

## Essential System Administration Tools And Techniques For Linux And Unix Administration

Implement a SOHO or SMB Linux infrastructure to expand your business and associated IT capabilities. Backed by the expertise and experienced guidance of the authors, this book provides everything you need to move your business forward. Pro Linux System Administration makes it easy for small- to medium-sized businesses to enter the world of zero-cost software running on Linux and covers all the distros you might want to use, including Red Hat, Ubuntu, Debian, and CentOS. Pro Linux System Administration takes a layered, component-based approach to open source business systems, while training system administrators as the builders of business infrastructure. Completely updated for this second edition, Dennis Matotek takes you through an infrastructure-as-code approach, seamlessly taking you through steps along the journey of Linux administration with all you need to master complex systems. This edition now includes Jenkins, Ansible, Logstash and more. What You'll Learn: Understand Linux architecture Build, back up, and recover Linux servers Create basic networks and network services with Linux Build and implement Linux infrastructure and services including mail, web, databases, and file and print Implement Linux security Resolve Linux performance and capacity planning issues Who This Book Is For: Small to medium-sized business owners looking to run their own IT, system administrators considering migrating to Linux, and IT systems integrators looking for an extensible Linux infrastructure management approach.

"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 SystemAdministration 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.

With platforms designed for rapid adaptation and failure recovery such as Amazon Web Services, cloud computing is more like programming than traditional system administration. Tools for automatic scaling and instance replacement allow even small DevOps teams to manage massively scalable application infrastructures—if team members drop their old views of development and operations and start mastering automation. This comprehensive guide shows developers and system administrators how to configure and manage AWS services including

EC2, CloudFormation, Elastic Load Balancing, S3, and Route 53. Sysadmins will learn will learn to automate their favorite tools and processes; developers will pick up enough ops knowledge to build a robust and resilient AWS application infrastructure. Launch instances with EC2 or CloudFormation Securely deploy and manage your applications with AWS tools Learn to automate AWS configuration management with Python and Puppet Deploy applications with Auto Scaling and Elastic Load Balancing Explore approaches for deploying application and infrastructure updates Save time on development and operations with reusable components Learn strategies for managing log files in AWS environments Configure a cloud-aware DNS service with Route 53 Use AWS CloudWatch to monitor your infrastructure and applications 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

Over the years, thousands of tools have been developed for debugging TCP/IP networks. They range from very specialized tools that do one particular task, to generalized suites that do just about everything except replace bad Ethernet cables. Even better, many of them are absolutely free. There's only one problem: who has time to track them all down, sort through them for the best ones for a particular purpose, or figure out how to use them? Network Troubleshooting Tools does the work for you--by describing the best of the freely available tools for debugging and troubleshooting. You can start with a lesser-known version of ping that diagnoses connectivity problems, or take on a much more comprehensive program like MRTG for graphing traffic through network interfaces. There's tkined for mapping and automatically monitoring networks, and Ethereal for capturing packets and debugging low-level problems. This book isn't just about the tools available for troubleshooting common network problems. It also outlines a systematic approach to network troubleshooting: how to document your network so you know how it behaves under normal conditions, and how to think about problems when they arise, so you can solve them more

effectively. The topics covered in this book include: Understanding your network Connectivity testing Evaluating the path between two network nodes Tools for capturing packets Tools for network discovery and mapping Tools for working with SNMP Performance monitoring Testing application layer protocols Software sources If you're involved with network operations, this book will save you time, money, and needless experimentation.

