

The Accidental Sysadmin Handbook A Primer For Entry Level It Professionals

Can a system be considered truly reliable if it isn't fundamentally secure? Or can it be considered secure if it's unreliable? Security is crucial to the design and operation of scalable systems in production, as it plays an important part in product quality, performance, and availability. In this book, experts from Google share best practices to help your organization design scalable and reliable systems that are fundamentally secure. Two previous O'Reilly books from Google—Site Reliability Engineering and The Site Reliability Workbook—demonstrated how and why a commitment to the entire service lifecycle enables organizations to successfully build, deploy, monitor, and maintain software systems. In this latest guide, the authors offer insights into system design, implementation, and maintenance from practitioners who specialize in security and reliability. They also discuss how building and adopting their recommended best practices requires a culture that's supportive of such change. You'll learn about secure and reliable systems through:

Design strategies
Recommendations for coding, testing, and debugging practices
Strategies to prepare for, respond to, and recover from incidents
Cultural best practices that help teams across your organization collaborate effectively

Learn to use PowerShell, Microsoft's scripting language, to automate real-world tasks that IT professionals and system administrators deal with every day. Save Time. Automate. PowerShell® is both a scripting language and an administrative shell that lets you control and automate nearly every aspect of IT. In PowerShell for Sysadmins, five-time Microsoft® MVP "Adam the Automator" Bertram shows you how to use PowerShell to manage and automate your desktop and server environments so that you can head out for an early lunch. You'll learn how to:

- Combine commands, control flow, handle errors, write scripts, run scripts remotely, and test scripts with the PowerShell testing framework, Pester
- Parse structured data like XML and JSON, work with common domains (like Active Directory, Azure, and Amazon Web Services), and create a real-world server inventory script
- Design and build a PowerShell module to demonstrate PowerShell isn't just about ad-hoc scripts
- Use PowerShell to create a hands-off, completely automated Windows deployment
- Build an entire Active Directory forest from nothing but a Hyper-V host and a few ISO files
- Create endless Web and SQL servers with just a few lines of code!

Real-world examples throughout help bridge the gap between theory and actual system, and the author's anecdotes keep things lively. Stop with the expensive software and fancy consultants. Learn how to manage your own environment with PowerShell for Sysadmins and make everyone happy. Covers Windows PowerShell v5.1

Provides advice for system administrators on time management, covering such topics as keeping an effective calendar, eliminating time wasters, setting priorities, automating processes, and managing interruptions.

Pro Ubuntu Server Administration teaches you advanced Ubuntu system building. After reading this book, you will be able to manage anything from simple file servers to multiple virtual servers to high-availability clusters. This is the capstone volume of the Apress Ubuntu trilogy that includes Beginning Ubuntu Linux, Third Edition and Beginning Ubuntu Server LTS Administration: From Novice to Professional, Second Edition. You will be able to make Ubuntu technology shine in a Fortune 500 environment and let Ubuntu server become the backbone of your infrastructure. Topics covered include Performance monitoring and optimization High-availability clustering Advanced Lightweight Directory Access Protocol (LDAP) integrated networking

