Security Cookbook includes real solutions to a wide range of targeted problems, such as sending encrypted email within Emacs, restricting access to network services at particular times of day, firewalling a webserver, preventing IP spoofing, setting up key-

based SSH authentication, and much more. With over 150 ready-to-use scripts and configuration files, this unique book helps administrators secure their systems without having to look up specific syntax. The book begins with recipes devised to establish a secure system, then moves on to secure day-to-day practices, and concludes with techniques to help your system stay secure. Some of the "recipes" you'll find in this book are: Controlling access to your system from firewalls down to individual services, using iptables, ipchains, xinetd, inetd, and more Monitoring your network with tcpdump, dsniff, netstat, and other tools Protecting network connections with Secure Shell (SSH) and stunnel Safeguarding email sessions with Secure Sockets Layer (SSL) Encrypting files and email messages with GnuPG Probing your own security with password crackers, nmap, and handy scripts This cookbook's proven techniques are derived from hard-won experience. Whether you're responsible for security on a home Linux system or for a large corporation, or somewhere in between, you'll find valuable, to-the-point, practical recipes for dealing with everyday security issues. This book is a system saver.

Ubuntu Linux—the most popular Linux distribution on the planet—preserves the spirit embodied in the ancient African word ubuntu, which means both "humanity to others" and "I am what I am because of who we all are." Ubuntu won the Linux Journal Reader's Choice Award for best Linux distribution and is consistently the top-ranked Linux variant on DistroWatch.com. The reason this distribution is so widely popular is that Ubuntu is designed to be useful, usable, customizable, and always available for free worldwide. Ubuntu Hacks is your one-stop source for all of the community knowledge you need to get the most out of Ubuntu: a collection of 100 tips and tools to help new and experienced Linux users install, configure, and customize Ubuntu. With this set of hacks, you can get Ubuntu Linux working exactly the way you need it to. Learn how to: Install and test-drive Ubuntu Linux. Keep your system running smoothly Turn Ubuntu into a multimedia powerhouse: rip and burn discs, watch videos, listen to music, and more Take Ubuntu on the road with Wi-Fi wireless networking, Bluetooth, etc. Hook up multiple displays and enable your video card's 3-D acceleration Run Ubuntu with virtualization technology such as Xen and VMware Tighten your system's security Set up an Ubuntu-powered server Ubuntu Hacks will not only show you how to get everything working just right, you will also have a great time doing it as you explore the powerful features lurking within Ubuntu. "Put in a nutshell, this book is a collection of around 100 tips and tricks which the authors choose to call hacks, which explain how to accomplish various tasks in Ubuntu Linux. The so called hacks range from down right ordinary to the other end of the spectrum of doing specialised things... More over, each and every tip in this book has been tested by the authors on the latest version of Ubuntu (Dapper Drake) and is guaranteed to work. In writing this book, it is clear that the authors have put in a lot of hard work in covering all facets of configuring this popular Linux distribution which makes this book a worth while buy." -- Ravi Kumar, Slashdot.org

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

Linux in a Nutshell covers the core commands available on common Linux distributions. This isn't a scaled-down quick reference of common commands, but a complete reference containing all user, programming, administration, and networking commands. Contents include: • Programming, system administration, and user commands with complete lists of options • LILO and Loadlin (boot) options • Shell syntax and variables for the bash, csh, and tcsh shells • Pattern matching • Emacs and vi editing commands • sed and gawk commands • Common configuration tasks for the GNOME and KDE desktops and the fwm2 window manager • Red Hat and Debian package managers New material in the third edition includes common techniques for customizing the GNOME and KDE desktops and the fwm2 window manager; the dpkg Debian Package Manager; an expanded discussion of the rpm Red Hat Package Manager and CVS; and many new commands. Linux in a Nutshell is a must for any Linux user; it weighs less than a stack of manual pages, but gives you everything you need for common, day-to-day use.

grep Pocket Reference is the first guide devoted to grep, the powerful Unix content-location utility. This handy book is ideal for system administrators, security professionals, developers, and others who want to learn more about grep and take new approaches with it -- for everything from mail filtering and system log management to malware analysis. With grep Pocket Reference, you will: Learn methods for filtering large files for specific content Acquire information not included in the current grep documentation Get several tricks for using variants such as egrep Keep key information about grep right at your fingertips Find the answers you need about grep quickly and easily. If you're familiar with this utility, grep Pocket Reference will help you refresh your basic knowledge, understand rare situations, and work more efficiently. If you're new to grep, this book is the best way to get started.

Over the last few years, Linux has grown both as an operating system and a tool for personal and business use. Simultaneously becoming more user friendly and more powerful as a back-end system, Linux has achieved new plateaus: the newer filesystems have solidified, new commands and tools have appeared and become standard, and the desktop—including new desktop environments—have proved to be viable, stable, and readily accessible to even those who don't consider themselves computer gurus. Whether you're using Linux for personal software projects, for a small office or home office (often termed the SOHO environment), to provide services to a small group of colleagues, or to administer a site responsible for millions of email and web connections each day, you need quick access to information on a wide range of tools. This book covers all aspects of administering and making effective use of Linux systems. Among its topics are booting, package management, and revision control. But foremost in Linux in a Nutshell are the utilities and commands that make Linux one of the most powerful and flexible systems available. Now in its fifth edition, Linux in a Nutshell brings users up-to-date with the current state of Linux. Considered by many to be the most complete and authoritative command reference for Linux available, the book covers all substantial user, programming, administration, and networking commands for the most common Linux distributions. Comprehensive but concise, the fifth edition has been updated to cover new features of major Linux distributions. Configuration information for the rapidly growing commercial network services and community update services is one of the subjects covered for the first time. But that's just the beginning. The book covers editors, shells, and LILO and GRUB boot options. There's also coverage of Apache, Samba, Postfix, sendmail, CVS, Subversion, Emacs, vi, sed, gawk, and much more. Everything that system administrators, developers, and power users need to know about Linux is referenced here, and they will turn to this book again and again.