Develop advanced skills for working with Linux systems on-premises and in the cloud Key Features Become proficient in everyday Linux administration tasks by mastering the Linux command line and using automation Work with the Linux filesystem, packages, users, processes, and daemons Deploy Linux to the cloud with AWS, Azure, and Kubernetes Book Description Linux plays a significant role in modern data center management and provides great versatility in deploying and managing your workloads on-premises and in the cloud. This book covers the important topics you need to know about for your everyday Linux administration tasks. The book starts by helping you understand the Linux command line and how to work with files, packages, and filesystems. You'll then begin administering network services and hardening security, and learn about cloud computing, containers, and orchestration. Once you've learned how to work with the command line, you'll explore the essential Linux commands for managing users, processes, and daemons and discover how to secure your Linux environment using application security frameworks and firewall managers. As you advance through the chapters, you'll work with containers, hypervisors, virtual machines, Ansible, and Kubernetes. You'll also learn how to deploy Linux to the cloud using AWS and Azure. By the end of this Linux book, you'll be well-versed with Linux and have mastered everyday administrative tasks using workflows spanning from on-premises to the cloud. If you also find yourself adopting DevOps practices in the process, we'll consider our mission accomplished. What you will learn Understand how Linux works and learn basic to advanced Linux administration skills Explore the most widely used commands for managing the Linux filesystem, network, security, and more Get to grips with different networking and messaging protocols Find out how Linux security works and how to configure SELinux, AppArmor, and Linux iptables Work with virtual machines and containers and understand container orchestration with Kubernetes Work with containerized workflows using Docker and Kubernetes Automate your configuration management workloads with Ansible Who this book is for If you are a Linux administrator who wants to understand the fundamentals and as well as modern concepts of Linux system administration, this book is for you. Windows System Administrators looking to extend their knowledge to the Linux OS will also benefit from this book.

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.

Essential Windows NT System Administration teaches you how to manage Windows NT systems effectively. It covers topics like security, performance tuning, fault tolerance features, backups, printing, and networking. By the author of O'Reilly's bestselling book, Essential System Administration.

A guide for administrators running Unix, Windows NT, or Mac OS platforms demonstrates the use of the programming language in file system management, directory services, user administration, log files, and security and network monitoring

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).

Develop the skill to manage and administer Red Hat Enterprise Linux and get ready to achieve the RHCSA certification Key Features Learn the most common administration and security tasks and manage enterprise Linux infrastructures efficiently Assess your knowledge using self-assessment questions based on real-world examples Understand how to apply the concepts of core systems administration in the real world Book Description Whether in infrastructure or development, as a DevOps or site reliability engineer, Linux skills are now more relevant than ever for any IT job, forming the foundation of understanding the most basic layer of your architecture. With Red Hat Enterprise Linux (RHEL) becoming the most popular choice for enterprises worldwide, achieving the Red Hat Certified System Administrator (RHCSA) certification will validate your Linux skills to install, configure, and troubleshoot applications and services on RHEL systems. Complete with easy-to-follow tutorial-style content, self-assessment questions, tips, best practices, and practical exercises with detailed solutions, this book covers essential RHEL commands, user and group management, software management, networking fundamentals, and much more. You'll start by learning how to create an RHEL 8 virtual machine and get to grips with essential Linux commands. You'll then understand how to manage users and groups on an RHEL 8 system, install software packages, and configure your network interfaces and firewall. As you advance, the book will help you explore disk partitioning, LVM configuration, Stratis volumes, disk compression with VDO, and container management with Podman, Buildah, and Skopeo. By the end of this book, you'll have covered everything included in the RHCSA EX200 certification and be able to use this book as a handy, on-the-job desktop reference guide. This book and its contents are solely the work of Miguel Perez Colino, Pablo Iranzo Gomez, and Scott McCarty. The content does not reflect the views of their employer (Red Hat Inc.). This work has no connection to Red Hat, Inc. and is not endorsed or supported by Red Hat, Inc. What you will learn Deploy RHEL 8 in different footprints, from bare metal and virtualized to the cloud Manage users and software on local and remote systems at scale Discover how to secure a system with SELinux, OpenSCAP, and firewalld Gain an overview of storage components with LVM, Stratis, and VDO Master remote administration with passwordless SSH and tunnels Monitor your systems for resource usage and take actions to fix issues Understand the boot process, performance optimizations, and containers Who this book is for This book is for IT professionals or students who want to start a career in Linux administration and anyone who wants to take the RHCSA 8 certification exam. Basic knowledge of Linux and familiarity with the Linux

command-line is necessary.

