

How Linux Works 2nd Edition What Every Superuser Should Know

Summary Linux in Action is a task-based tutorial that will give you the skills and deep understanding you need to administer a Linux-based system. This hands-on book guides you through 12 real-world projects so you can practice as you learn. Each chapter ends with a review of best practices, new terms, and exercises. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology You can't learn anything without getting your hands dirty— including Linux. Skills like securing files, folders, and servers, safely installing patches and applications, and managing a network are required for any serious user, including developers, administrators, and DevOps professionals. With this hands-on tutorial, you'll roll up your sleeves and learn Linux project by project. About the Book Linux in Action guides you through 12 real-world projects, including automating a backup-and-restore system, setting up a private Dropbox-style file cloud, and building your own MediaWiki server. You'll try out interesting examples as you lock in core practices like virtualization, disaster recovery, security, backup, DevOps, and system troubleshooting. Each chapter ends with a review of best practices, new terms, and exercises. What's inside Setting up a safe Linux environment Managing secure remote connectivity Building a system recovery device Patching and upgrading your system About the Reader No prior Linux admin experience is required. About the Author David Clinton is a certified Linux Server Professional, seasoned instructor, and author of Manning's bestselling Learn Amazon Web Services in a Month of Lunches. Table of Contents Welcome to Linux Linux virtualization: Building a Linux working environment Remote connectivity: Safely accessing networked machines Archive management: Backing up or copying entire file systems Automated administration: Configuring automated offsite backups Emergency tools: Building a system recovery device Web servers: Building a MediaWiki server Networked file sharing: Building a Nextcloud file-sharing server Securing your web server Securing network connections: Creating a VPN or DMZ System monitoring: Working with log files Sharing data over a private network Troubleshooting system performance issues Troubleshooting network issues Troubleshooting peripheral devices DevOps tools: Deploying a scripted server environment using Ansible

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.

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.

Your one-stop guide to Linux—fully revised and expanded Get in-depth coverage of all Linux features, tools, and utilities from this thoroughly updated and comprehensive resource, designed for all Linux distributions. Written by Linux expert Richard Petersen, this book explains how to get up-and-running on Linux, use the desktops and shells, manage applications, deploy servers, implement security measures, and handle system and network administration tasks. With full coverage of the latest platform, Linux: The Complete Reference, Sixth Edition includes details on the very different and popular Debian (Ubuntu) and Red Hat/Fedora software installation and service management tools used by most distributions. This is a must-have guide for all Linux users. Install, configure, and administer any Linux distribution Work with files and folders from the BASH, TCSH, and Z shells Use the GNOME and KDE desktops, X Windows, and display managers Set up office, database, Internet, and multimedia applications Secure data using SELinux, netfilter, SSH, and Kerberos Encrypt network transmissions with GPG, LUKS, and IPsec Deploy FTP, Web, mail, proxy, print, news, and database servers Administer system resources using HAL, udev, and virtualization (KVM and Xen) Configure and maintain IPv6, DHCPv6, NIS, networking, and remote access Access remote files and devices using NFSv4, GFS, PVFS, NIS, and SAMBA

Linux Command Line and Shell Scripting Bible

Linux Pocket Guide

Linux System Programming

Linux in Action

SSH, The Secure Shell

Docker in Action

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.

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

Describes the concepts of programming with Linux, covering such topics as shell programming, file structure, managing memory, using MySQL, debugging, processes and signals, and GNOME.

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.

A Complete Introduction

Unix for the Practical Paranoid

Absolute OpenBSD, 2nd Edition

How Linux Works, 2nd Edition

Embedded Software

Linux for Developers

Full of tips, tricks, and helpful pointers, this is a hands-on, project-based guide to Ubuntu, a completely free Linux operating system. The authors tackle topics of interest to the everyday user, such as customizing the desktop, installing programs, and playing audio and video.

More than 50 percent new and revised content for today's Linux environment gets you up and running in no time! Linux continues to be an excellent, low-cost alternative to expensive operating systems. Whether you're new to Linux or need a reliable update and reference, this is an excellent resource. Veteran bestselling author Christopher Negus provides a complete tutorial packed with major updates, revisions, and hands-on exercises so that you can confidently start using Linux today. Offers a complete restructure, complete with exercises, to make the book a better learning tool Places a strong focus on the Linux command line tools and can be used with all distributions and versions of Linux Features in-depth coverage of the tools that a power user and a Linux administrator need to get started This practical learning tool is ideal for anyone eager to set up a new Linux desktop system at home or curious to learn how to manage Linux server systems at work.

