Best Practices Guide Vyatta Firewall

IBM® Spectrum Virtualize is a key member of the IBM SpectrumTM Storage portfolio. It is a highly flexible storage solution that enables rapid deployment of block storage services for new and traditional workloads, on-premises, off-premises and in a combination of both. IBM Spectrum VirtualizeTM for Public Cloud provides the IBM Spectrum Virtualize functionality in IBM CloudTM. This new capability provides a monthly license to deploy and use Spectrum Virtualize in IBM Cloud to enable hybrid cloud solutions, offering the ability to transfer data between on-premises private clouds or data centers and the public cloud. This IBM RedpaperTM publication gives a broad understanding of IBM Spectrum Virtualize for Public Cloud architecture and provides planning and implementation details of the common use cases for this product. This publication helps storage and networking administrators plan and implement install, tailor, and configure IBM Spectrum Virtualize for Public Cloud offering. It also provides a detailed description of troubleshooting tips. IBM Spectrum Virtualize is also available on AWS. For more information, see Implementation guide for IBM Spectrum Virtualize for Public Cloud on AWS, REDP-5534.

This book provides a comprehensive overview of the fundamental security of Industrial Control Systems (ICSs), including Supervisory Control and Data Acquisition (SCADA) systems and touching on cyber-physical systems in general. Careful attention is given to providing the reader with clear and comprehensive background and reference material for each topic pertinent to ICS security. This book offers answers to such questions as: Which specific operating and security issues may lead to a loss of efficiency and operation? What methods can be used to monitor and protect my system? How can I design my system to reduce threats?This book offers chapters on ICS cyber threats, attacks, metrics, risk, situational awareness, intrusion detection, and security testing, providing an advantageous reference set for current system owners who wish to securely configure and operate their ICSs. This book is appropriate for non-specialists as well. Tutorial information is provided in two initial chapters and in the beginnings of other chapters as needed. The book concludes with advanced topics on ICS governance, responses to attacks on ICS, and future security of the Internet of Things.

Firewalls are among the best-known network security tools in use today, and their critical role in information security continues to grow. However, firewalls are most effective when backed by thoughtful security planning, well-designed security policies, and integrated support from anti-virus software, intrusion detection systems, and related tools. GUIDE TO FIREWALLS AND VPNs, THIRD EDITION explores firewalls in the context of these critical elements, providing an in-depth guide that focuses on both managerial and technical aspects of security. Coverage includes packet filtering, authentication, proxy servers, encryption, bastion hosts, virtual private networks (VPNs), log file maintenance, and intrusion detection systems. The text also features an abundant selection of realistic projects and cases incorporating cutting-edge technology and current trends, giving students the opportunity to hone and apply the knowledge and skills they will need as working professionals. GUIDE TO FIREWALLS AND VPNs includes new and updated cases and projects, enhanced coverage of network security and VPNs, and information on relevant National Institute of Standards and Technology guidelines used by businesses and information technology professionals. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Your first step into the world of network security No security experience required Includes clear and easily understood explanations Makes learning easy Your first step to network security begins here! Learn about hackers and their attacks Understand security tools and technologies Defend your network with firewalls, routers, and other devices Explore security for wireless networks Learn how to prepare for security incidents Welcome to the world of network security!

Computer networks are indispensable-but they're also not secure. With the proliferation of Internet viruses and worms, many people and companies are considering increasing their network security. But first, you need to make sense of this complex world of hackers, viruses, and the tools to combat them. No security experience needed! Network Security First-Step explains the basics of network security in easy-to-grasp language that all of us can understand. This book takes you on a guided tour of the core technologies that make up and control network security. Whether you are looking to take your first step into a career in network security or are interested in simply gaining knowledge of the technology, this book is for you!

Thoroughly prepare for the revised Cisco CCIE Wireless v3.x certification exams Earning Cisco CCIE Wireless certification demonstrates your broad theoretical knowledge of wireless networking, your strong understanding of Cisco WLAN technologies, and the skills and technical knowledge required of an expert-level wireless network professional. This guide will help you efficiently master the knowledge and skills you’ll need to succeed on both the CCIE Wireless v3.x written and lab exams. Designed to help you efficiently focus your study, achieve mastery, and build confidence, it focuses on conceptual insight, not mere memorization. Authored by five of the leading Cisco wireless network experts, it covers all areas of the CCIE Wireless exam blueprint, offering complete foundational knowledge for configuring and troubleshooting virtually any Cisco wireless deployment. Plan and design enterprise-class WLANs addressing issues ranging from RF boundaries to AP positioning, power levels, and density Prepare and set up wireless network infrastructure, including Layer 2/3 and key network services Optimize existing wired networks to support wireless infrastructure Deploy, configure, and troubleshoot Cisco IOS Autonomous WLAN devices for wireless bridging Implement, configure, and manage AireOS Appliance, Virtual, and Mobility Express Controllers Secure wireless networks with Cisco Identity Services Engine: protocols, concepts, use cases, and configuration Set up and optimize management operations with Prime Infrastructure and MSE/CMX Design, configure, operate, and troubleshoot WLANs with real-time applications

An introduction to the social and policy issues which have arisen as a result of IT. Whilst it assumes a modest familiarity with computers, the book provides a guide to the issues suitable for undergraduates. In doing so, the author prompts students to consider questions such as: * How do morality and the law relate to each other? * What should be covered in a professional code of conduct for information technology professionals? * What are the ethical issues relating to copying software? * Is electronic monitoring o employees wrong? * What are the moral codes of cyberspace? Throughout, the book shows how in many ways the technological development is outpacing the ability of our legal systems, and how different paradigms applied to ethical questions often proffer conflicting conclusions. As a result, students will find this a thought-provoking and valuable survey of the new and difficult ethical questions posed by the Internet, artificial intelligence, and virtual reality.