Learn to design, build, and manage your infrastructure on the most popular of all the Cloud platforms—Amazon Web Services About This Book Learn how to leverage various Amazon Web Services (AWS) components and services to build a secure, reliable, and robust environment to host your applications on Deep dive into the core AWS service offerings with hands-on tutorials, real-world use case scenarios, and best practices A self-paced, systematic, and step-by-step guide to learning and implementing AWS in your own environment Who This Book Is For This book is for those who want to learn and leverage AWS. Although no prior experience with AWS is required, it is recommended that you have some hands-on experience of Linux, Web Services, and basic networking What You Will Learn A brief introduction to Cloud Computing and AWS accompanied by steps to sign up for your first AWS account Create and manage users, groups, and permissions using AWS Identity and Access Management services Get started with deploying and accessing EC2 instances, working with EBS Volumes and Snapshots Customize and create your very own Amazon Machine Image Design and deploy your instances on a highly secured, network isolated environment using Amazon VPC Effectively monitor your AWS environment using specialized alarms, custom monitoring metrics, and much more Explore the various benefits of Database-as-a-Service offerings and leverage them using Amazon RDS and Amazon DynamoDB Take an in-depth look at what's new with AWS, including EC2 Container Service and Elastic File System In Detail AWS is at the forefront of Cloud Computing today. Many businesses are moving away from traditional datacenters and toward AWS because of its reliability, vast service offerings, lower costs, and high rate of innovation. Because of its versatility and flexible design, AWS can be used to accomplish a variety of simple and complicated tasks such as hosting multitenant websites, running large scale parallel processing, content delivery, petabyte storage and archival, and lots more. Whether you are a seasoned sysadmin or a rookie, this book will provide you with all the necessary skills to design, deploy, and manage your applications on the AWS cloud platform. The book guides you through the core AWS services such as IAM, EC2, VPC, RDS, and S3 using a simple real world application hosting example that you can relate to. Each chapter is designed to provide you with the most information possible about a particular AWS service coupled with easy

to follow hands-on steps, best practices, tips, and recommendations. By the end of the book, you will be able to create a highly secure, fault tolerant, and scalable environment for your applications to run on. Style and approach This in-depth and insightful guide is filled with easy-to-follow examples, real-world use cases, best practices, and recommendations that will help you design and leverage AWS.

Every enterprise application creates data, whether it's log messages, metrics, user activity, outgoing messages, or something else. And how to move all of this data becomes nearly as important as the data itself. If you're an application architect, developer, or production engineer new to Apache Kafka, this practical guide shows you how to use this open source streaming platform to handle real-time data feeds. Engineers from Confluent and LinkedIn who are responsible for developing Kafka explain how to deploy production Kafka clusters, write reliable event-driven microservices, and build scalable stream-processing applications with this platform. Through detailed examples, you'll learn Kafka's design principles, reliability guarantees, key APIs, and architecture details, including the replication protocol, the controller, and the storage layer. Understand publish-subscribe messaging and how it fits in the big data ecosystem. Explore Kafka producers and consumers for writing and reading messages Understand Kafka patterns and use-case requirements to ensure reliable data delivery Get best practices for building data pipelines and applications with Kafka Manage Kafka in production, and learn to perform monitoring, tuning, and maintenance tasks Learn the most critical metrics among Kafka's operational measurements Explore how Kafka's stream delivery capabilities make it a perfect source for stream processing systems

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.

Your easy-to-follow step-by-step guide to configuring a Cisco router from the ground up The Accidental Administrator: Cisco Router Step-by-Step Configuration Guide is packed with more than 30 easy-to-follow interactive exercises, loads of screen captures, and lots of step-by-step examples to help you build a working router from scratch. Easily the most straightforward approach to learning how to configure a Cisco router, this book is filled with practical tips and secrets learned from years of Don's teaching and consulting on Cisco network devices. As a bonus, you won't waste your time on boring theory. All the essentials are covered in chapters on installing, backups and restores, and TCP/IP. You'll learn the nitty-gritty on subnetting, remote administration, routing protocols, static routing, access-control lists, site-to-site VPNs, network address translation (NAT), DHCP, password recovery, and security. There's even an entire chapter on the new Internet Protocol version 6 (IPv6). Here's just some of what you'll find: How to configure and manage access lists How to set up a site-to-site VPN How to implement IPv6 All the information is presented in a straightforward style that you can understand and use right away. With The Accidental Administrator: Cisco Router Step-by-Step Configuration Guide you'll be able to sit down with your routers and build a working configuration in a matter of minutes. Of course, some of the more advanced configs may take a little longer, but even so, you'll be able to "get 'er done" in a minimal amount of time In addition, there are supporting videos and a supporting webpage to provide even more help and updated information.