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.

Shell scripts are an efficient way to interact with your machine and manage your files and system operations. With just a few lines of code, your computer will do exactly what you want it to do. But you can also use shell scripts for many other essential (and not-so-essential) tasks. This second edition of Wicked Cool Shell Scripts offers a collection of useful, customizable, and fun shell scripts for solving common problems and personalizing your computing environment. Each chapter contains ready-to-use scripts and explanations of how they work, why you'd want to use them, and suggestions for changing and expanding them. You'll find a mix of classic favorites, like a disk backup utility that keeps your files safe when your system crashes, a password manager, a weather tracker, and several games, as well as 23 brand-new scripts, including: - ZIP code lookup tool that reports the city and state - Bitcoin address information retriever - suite of tools for working with cloud services like Dropbox and iCloud - for renaming and applying commands to files in bulk - processing and editing tools Whether you want to save time managing your system or just find new ways to goof off, these scripts are wicked cool!

The Practice of System and Network Administration

The Definitive Guide

Volume 1: DevOps and other Best Practices for Enterprise IT

How Linux Works, 3rd Edition

Ubuntu Made Easy

How Linux Works

Whether you're a systems administrator or a home user, you need to understand how Linux internals work before you can really master Linux — how it boots, how networking works, how to customize the kernel, and even what hardware to buy. How Linux Works contains the kind of information normally handed down from wizards—knowledge that comes from years of experience doing things the hard way. But instead of seeking the right incantation to make your system work, you can read How Linux Works to see how to administer Linux and why each particular technique works. This book covers such need-to-know topics as: –How Linux boots, with coverage of boot loaders and init –How networking, interfaces, firewalls, and servers work –How development tools and shared libraries work –How the kernel manages devices, device drivers, and processes, and how to build a custom kernel –How the Linux printing system works, with sections on cups, filters, and Ghostscript –How shell scripts work With its combination of background theory and real-world examples, How Linux Works will show you how to run your system instead of having your system run you.

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 third edition of the bestselling How Linux Works , author Brian Ward peels back the layers of this well-loved operating system to make Linux internals accessible. This edition has been thoroughly updated and expanded with added coverage of Logical Volume Manager (LVM), virtualization, and containers. You'll learn: •How Linux boots, from boot loaders to init (systemd) •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 , 3rd edition will teach you what you need to know to solve pesky problems and take control of your operating system.

Pick up where certification exams leave off. With this practical, in-depth guide to the entire network infrastructure, you'll learn how to deal with real Cisco networks, rather than the hypothetical situations presented on exams like the CCNA. Network Warrior takes you step by step through the world of routers, switches, firewalls, and other technologies based on the author's extensive field experience. You'll find new content for MPLS, IPv6, VoIP, and wireless in this completely revised second edition, along with examples of Cisco Nexus 5000 and 7000 switches throughout. Topics include: An in-depth view of routers and routing Switching, using Cisco Catalyst and Nexus switches as examples SOHO VoIP and SOHO wireless access point design and configuration Introduction to IPv6 with configuration examples Telecom technologies in the data-networking world, including T1, DS3, frame relay, and MPLS Security, firewall theory, and configuration, as well as ACL and authentication Quality of Service (QoS), with an emphasis on low-latency queuing (LLQ) IP address allocation, Network Time Protocol (NTP), and device failures 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.

The Complete Guide to FreeBSD

Getting Started with Networking, Scripting, and Security in Kali

Understanding the Linux Kernel

Beginning Linux?Programming

The Cult of Mac, 2nd Edition

A Project-based Introduction to Linux

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 bill: 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 you need a 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 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 explanations of 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 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.