Be more productive and make your life easier. That's what LDAP System Administration is all about. System administrators often spend a great deal of time managing configuration information located on many different machines: usernames, passwords, printer configurations, email client configurations, and network filesystem configurations, to name a few. LDAPv3 provides tools for centralizing all of the configuration information and placing it under your control. Rather than maintaining several administrative databases (NIS, Active Directory, Samba, and NFS configuration files), you can make changes in only one place and have all your systems immediately "see" the updated information. Practically platform independent, this book uses the widely available, open source OpenLDAP 2 directory server as a premise for examples, showing you how to use it to help you manage your configuration information effectively and securely. OpenLDAP 2 ships with most Linux® distributions and Mac OS® X, and can be easily downloaded for most Unix-based systems. After introducing the workings of a directory service and the LDAP protocol, all aspects of building and installing OpenLDAP, plus key ancillary packages like SASL and OpenSSL, this book discusses: Configuration and access control Distributed directories; replication and referral Using OpenLDAP to replace NIS Using OpenLDAP to manage email configurations Using LDAP for abstraction with FTP and HTTP servers, Samba, and Radius Interoperating with different LDAP servers, including Active Directory Programming using Net::LDAP If you want to be a master of your domain, LDAP System Administration will help you get up and running quickly regardless of which LDAP version you use. After reading this book, even with no previous LDAP experience, you'll be able to integrate a directory server into essential network services such as mail, DNS, HTTP, and SMB/CIFS.

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

Windows(r) and Mac OS(r) X, CVS is widely used to manage program code, web site content, and to track changes made to system configuration files. Multiple users can check out files from a directory tree, make changes, and then commit those changes back into the directory. If two developers modify the same file, CVS enables both sets of changes to be merged together into one final file. Although CVS is a lifesaver in many development scenarios, it suffers from poor documentation. But with "Essential CVS," developers can have it all: the order that CVS brings and the comprehensive documentation developers need. "Essential CVS" is a complete and easy-to-follow reference that helps programmers and system administrators apply order to the task of managing large quantities of documents. The book covers basic concepts and usage of CVS, and features a comprehensive reference for CVS commands--including a handy Command Reference Card for quick, on-the-job checks. The book also includes advanced information on all aspects of CVS that involve automation, logging, branching and merging, and "watches." Readers will find in-depth coverage of the following: Installing CVS and building your first repository Basic use of CVS, including importing projects, checking out projects, committing changes, and updating projects Tagging, branching and merging Working with multiple users Clients, operating systems, and IDEs Repository management and managing remote repositories Project administration, including bug tracking systems, enforcing log messages, history and annotation, and more. Troubleshooting Version control is essential to maintaining order in any project, large or small. Any CVS user, from beginners to team leaders and system administrators, will find this practical guide to CVS indispensable in getting the most from this valuable tool.

Build and manage a powerful network on Mac OS X Server Boost productivity and foster collaboration using the powerful networking tools available in Mac OS X Snow Leopard Server. With clear, detailed explanations and step-by-step instructions, Mac OS X System Administration shows you how to plan, construct, and manage a high-performance Mac-based network. You'll learn how to do everything from planning and installing the network from scratch to backing up both clients and servers to recovering from disaster. Plan the wired, wireless, or combination network your organization needs Build the network and install Mac OS X Server Secure the network using firewalls, encryption, and SSL authentication Harness the power of Open Directory to organize and manage the network Create user accounts, set up groups, and control which applications and features users can access Set up and manage file sharing, print, Web, and e-mail services Install applications automatically both before and after deploying the Macs Enable remote access to the network via VPN Add iPhones and iPod touches to the network Guy Hart-Davis is the bestselling author of more than 50 computer books, including AppleScript: A Beginner's Guide, Mac OS X Leopard QuickSteps, HTML, XHTML & CSS QuickSteps, and How to Do Everything: iPod, iPhone, & iTunes.