Understand the concepts, processes and technologies that will aid in your professional development as a new system administrator. While every information technology culture is specific to its parent organization, there are commonalities that apply to all organizations. The Accidental SysAdmin Handbook, Second Edition looks at those commonalities and provides a general introduction to critical aspects associated with system administration. It further acts to provide definitions and patterns for common computer terms and acronyms. What You Will Learn Build and manage home networking and plan more complex network environments Manage the network layer and service architectures as well as network support plans Develop a server hardware strategy and understand the physical vs. virtual server ecosystem Handle data storage, data strategies and directory services, and central account management Work with DNS, DHCP, IP v4 and IP v6 Deploy workstations and printers Manage and use antivirus and security management software Build, manage and work with intranets and Internet support services Who This Book Is For It is assumed that the reader has little to no experience in a professional information technology environment.

Understand the concepts, processes and technologies that will aid in your professional development as a new system administrator. While every information technology culture is specific to its parent organization, there are commonalities that apply to all organizations. The Accidental SysAdmin Handbook, Second Edition looks at those commonalities and provides a general introduction to critical aspects associated with system administration. It further acts to provide definitions and patterns for common computer terms and acronyms. You'll learn: How to build and manage home networking and plan more complex network environments How to manage the network layer and service architectures as well as network support plans How to develop a server hardware strategy and understand the physical vs. virtual server ecosystem How to handle data storage, data strategies and directory services, and central account management How to work with DNS, DHCP, IP v4 and IP v6 How to deploy workstations and printers How to manage and use antivirus and security management software How to build, manage and work with intranets and Internet support services Audience It is assumed that the reader has little to no experience in a professional information technology environment.

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.

This book introduces information technology topics foundational to many services offered in libraries and information centers. Written by a librarian with extensive experience as a technology specialist in libraries the book clearly explains concepts information technology principles with an eye toward their practical applications in libraries.

The infrastructure-as-code revolution in IT is also affecting database administration. With this practical book, developers, system administrators, and junior to mid-level DBAs will learn how the modern practice of site reliability engineering applies to the craft of database architecture and operations. Authors Laine Campbell and Charity Majors provide a framework for professionals looking to join the ranks of today's database reliability engineers (DBRE). You'll begin by exploring core operational concepts that DBREs need to master. Then you'll examine a wide range of database persistence options, including how to implement key technologies to provide resilient, scalable, and performant data storage and retrieval. With a firm foundation in database reliability engineering, you'll be ready to dive into the architecture and operations of any modern database. This book covers: Service-level requirements and risk management Building and evolving an architecture for operational visibility Infrastructure engineering and infrastructure management How to facilitate the release management process Data storage, indexing, and replication Identifying datastore characteristics and best use cases Datastore architectural components and data-driven architectures

This book presents the latest advances in machine intelligence and big data analytics to improve early warning of cyber-attacks, for cybersecurity intrusion detection and monitoring, and malware analysis. Cyber-attacks have posed real and wide-ranging threats for the information society. Detecting cyber-attacks becomes a challenge, not only because of the sophistication of attacks but also because of the large scale and complex nature of today's IT infrastructures. It discusses novel trends and achievements in machine intelligence and their role in the development of secure systems and identifies open and future research issues related to the application of machine intelligence in the cybersecurity field. Bridging an important gap between machine intelligence, big data, and cybersecurity communities, it aspires to provide a relevant reference for students, researchers, engineers, and professionals working in this area or those interested in grasping its diverse facets and exploring the latest advances on machine intelligence and big data analytics for cybersecurity applications.