In-depth instruction and practical techniques for building with the BeagleBone embedded Linux platform Exploring BeagleBone is a hands-on guide to bringing gadgets, gizmos, and robots to life on the BeagleBone embedded Linux platform. Comprehensive content and deep detail provide more than just a BeagleBone instruction manual—you'll also learn the underlying engineering techniques that will help you create your own projects. The book begins with a foundational primer on essential skills, and then gradually moves into communication, control, and advanced applications using C/C++, allowing you to learn at your own pace. In addition, the book's companion website features instructional videos, source code, discussion forums, and more, to ensure that you have everything you need. The BeagleBone's small size, high performance, low cost, and extreme adaptability have made it a favorite development platform, and the Linux software base allows for complex yet flexible functionality. The BeagleBone has applications in smart buildings, robot control, environmental sensing, to name a few; and, expansion boards and peripherals dramatically increase the possibilities. Exploring BeagleBone provides a reader-friendly guide to the world of embedded Linux, including a crash course in computer engineering. While following step by step, you can: Get up to speed on embedded Linux, electronics, and programming Master interfacing electronic circuits, with practical examples Explore the Internet-connected BeagleBone and the BeagleBone with a display Apply the BeagleBone to sensing applications, including video and sound Explore the BeagleBone's Programmable Real-Time Controllers Hands-on learning helps ensure that your new skills stay with you, allowing you to design with electronics, modules, or peripherals even beyond the BeagleBone. Online guidance and online peer support help you transition from beginner to expert as you master the techniques presented in Exploring BeagleBone, the practical handbook for the popular computing platform. This handy cookbook teaches new-to-intermediate Linux users the essential skills necessary to manage a home or small business network. The recipes in this book are updated to cover new tools like systemctl, firewalld, modern package managers, the Raspberry Pi, and connecting Android and iOS devices to your network. You'll learn how to install, maintain, and troubleshoot a Linux system; how to manage software, manage filesystems, run backups and restores, manage name services, securely connect to remote systems, partition storage devices, build a LAN gateway on Raspberry Pi, and more. This book covers the tasks you'll need to run and maintain a Linux system. Carla Schroder, author of over a thousand Linux how-tos for various publications, as well as the Networking Cookbook and the Book of ARM, provides the solid Linux foundations you need to build and run your network. How do you multiboot? Or troubleshoot software, hardware, and network issues? Each recipe addresses a specific problem and provides a solution that explains the solution and provides insight into how it works. Learn how the Linux ecosystem is structured Enable smartphones and tablets to safely connect to your LAN Manage fundamental network essential tasks Secure remote access and build a firewall/internet gateway Manage users and groups, and filesystems and partitions Rescue nonbooting systems Manage name services and the Dynamic Host Configuration Protocol (DHCP)

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 the system'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.

Linux Cookbook

Linux in a Nutshell

Everything You Need to Know That Wasn't on the CCNA Exam

Linux Device Drivers

Unix Power Tools

Essential Skills for Linux Users and System and Network Administrators

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

Praise for the First Edition: "This outstanding book ... gives the reader robust concepts and implementable knowledge of this environment. Graphical user interface (GUI)-based users and developers do not get short shrift, despite the command-line interface's (CLI) full-power treatment. ... Every programmer should read the introduction's Unix/Linux philosophy section. ... This authoritative and exceptionally well-constructed book has my highest recommendation. It will repay careful and recursive study." --Computing Reviews, August 2011 Mastering Modern Linux, Second Edition retains much of the good material from the previous edition, with extensive updates and new topics added. The book provides a comprehensive and up-to-date guide to Linux concepts, usage, and programming. The text helps the reader master Linux with a well-selected set of topics, and encourages hands-on practice. The first part of the textbook covers interactive use of Linux via the Graphical User Interface (GUI) and the Command-Line Interface (CLI), including comprehensive treatment of the Gnome desktop and the Bash Shell. Using different apps, commands and filters, building pipelines, and matching patterns with regular expressions are major focuses. Next comes Bash scripting, file system structure, organization, and usage. The following chapters present networking, the Internet and the Web, data encryption, basic system admin, as well as Web hosting. The Linux Apache MySQL/MariaDB PHP (LAMP) Web hosting combination is also presented in depth. In the last part of the book, attention is turned to C-level programming. Topics covered include the C compiler, preprocessor, debugger, I/O, file manipulation, process control, inter-process communication, and networking. The book includes many examples and complete programs ready to download and run. A summary and exercises of varying degrees of difficulty can be found at the end of each chapter. A companion website (<http://mml.sofpower.com>) provides appendices, information updates, an example code package, and other resources for instructors, as well as students.

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).

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.

Solutions and Examples for Bash Users

Linux Kernel Development

Wicked Cool Shell Scripts, 2nd Edition

Pro Git

What Every Superuser Should Know

Bash Cookbook

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.