Early system administration required in-depth knowledge of a variety of services on individual systems. Now, the job is increasingly complex and different from one company to the next with an ever-growing list of technologies and third-party services to integrate. How does any one individual stay relevant in systems and services? This practical guide helps anyone in operations--sysadmins, automation engineers, IT professionals, and site reliability engineers--understand the essential concepts of the role today. Collaboration, automation, and the evolution of systems change the fundamentals of operations work. No matter where you are in your journey, this book provides you the information to craft your path to advancing essential system administration skills. Author Jennifer Davis provides examples of modern practices and tools with recommended materials to advance your skills. Topics include: Development and testing: Version control, fundamentals of virtualization and containers, testing, and architecture review Deploying and configuring services: Infrastructure management, networks, security, storage, serverless, and release management Scaling administration: Monitoring and observability, capacity planning, log management and analysis, and security and compliance

A guide geared toward seasoned Linux and Unix administrators offers practical knowledge for managing a range of Linux systems and servers, covering such topics as installing servers, setting up e-mail systems, and creating shell scripts.

Debian GNU/Linux, a very popular non-commercial Linux distribution, is known for its reliability and richness. Built and maintained by an impressive network of thousands of developers throughout the world, the Debian project is cemented by its social contract. This foundation text defines the project's objective: fulfilling the needs of users with a 100% free operating system. The success of Debian and of its ecosystem of derivative distributions (with Ubuntu at the forefront) means that an increasing number of administrators are exposed to Debian's technologies. This Debian Administrator's Handbook, which has been entirely updated for Debian 8 "Jessie", builds on the success of its 6 previous editions. Accessible to all, this book teaches the essentials to anyone who wants to become an effective and independent Debian GNU/Linux administrator. It covers all the topics that a competent Linux administrator should master, from installation to updating the system, creating packages and compiling the kernel, but also monitoring, backup and migration, without forgetting advanced topics such as setting up SELinux or AppArmor to secure services, automated installations, or virtualization with Xen, KVM or LXC. This book is not only designed for professional system administrators. Anyone who uses Debian or Ubuntu on their own computer is de facto an administrator and will find tremendous value in knowing more about how their system works. Being able to understand and resolve problems will save you invaluable time. Learn more about the book on its official website: [debian-handbook.info](http://debian-handbook.info)

\* Updated to cover Red Hat Linux Enterprise Workstation with the latest on advanced Linux kernel features, the Tux Web server, the latest Apache 2.x Web server, and the expanded suite of custom configuration tools \* Starts with network planning and Red Hat installation and configuration, then progresses to optimizing network and Internet services and monitoring and maintaining the network \* Examines the basics of Red Hat Linux security and offers trouble-shooting and problem-solving advice \* Includes important new chapters that focus on optimizing standard network services, such as file and print services, and Internet-related servers, such as the Apache Web server Copyright © 2004 by Red Hat, Inc. Material from Chapters 4-6, 8-10, 17 and 21 may be distributed only subject to the terms and conditions set forth in the Open Publication License, V1.0 or later (the latest version is presently available at <http://www.opencontent.org/openpub/>).

Essential System Administration Tools and Techniques for Linux and Unix Administration"O'Reilly Media, Inc."

Covers the concepts and fundamentals of Microsoft Windows server with information on such topics as active directory, group policy, installation, storage, and remote access.

Get in-depth guidance—and inside insights—for using the Windows Sysinternals tools available from Microsoft TechNet. Guided by Sysinternals creator Mark Russinovich and Windows expert Aaron Margosis, you'll drill into the features and functions of dozens of free file, disk, process, security, and Windows management tools. And you'll learn how to apply the book's best practices to help resolve your own technical issues the way the experts do. Diagnose. Troubleshoot. Optimize. Analyze CPU spikes, memory leaks, and other system problems Get a comprehensive view of file, disk, registry, process/thread, and network activity Diagnose and troubleshoot issues with Active Directory Easily scan, disable, and remove autostart applications and components Monitor application debug output Generate trigger-based memory dumps for application troubleshooting Audit and analyze file digital

signatures, permissions, and other security information Execute Sysinternals management tools on one or more remote computers Master Process Explorer, Process Monitor, and Autoruns

Learn to administer UNIX from both a network and single system perspective with help from this introductory resource. You'll get clear advice on everything from installation and configuration to setting up important services such as Web Server, FTP, SNMP, DNS, as well as other key functions. You'll also find specific information for the Solaris, HP-UX, and AIX platforms.