The Accidental SysAdmin Handbook A Primer for Early Level IT Professionals Apress

Wireless has become ubiquitous in today's world. The mobility and flexibility provided by it makes our lives more comfortable and productive. But this comes at a cost – Wireless technologies are inherently insecure and can be easily broken. BackTrack is a penetration testing and security auditing distribution that comes with a myriad of wireless networking tools used to simulate network attacks and detect security loopholes. Backtrack 5 Wireless Penetration Testing Beginner's Guide will take you through the journey of becoming a Wireless hacker. You will learn various wireless testing methodologies taught using live examples, which you will implement throughout this book. The engaging practical sessions very gradually grow in complexity giving you enough time to ramp up before you get to advanced wireless attacks. This book will take you through the basic concepts in Wireless and creating a lab environment for your experiments to the business of different lab sessions in wireless security basics, slowly turn on the heat and move to more complicated scenarios, and finally end your journey by conducting bleeding edge wireless attacks in your lab. There are many interesting and new things that you will learn in this book – War Driving, WLAN packet sniffing, Network Scanning, Circumventing hidden SSIDs and MAC filters, bypassing Shared Authentication, Cracking WEP and WPA/WPA2 encryption, Access Point MAC spoofing, Rogue Devices, Evil Twins, Denial of Service attacks, Viral SSIDs, HoneyPot and Hotspot attacks, Caffe Latte WEP Attack, Man-in-the-Middle attacks, Evading Wireless Intrusion Prevention systems and a bunch of other cutting edge wireless attacks. If you were ever curious about what wireless security and hacking was all about, then this book will get you started by providing you with the knowledge and practical know-how to become a wireless hacker. Hands-on practical guide with a step-by-step approach to help you get started immediately with Wireless Penetration Testing

“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.

Python is an ideal language for solving problems, especially in Linux and Unix networks. With this pragmatic book, administrators can review various tasks that often occur in the management of these systems, and learn how Python can provide a more efficient and less painful way to handle them. Each chapter in Python for Unix and Linux System Administration presents a particular administrative issue, such as

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

Build real-world, end-to-end network monitoring solutions with Nagios This is the definitive guide to building low-cost, enterprise-strength monitoring infrastructures with Nagios, the world's leading open source monitoring tool. Network monitoring specialist David Josephsen goes far beyond the basics, demonstrating how to use third-party tools and plug-ins to solve the specific problems in your unique environment. Josephsen introduces Nagios "from the ground up," showing how to plan for success and leverage today's most valuable monitoring best practices. Then, using practical examples, real directives, and working code, Josephsen presents detailed monitoring solutions for Windows, Unix, Linux, network equipment, and other platforms and devices. You'll find thorough discussions of advanced topics, including the use of data visualization to solve complex monitoring problems. This is also the first Nagios book with comprehensive coverage of using Nagios Event Broker to transform and extend Nagios. Understand how Nagios works, in depth: the host and service paradigm, plug-ins, scheduling, and notification Configure Nagios successfully: config files, templates, timeperiods, contacts, hosts, services, escalations, dependencies, and more Streamline deployment with scripting templates, automated discovery, and Nagios GUI tools Use plug-ins and tools to systematically monitor the devices and platforms you need to monitor, the way you need to monitor them Establish front-ends, visual dashboards, and management interfaces with MRTG and RRDTool Build new C-based Nagios Event Broker (NEB) modules, one step at a time Contains easy-to-understand code listings in Unix shell, C, and Perl If you're responsible for systems monitoring infrastructure in any organization, large or small, this book will help you achieve the results you want—right from the start. David Josephsen is Senior Systems Engineer at DBG, Inc., where he maintains a collection of geographically dispersed server farms. He has more than a decade of hands-on experience with Unix systems, routers, firewalls, and load balancers in support of complex, high-volume networks. Josephsen's certifications include CISSP, CCNA, CCDA, and MCSE. His co-authored work on Bayesian spam filtering earned a Best Paper award at USENIX LISA 2004. He has been published in both ;login and Sysadmin magazines on topics relating to security, systems monitoring, and spam mitigation. Introduction CHAPTER 1 Best Practices CHAPTER 2 Theory of Operations CHAPTER 3 Installing Nagios CHAPTER 4 Configuring Nagios CHAPTER 5 Bootstrapping the Configs CHAPTER 6 Watching CHAPTER 7 Visualization CHAPTER 8 Nagios Event Broker Interface APPENDIX A Configure Options APPENDIX B nagios.cfg and cgi.cfg APPENDIX C Command-Line Options Index