"As an author, editor, and publisher, I never paid much attention to the competition—except in a few cases. This is one of those cases. The UNIX System Administration Handbook is one of the few books we ever measured ourselves against." —Tim O'Reilly, founder of O'Reilly Media "This edition is for those whose systems live in the cloud or in virtualized data centers; those whose administrative work largely takes the form of automation and configuration source code; those who collaborate closely with developers, network engineers, compliance officers, and all the other worker bees who inhabit the modern hive." —Paul Vixie, Internet Hall of Fame-recognized innovator and founder of ISC and Farsight Security "This book is fun and functional as a desktop reference. If you use UNIX and Linux systems, you need this book in your short-reach library. It covers a bit of the systems' history but doesn't bloviate. It's just straight-forward information delivered in a colorful and memorable fashion." —Jason A. Nunnelley UNIX® and Linux® System Administration Handbook, Fifth Edition, is today's definitive guide to installing, configuring, and maintaining any UNIX or Linux system, including systems that supply core Internet and cloud infrastructure. Updated for new distributions and cloud environments, this comprehensive guide covers best practices for every facet of system administration, including storage management, network design and administration, security, web hosting, automation, configuration management, performance analysis, virtualization, DNS, security, and the management of IT service organizations. The authors—world-class, hands-on technologists—offer indispensable new coverage of cloud platforms, the DevOps philosophy, continuous deployment, containerization, monitoring, and many other essential topics. Whatever your role in running systems and networks built on UNIX or Linux, this conversational, well-written guide

will improve your efficiency and help solve your knottiest problems.

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

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?

Exploring BeagleBone

Linux: The Complete Reference, Sixth Edition

Absolute FreeBSD, 2nd Edition

Network Warrior

UNIX and Linux System Administration Handbook

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.

Learn Linux, and take your career to the next level! Linux Essentials, 2nd Edition provides a solid foundation of knowledge for anyone considering a career in information technology, for anyone new to the Linux operating system, and for anyone who is preparing to sit for the Linux Essentials Exam. Through this engaging resource, you can access key information in a learning-by-doing style. Hands-on tutorials and end-of-chapter exercises and review questions lead you in both learning and applying new information—information that will help you achieve your goals! With the experience provided in this compelling reference, you can sit down for the Linux Essentials Exam with confidence. An open source operating system, Linux is a UNIX-based platform that is freely updated by developers. The nature of its development means that Linux is a low-cost and secure alternative to other operating systems, and is used in many different IT environments. Passing the Linux Essentials Exam prepares you to apply your knowledge regarding this operating system within the workforce. Access lessons that are organized by task, allowing you to quickly identify the topics you are looking for and navigate the comprehensive information presented by the book

Discover the basics of the Linux operating system, including distributions, types of open source applications, freeware, licensing, operations, navigation, and more

Explore command functions, including navigating the command line, turning commands into scripts, and more

Identify and create user types, users, and groups

Linux Essentials, 2nd Edition is a critical resource for anyone starting a career in IT or anyone new to the Linux operating system.

It's been nearly fifteen years since Apple fans raved over the first edition of the critically-acclaimed The Cult of Mac. This long-awaited second edition brings the reader into the world of Apple today while also filling in the missing history since the 2004 edition, including the creation of Apple brand loyalty, the introduction of the iPhone, and the death of Steve Jobs. Apple is a global luxury brand whose products range from mobile phones and tablets to streaming TVs and smart home speakers. Yet despite this dominance, a distinct subculture persists, which celebrates the ways in which Apple products seem to encourage self-expression, identity, and innovation. The beautifully designed second edition of The Cult of Mac takes you inside today's Apple fandom to explore how devotions--new and old--keep the fire burning. Join journalists Leander Kahney and David Pierini as they explore how enthusiastic fans line up for the latest product releases, and how artists pay tribute to Steve Jobs' legacy in sculpture and opera. Learn why some photographers and filmmakers have eschewed traditional gear in favor of iPhone cameras. Discover a community of collectors around the world who spend tens of thousands of dollars to buy, restore, and enshrine Apple artifacts, like the Newton MessagePad and Apple II. Whether you're an Apple fan or just a casual observer, this second edition of The Cult of Mac is sure to reveal more than a few surprises, offering an intimate look at some of the most dedicated members in the Apple community.

Pro Git (Second Edition) is your fully-updated guide to Git and its usage in the modern world. Git has come a long way since it was first developed by Linus Torvalds for Linux kernel development.

It has taken the open source world by storm since its inception in 2005, and this book teaches you how to use it like a pro. Effective and well-implemented version control is a necessity for successful web projects, whether large or small. With this book you'll learn how to master the world of distributed version workflow, use the distributed features of Git to the full, and extend Git to meet your every need. Written by Git pros Scott Chacon and Ben Straub, Pro Git (Second Edition) builds on the hugely successful first edition, and is now fully updated for Git version 2.0, as well as including an indispensable chapter on GitHub. It's the best book for all your Git needs.