This book highlights practical sysadmin skills, common architectures that you'll encounter, and best practices that apply to automating and running systems at any scale, from one laptop or server to 1,000 or more. It is intended to help orient you within the discipline, and hopefully encourages you to learn more about system administration.

"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.

This complete guide to setting up and running a TCP/IP network is essential for network administrators, and invaluable for users of home systems that access the Internet. The book starts with the fundamentals -- what protocols do and how they work, how addresses and routing are used to move data through the network, how to set up your network connection -- and then covers, in detail, everything you need to know to exchange information via the Internet. Included are discussions on advanced routing protocols (RIPv2, OSPF, and BGP) and the gated software package that implements them, a tutorial on configuring important network services -- including DNS, Apache, sendmail, Samba, PPP, and DHCP -- as well as expanded chapters on troubleshooting and security. TCP/IP Network Administration is also a command and syntax reference for important packages

such as gated, pppd, named, dhcpd, and sendmail. With coverage that includes Linux, Solaris, BSD, and System V TCP/IP implementations, the third edition contains: Overview of TCP/IP Delivering the data Network services Getting started M Basic configuration Configuring the interface Configuring routing Configuring DNS Configuring network servers Configuring sendmail Configuring Apache Network security Troubleshooting Appendices include dip, pppd, and chat reference, a gated reference, a dhcpd reference, and a sendmail reference This new edition includes ways of configuring Samba to provide file and print sharing on networks that integrate Unix and Windows, and a new chapter is dedicated to the important task of configuring the Apache web server. Coverage of network security now includes details on OpenSSH, stunnel, gpg, iptables, and the access control mechanism in xinetd. Plus, the book offers updated information about DNS, including details on BIND 8 and BIND 9, the role of classless IP addressing and network prefixes, and the changing role of registrars. Without a doubt, TCP/IP Network Administration, 3rd Edition is a must-have for all network administrators and anyone who deals with a network that transmits data over the Internet.

Patient-reported outcomes (PROs) are measures of how patients feel or what they are able to do in the context of their health status; PROs are reports, usually on questionnaires, about a patient's health conditions, health behaviors, or experiences with health care that individuals report directly, without modification of responses by clinicians or others; thus, they directly reflect the voice of the patient. PROs cover domains such as physical health, mental and emotional health, functioning, symptoms and symptom burden, and health behaviors. They are relevant for many activities: helping patients and their clinicians make informed decisions about health care, monitoring the progress of care, setting policies for coverage and reimbursement of health services, improving the quality of health care services, and tracking or reporting on the performance of health care delivery organizations. We address the major methodological issues related to choosing, administering, and using PROs for these purposes, particularly in clinical practice settings. We include a framework for best practices in selecting PROs, focusing on choosing appropriate methods and modes for administering PRO measures to accommodate patients with diverse linguistic, cultural, educational, and functional skills, understanding measures developed through both classic and modern test theory, and addressing complex issues relating to scoring and analyzing PRO data.

As an open operating system, Unix can be improved on by anyone and everyone: individuals, companies, universities, and more. As a result, the very nature of Unix has been altered over the years by numerous extensions formulated in an assortment of versions. Today, Unix encompasses everything from Sun's Solaris to Apple's Mac OS X and more varieties of Linux than you can easily name. The latest edition of this bestselling reference brings Unix into the 21st century. It's been reworked to keep current with the broader state of Unix in today's world and highlight the strengths of this operating system in all its various flavors. Detailing all Unix commands and options, the informative guide provides generous descriptions and examples that put those commands in context. Here are some of the new features you'll find in Unix in a Nutshell, Fourth Edition: Solaris 10, the latest version of the SVR4-based operating system, GNU/Linux, and Mac OS X

Bash shell (along with the 1988 and 1993 versions of ksh) tsch shell (instead of the original Berkeley csh) Package management programs, used for program installation on popular GNU/Linux systems, Solaris and Mac OS X GNU Emacs Version 21 Introduction to source code management systems Concurrent versions system Subversion version control system GDB debugger As Unix has progressed, certain commands that were once critical have fallen into disuse. To that end, the book has also dropped material that is no longer relevant, keeping it taut and current. If you're a Unix user or programmer, you'll recognize the value of this complete, up-to-date Unix reference. With chapter overviews, specific examples, and detailed command.