The Accidental SysAdmin Handbook is designed to give new system administrators an understanding of concepts, processes and technologies that will aid in their professional development. It is assumed that the reader has little to no experience in a professional information technology environment. While every information technology culture is specific to its parent organization, there are commonalities that apply to all organizations. This book looks at those commonalities and provides a general introduction to critical aspects associated with

system administration. It further acts to provide definitions for common computer terms and acronyms.

The Bash Guide for Beginners (Second Edition) discusses concepts useful in the daily life of the serious Bash user. While a basic knowledge of shell usage is required, it starts with a discussion of shell building blocks and common practices. Then it presents the grep, awk and sed tools that will later be used to create more interesting examples. The second half of the course is about shell constructs such as loops, conditional tests, functions and traps, and a number of ways to make interactive scripts. All chapters come with examples and exercises that will help you become familiar with the theory.

"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 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.

The author focuses solely on how UNIX and Linux system administrators can use well-known tools to automate tasks, even across multiple systems.

This book is a step-by-step guide to building your own SharePoint farm in a home lab setting. Learn how to build a windows domain and then join servers into the domain in order to create your own testing and learning environment. After you get the domain stood up, where you go from there is up to you. This book will help you learn how to spin up SharePoint in a least privileged fashion. This isn't strictly a SharePoint book, though. For example, if you're not a SharePoint professional and are just looking to create a working windows domain for other purposes; the home-lab domain that you'll create will work great for Exam preparation for non-SharePoint purposes. You could even use it for learning how to install Exchange Server. After all, it's your Home Lab domain. In this book you will build your home-lab domain and you'll have a great place for learning how to administer SharePoint and develop SharePoint Apps. Here are just some of the tasks you'll complete in easy to follow exercises: Create a windows domain and a certificate authority, so that you can run SharePoint on SSL Join servers to the domain and configure other technology on the member servers as needed Install SQL Server, and correctly partition the server in accordance with best practices Install and configure a SharePoint farm Spin up Host Named Site Collections (HNSC's) Install and configure Visual Studio Who This Book Is For: This book is suitable for both developers and administrators. No technical knowledge is assumed beyond a general familiarity with computers and computing terminology. The resulting domain will be suitable for both IT and developer testing needs.

Linux Server Security has been written for Sysadmins, DevOps engineers, developers and other technical professionals that wish

to improve their hands-on knowledge of securing what is now the most popular Operating System on the planet. This detailed book walks steadily through challenging scenarios so that the reader may increase their knowledge of a number of diverse security areas which a technical professional faces. The reader is already familiar with Linux as a bedrock of stability but sometimes frustrated with certain software packages and the way that they integrate with the Operating System and indeed other packages. Looking closely at a considered selection of security topics empowers the reader to continue their learning and make full use of Linux's rocksteady foundation. In addition to each of the varied subjects covered such as sophisticated attacks, penetration testing, launching attacks and making a server invisible the book is brimming with invaluable insights gleaned from hard-won, professional experience. Applicable to almost all of the popular Linux flavours, such as Debian, Red Hat, Ubuntu, Linux Mint and CentOS, Linux Server Security can also be used to reference other Unix-type systems with little modification. The reader will improve their practical knowhow and background knowledge in order to increase their ability to troubleshoot and ultimately solve the daily security challenges encountered by Sysadmins and DevOps engineers. Whether the aim is to further a career or bring more enjoyment to a hobby the powerful, newfound knowledge gleaned from this book will help the reader add to their technical arsenal. 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.