Linux Essentials

Jumpstart Your Linux Programming Skills

The Linux Command Line, 2nd Edition

The Design and Implementation of the FreeBSD Operating System

Tools and Techniques for Building with Embedded Linux

Talking Directly to the Kernel and C Library

With 28 new chapters, the third edition of The Practice of System and Network Administration innovates yet again! Revised with thousands of updates and clarifications based on reader feedback, this new edition also incorporates DevOps strategies even for non-DevOps environments. Whether you use Linux, Unix, or Windows, this new edition describes the essential practices previously handed down only from mentor to protégé. This wonderfully lucid, often funny cornucopia of information introduces beginners to advanced frameworks valuable for their entire career, yet is structured to help even experts through difficult projects. Other books tell you what commands to type. This book teaches you the cross-platform strategies that are timeless! DevOps techniques: Apply DevOps principles to enterprise IT infrastructure, even in environments without developers Game-changing strategies: New ways to deliver results faster with less stress Fleet management: A comprehensive guide to managing your fleet of desktops, laptops, servers and mobile devices Service management: How to design, launch, upgrade and migrate services Measurable improvement: Assess your operational effectiveness; a forty-page, pain-free assessment system you can start using today to raise the quality of all services Design guides: Best practices for networks, data centers, email, storage, monitoring, backups and more Management skills: Organization design, communication, negotiation, ethics, hiring and firing, and more Have you ever had any of these problems? Have you been surprised to discover your backup tapes are blank? Ever spent a year launching a new service only to be told the users hate it? Do you have more incoming support requests than you can handle? Do you spend more time fixing problems than building the next awesome thing? Have you suffered from a botched migration of thousands of users to a new service? Does your company rely on a computer that, if it died, can't be rebuilt? Is your network a fragile mess that breaks any time you try to improve it? Is there a periodic "hell month" that happens twice a year? Twelve times a year? Do you find out about problems when your users call you to complain? Does your corporate "Change Review Board" terrify you? Does each division of your company have their own broken way of doing things? Do you fear that automation will replace you, or break more than it fixes? Are you underpaid and overworked? No vague "management speak" or empty platitudes. This comprehensive guide provides real solutions that prevent these problems and more!

The key to mastering any Unix system, especially Linux and Mac OS X, is a thorough knowledge of shell scripting. Scripting is a way to harness and customize the power of any Unix system, and it's an essential skill for any Unix users, including system administrators and professional OS X developers. But beneath this simple promise lies a treacherous ocean of variations in Unix commands and standards. bash Cookbook teaches shell scripting the way Unix masters practice the craft. It presents a variety of recipes and tricks for all levels of shell programmers so that anyone can become a proficient user of the most common Unix shell -- the bash shell -- and cygwin or other popular Unix emulation packages. Packed full of useful scripts, along with examples that explain how to create better scripts, this new cookbook gives professionals and power users everything they need to automate routine tasks and enable them to truly manage their systems -- rather than have their systems manage them.

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.

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Mastering Modern Linux

The Linux Command Line

Linux Network Administrator's Guide

Linux Bible

101 Scripts for Linux, OS X, and UNIX Systems

The Works

As the embedded world expands, developers must have a strong grasp of many complex topics in order to make faster, more efficient and more powerful microprocessors to meet the public's growing demand. Embedded Software: The Works covers all the key subjects embedded engineers need to understand in order to succeed, including Design and Development, Programming, Languages including C/C++, and UML, Real Time Operating Systems Considerations, Networking, and much more. New material on Linux, Android, and multi-core gives engineers the up-to-date practical know-how they need in order to succeed. Colin Walls draws upon his experience and insights from working in the industry, and covers the complete cycle of embedded software development: its design, development, management, debugging procedures, licensing, and reuse. For those new to the field, or for experienced engineers looking to expand their skills, Walls provides the reader with detailed tips and techniques, and rigorous explanations of technologies. Key features include: New chapters on Linux, Android, and multi-core - the cutting edge of embedded software development! Introductory roadmap guides readers through the book, providing a route through the separate chapters and showing how they are linked About the Author Colin Walls has over twenty-five years experience in the electronics industry, largely dedicated to embedded software. A frequent presenter at conferences and seminars and author of numerous technical articles and two books on embedded software, he is a member of the marketing team of the Mentor Graphics Embedded Software Division. He writes a regular blog on the Mentor website (blogs.mentor.com/colinwalls). New chapters on Linux, Android, and multi-core - the cutting edge of embedded software development! Introductory roadmap guides readers through the book, providing a route through the separate chapters and showing how they are linked

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.