If you do systems administration work of any kind, you have to deal with the growing complexity of your environment and increasing demands on your time. Automating System Administration with Perl, Second Edition, not only offers you the right tools for your job, but also suggests the best way to approach specific problems and to securely automate recurring tasks. Updated and expanded to cover the latest operating systems, technologies, and Perl modules, this edition of the "Otter Book" will help you: Manage user accounts Monitor filesystems and processes Work with configuration files in important formats such as XML and YAML Administer databases, including MySQL, MS-SQL, and Oracle with DBI Work with directory services like LDAP and Active Directory Script email protocols and spam control Effectively create, handle, and analyze log files Administer network name and configuration services, including NIS, DNS and DHCP Maintain, monitor, and map network services, using technologies and tools such as SNMP, nmap, libpcap, GraphViz and RRDtool Improve filesystem, process, and network security This edition includes additional appendixes to get you up to speed on technologies such as XML/XPath, LDAP, SNMP, and SQL. With this book in hand and Perl in your toolbox, you can do more with less -- fewer resources, less effort, and far less hassle.

This new text provides students the knowledge and skills they will need to compete for and succeed in the information security roles they will encounter straight out of college. This is accomplished by providing a hands-on immersion in essential system administration, service and application installation and configuration, security tool use, TIG implementation and reporting. It is designed for an introductory course on IS Security offered usually as an elective in IS departments in 2 and 4 year schools. It is not designed for security certification courses.

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.

Modern information and communication technologies, together with a cultural upheaval within the research community, have profoundly changed research in nearly every aspect. Ranging from sharing and discussing ideas in social networks for scientists to new collaborative environments and novel publication formats, knowledge creation and dissemination as we know it is experiencing a vigorous shift towards increased transparency, collaboration and accessibility. Many assume that research workflows will change more in the next 20 years than they have in the last 200. This book provides researchers, decision makers, and other scientific stakeholders with a snapshot of the basics, the tools, and the underlying visions that drive the current scientific (r)evolution, often called 'Open Science.'

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"

“There’s an incredible amount of depth and thinking in the practices described here, and it’s impressive to see it all in one place.” —Win Treese, coauthor of *Designing Systems for Internet Commerce The Practice of Cloud System Administration, Volume 2*, focuses on “distributed” or “cloud” computing and brings a DevOps/SRE sensibility to the practice of system administration. Unsatisfied with books that cover either design or operations in isolation, the authors created this authoritative reference centered on a comprehensive approach. Case studies and examples from Google, Etsy, Twitter, Facebook, Netflix, Amazon, and other industry giants are explained in practical ways that are useful to all enterprises. The new companion to the best-selling first volume, *The Practice of System and Network Administration, Second Edition*, this guide offers expert coverage of the following and many other crucial topics: Designing and building modern web and distributed systems Fundamentals of large system design Understand the new software engineering implications of cloud administration Make systems that are resilient to failure and grow and scale dynamically Implement DevOps principles and cultural changes IaaS/PaaS/SaaS and virtual platform selection Operating and running systems using the latest DevOps/SRE strategies Upgrade production systems with zero down-time What and how to automate; how to decide what not to automate On-call best practices that improve uptime Why distributed systems require fundamentally different system administration techniques Identify and resolve resiliency problems before they surprise you Assessing and evaluating your team’s operational effectiveness Manage the scientific process of continuous improvement A forty-page, pain-free assessment system you can start using today

A practical guide for meeting the challenges of planning and designing a network Network design has to be logical and efficient, decisions have to be made about what services are needed, and security concerns must be addressed. Focusing on general principles, this book will help make the process of setting up, configuring, and maintaining a network much easier. It outlines proven procedures for working in a global community of networked machines, and provides practical illustrations of technical specifics. Readers will also find broad coverage of Linux and other Unix versions, Windows(r), Macs, and mainframes. The author includes discussions on the social and ethical aspects of system administration.