Ten Strategies of a World-Class Cyber Security Operations Center conveys MITRE's accumulated expertise on enterprise-grade computer network defense. It covers ten key qualities of leading Cyber Security Operations Centers (CSOCs), ranging from their structure and organization, to processes that best enable smooth operations, to approaches that extract maximum value from key CSOC technology investments. This book offers perspective and context for key decision points in structuring a CSOC, such as what capabilities to offer, how to architect large-scale data collection and analysis, and how to prepare the CSOC team for agile, threat-based response. If you manage, work in, or are standing up a CSOC, this book is for you. It is also available on MITRE's website, www.mitre.org.

A guide to Cisco routers and switches provides informaton on switch and router maintenance and integration into an existing network.

“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 book describes, diagnoses, and solves the most common problems with SQL Server 2005, 2008, and 2008 R2. The authors explain a basic approach to troubleshooting and the essential tools. They explore areas in which problems arise with regularity: high disk I/O (RAID misconfiguration, inadequate I/O throughput, poor workload distribution, SAN issues, disk partition misalignment); high CPU usage (insufficient memory, poorly written queries, inadequate indexing, inappropriate configuration option settings); memory mismanagement; missing indexes; blocking (caused mainly by poorly designed databases that lack proper keys and indexing, and applications that apply needlessly restrictive transaction isolation levels); deadlocking (Bookmark Lookup, Serializable Range Scan, Cascading Constraint); full transaction logs (lack of log backups, hefty index maintenance operations, long running transaction, problems with replication and mirroring environments); and accidentally-lost data. Finally, the authors discuss diagnosing tools such as the Performance Monitor, Dynamic Management Views, and server-side tracing.

-- While Robotic Process Automation (RPA) has been around for about 20 years, it has hit an inflection point because of the convergence of cloud computing, big data and AI. This book shows you how to leverage RPA effectively in your company to automate repetitive and rules-based processes, such as scheduling, inputting/transferring data, cut and paste, filling out forms, and search. Using practical aspects of implementing the technology (based on case studies and industry best practices), you’ll see how companies have been able to realize substantial ROI (Return On Investment) with their implementations, such as by lessening the need for hiring or outsourcing. By understanding the core concepts of RPA, you’ll also see that the technology significantly increases compliance – leading to fewer issues with regulations – and minimizes costly errors. RPA software revenues have recently soared by over 60 percent, which is the fastest ramp in the tech industry, and they are expected to exceed \$1 billion by the end of 2019. It is generally seamless with legacy IT environments, making it easier for companies to pursue a strategy of digital transformation and can even be a gateway to AI. The Robotic Process Automation Handbook puts everything you need to

know into one place to be a part of this wave. What You'll Learn Develop the right strategy and plan Deal with resistance and fears from employees Take an in-depth look at the leading RPA systems, including where they are most effective, the risks and the costs Evaluate an RPA system Who This Book Is For IT specialists and managers at mid-to-large companies

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.

You need to maintain clients, servers and networks, while acquiring new skills. Foundations of Cent OS Linux: Enterprise Linux On the Cheap covers a free, unencumbered Linux operating system within the Red Hat lineage, but it does not assume you have a Red Hat Enterprise Linux license. Now you can learn CentOS Linux, the most powerful and popular of all Red Hat clones, keep maintaining your network at work, and become an Red Hat Certified Engineer, all just for the cost of this book. Introduces CentOS Linux and Fedora clients as equals to Red Hat Enterprise Linux Sets up CentOS as a secure, high-performance web services back end Prepares you for the RHCE examination, but does not assume an RHEL installation

Delve inside Windows architecture and internals—and see how core components work behind the scenes. Led by three renowned internals experts, this classic guide is fully updated for Windows 7 and Windows Server 2008 R2—and now presents its coverage in two volumes. As always, you get critical insider perspectives on how Windows operates. And

through hands-on experiments, you'll experience its internal behavior firsthand—knowledge you can apply to improve application design, debugging, system performance, and support. In Part 1, you will: Understand how core system and management mechanisms work—including the object manager, synchronization, Wow64, Hyper-V, and the registry Examine the data structures and activities behind processes, threads, and jobs Go inside the Windows security model to see how it manages access, auditing, and authorization Explore the Windows networking stack from top to bottom—including APIs, BranchCache, protocol and NDIS drivers, and layered services Dig into internals hands-on using the kernel debugger, performance monitor, and other tools