Simple Network Management Protocol (SNMP) provides a "simple" set of operations that allows you to more easily monitor and manage network devices like routers, switches, servers, printers, and more. The information you can monitor with SNMP is wide-ranging--from standard items, like the amount of traffic flowing into an interface, to far more esoteric

items, like the air temperature inside a router. In spite of its name, though, SNMP is not especially simple to learn. O'Reilly has answered the call for help with a practical introduction that shows how to install, configure, and manage SNMP. Written for network and system administrators, the book introduces the basics of SNMP and then offers a technical background on how to use it effectively. Essential SNMP explores both commercial and open source packages, and elements like OIDs, MIBs, community strings, and traps are covered in depth. The book contains five new chapters and various updates throughout. Other new topics include: Expanded coverage of SNMPv1, SNMPv2, and SNMPv3 Expanded coverage of SNMPc The concepts behind network management and change management RRDTTool and Cricket The use of scripts for a variety of tasks How Java can be used to create SNMP applications Net-SNMP's Perl module The bulk of the book is devoted to discussing, with real examples, how to use SNMP for system and network administration tasks. Administrators will come away with ideas for writing scripts to help them manage their networks, create managed objects, and extend the operation of SNMP agents. Once demystified, SNMP is much more accessible. If you're looking for a way to more easily manage your network, look no further than Essential SNMP, 2nd Edition. This essential guide explains what works, what doesn't, and most of all, what's practical about IPv6 -- the next-generation Internet standard. Also covers other IPv6 benefits, such as routing, integrated auto-configuration, quality-of-services (QoS), enhanced mobility, and end-to-end security.

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!

If you are a Linux administrator who is looking to gain knowledge that differentiates yourself from the crowd, then this is the book for you. Beginners who have a keen interest to learn more about Linux administration will also progress quickly with this resourceful learning guide.

If you're a Unix system administrator, then the information you need every day just to get your job done could fill a book--a very large book. But, practically speaking, you don't want to stop and thumb through a weighty volume each time a problem arises. Your answer is the Essential System Administration Pocket Reference, the only system administration reference that fits in your pocket. Concise and easy-to-use, this little book is the portable companion to the classic Essential System Administration by Aileen Frisch. The Essential System Administration Pocket Reference is a quick reference to all the fundamental and essential tasks required to run such divergent Unix systems as Solaris, Linux, AIX, BSD, SuSe, Red Hat, and more. Beginners and experienced administrators alike will quickly be able to apply its principles and advice to solve everyday problems. The book is divided into three parts: Commands, Syntax and Their Applications, Configuration Files and Formats, and Operating System Specific Information. The information in this book is a must-have for any administrator or user of a Unix system. O'Reilly's Pocket References have become a favorite among technology professionals everywhere. By providing a wealth of important details in a concise, well-organized format, these handy books deliver just what you need to complete the task at hand. When you've reached a sticking point and need to get to a solution quickly, the new Essential System Administration Pocket Reference is the book you'll want to have.

"Most Indispensable Linux Book" --2001 Linux Journal Readers Choice Awards Authoritative Answers to All Your Linux Questions You can rely on the fully updated second edition of Linux System Administration for answers to all your questions about installing, configuring, and administering Linux. Written by two Linux experts, this book teaches you, step-

by-step, all the standard and advanced techniques you need to know to set up and maintain a secure, effective Linux environment. Scores of clear, consistent examples illustrate these techniques in detail--so you stay on track and accomplish all your goals. Coverage includes: \* Installing a Linux server \* Setting up and maintaining user and group accounts \* Setting up Linux system security \* Sharing files using Samba and NFS \* Implementing a backup strategy \* Troubleshooting common Linux problems \* Setting up the X Window System \* Setting up TCP/IP and connecting to the Internet \* Setting up a mail server \* Maintaining filesystems and partitions \* Configuring printers \* Improving system performance \* Writing shell scripts \* Using Webmin for cross-distribution GUI administration

The Craig Hunt Linux Library provides in-depth, advanced coverage of the key topics for Linux administrators. Topics include Samba, Network Servers, DNS Server Administration, Apache, Security, and Sendmail. Each book in the series is either written by or meticulously reviewed by Craig Hunt to ensure the highest quality and most complete coverage for networking professionals working specifically in Linux environments.

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