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. Sysadms 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

Despite the increase of high-profile hacks, record-breaking data leaks, and ransomware attacks, many organizations don't have the budget to establish or outsource an information security (InfoSec) program, forcing them to learn on the job. For companies obliged to improvise, this pragmatic guide provides a security-101 handbook with steps, tools, processes, and ideas to help you drive maximum-security improvement at little or no cost. Each chapter in this book provides step-by-step instructions for dealing with a specific issue, including breaches and disasters, compliance, network infrastructure and password management, vulnerability scanning, and penetration testing, among others. Network engineers, system administrators, and security professionals will learn tools and techniques to help improve security in sensible, manageable chunks. Learn fundamentals of starting or redesigning an InfoSec program Create a base set of policies, standards, and procedures Plan and design incident response, disaster recovery, compliance, and physical security Bolster Microsoft and Unix systems, network infrastructure, and password management Use

segmentation practices and designs to compartmentalize your network Explore automated process and tools for vulnerability management Securely develop code to reduce exploitable errors Understand basic penetration testing concepts through purple teaming Delve into IDS, IPS, SOC, logging, and monitoring

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!

Computers at Risk presents a comprehensive agenda for developing nationwide policies and practices for computer security. Specific recommendations are provided for industry and for government agencies engaged in computer security activities. The volume also outlines problems and opportunities in computer security research, recommends ways to

improve the research infrastructure, and suggests topics for investigators. The book explores the diversity of the field, the need to engineer countermeasures based on speculation of what experts think computer attackers may do next, why the technology community has failed to respond to the need for enhanced security systems, how innovators could be encouraged to bring more options to the marketplace, and balancing the importance of security against the right of privacy.

The job of Linux systems administrator is interrupt-driven and requires constant learning in byte-wise chunks. This book gives solutions to modern problems—even some you might not have heard of—such as scripting LDAP, making Mac clients play nice with Linux servers, and backup, security, and recovery scripts. Author Juliet Kemp takes a broad approach to scripting using Perl and bash, and all scripts work on Debian or Red Hat lineage distributions. Plus, she dispenses wisdom about time management, dealing with desperate colleagues, and how to avoid reinventing the wheel! Learn how to love LDAP scripting and NFS tuning Make Perl serve you: don't be enslaved by Perl Learn to change, craft, and feel empowered by recipes that change your life

This soup-to-nuts collection of recipes covers everything you need to know to perform your job as a Linux network administrator, whether you're new to the job or have years of experience. With Linux Networking Cookbook, you'll dive straight into the gnarly hands-on work of building and maintaining a computer network. Running a network doesn't mean you have all the answers. Networking is a complex subject with reams of reference material that's difficult to keep straight, much less remember. If you want a book that lays out the steps for specific tasks, that clearly explains the commands and configurations, and does not tax your patience with endless ramblings and meanderings into theory and obscure RFCs, this is the book for you. You will find recipes for: Building a gateway, firewall, and wireless access point on a Linux network Building a VoIP server with Asterisk Secure remote administration with SSH Building secure VPNs with OpenVPN, and a Linux PPTP VPN server Single sign-on with Samba for mixed Linux/Windows LANs Centralized network directory with OpenLDAP Network monitoring with Nagios or MRTG Getting acquainted with IPv6 Setting up hands-free networks installations of new systems Linux system administration via serial console And a lot more. Each recipe includes a clear, hands-on solution with tested code, plus a discussion on why it works. When you need to solve a network problem without delay, and don't have the time or patience to comb through reference books or the Web for answers, Linux Networking Cookbook gives you exactly what you need.

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