The 2013 edition of the bestselling vSphere book on the market Virtualization remains the hottest trend in the IT world, and VMware vSphere is the industry's most widely deployed virtualization solution. The demand for IT professionals skilled in virtualization and cloud-related technologies is great and expected to keep growing. This comprehensive Sybex guide covers all the features and capabilities of VMware vSphere, showing administrators step by step how to install, configure, operate, manage, and secure it. This perfect blend of hands-on instruction, conceptual explanation, and practical application is reinforced with real-world examples. Led by Scott Lowe and Nick Marshall, both VMware vExperts, the author team provides expertise that will prepare IT professionals to excel in using this virtualization technology. Virtualization is seen as a "best practice" for high availability and disaster recovery solutions, as well as for applications such as Exchange Server and SharePoint IDC estimates that there are as many as 7 million jobs available worldwide in virtualization and cloud technology Provides hands-on instruction in all the latest features and capabilities of VMware vSphere, with both conceptual explanations and practical applications Author team is lead by Scott Lowe and Nick Marshall, well-known VMware experts and popular bloggers Mastering VMware vSphere provides what every virtualization professional needs to know.

Thoroughly revised and expanded, this second edition adds sections on MPLS, Security, IPv6, and IP Mobility and presents solutions to the most common configuration problems.

This fully revised and updated new edition of the definitive text/reference on computer network and information security presents a comprehensive guide to the repertoire of security tools, algorithms and best practices mandated by the technology we depend on. Topics and features: highlights the magnitude of the vulnerabilities, weaknesses and loopholes inherent in computer networks; discusses how to develop effective security solutions, protocols, and best practices for the modern computing environment; examines the role of legislation, regulation, and enforcement in securing computing and mobile systems; describes the burning security issues brought about by the advent of the Internet of Things and the eroding boundaries between enterprise and home networks (NEW); provides both quickly workable and more thought-provoking exercises at the end of each chapter, with one chapter devoted entirely to hands-on exercises; supplies additional support materials for instructors at an associated website.

This IBM® Redbooks® publication takes you on a hybrid cloud journey with IBM PureApplication® System and PureApplication Service: from the what, over the why, and to the how. We outline the needs for a hybrid PureApplication cloud and we describe how to build a strategy. We provide advice about the components, including security. Through use cases, we define the need and the strategy for a hybrid cloud implementation with IBM PureApplication System, Software, or Service. The target audience for this book varies from anyone who is interested in learning more about a true hybrid cloud solution from IBM to strategists, IT architects, and IT specialists who want an overview of what is required to build a hybrid cloud with IBM PureApplication family members.

This is the eBook version of the print title. Note that the eBook does not provide access to the practice test software that accompanies the print book. Learn, prepare, and practice for CEH v8 exam success with this cert guide from Pearson IT Certification, a leader in IT certification learning. Master CEH exam topics Assess your knowledge with chapter-ending quizzes Review key concepts with exam preparation tasks Certified Ethical Hacker (CEH) Cert Guide is a best-of-breed exam study guide. Leading security consultant and certification expert Michael Gregg shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. You'll get a complete test preparation routine organized around proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. This EC-Council authorized study guide helps you master all the topics on the CEH v8 (312-50) exam, including: Ethical hacking basics Technical foundations of hacking Footprinting and scanning Enumeration and system hacking Linux and automated assessment tools Trojans and backdoors Sniffers, session hijacking, and denial of service Web server hacking, web applications, and database attacks Wireless technologies, mobile security, and mobile attacks IDS, firewalls, and honeypots Buffer overflows, viruses, and worms Cryptographic attacks and defenses Physical security and social engineering

Addressing the firewall capabilities of Linux, a handbook for security professionals describes the Netfilter infrastruction in the Linux kernel and explains how to use Netfilter as an intrusion detection system by integrating it with custom open source software and Snort rulesets, discussin such topics as Linux firewall log analysis and policies, passive network authentication and authorization, and more. Original. (Intermediate)

The essential guide to understanding and using firewalls to protect personal computers and your network An easy-to-read introduction to the most commonly deployed network security device Understand the threats firewalls are designed to protect against Learn basic firewall architectures, practical deployment scenarios, and common management and troubleshooting tasks Includes configuration, deployment, and management checklists Increasing reliance on the Internet in both work and home environments has radically increased the vulnerability of computing systems to attack from a wide variety of threats. Firewall technology continues to be the most prevalent form of protection against existing and new threats to computers and networks. A full understanding of what firewalls can do, how they can be deployed to maximum effect, and the differences among firewall types can make the difference between continued network integrity and complete network or computer failure. Firewall Fundamentals introduces readers to firewall concepts and explores various commercial and open source firewall implementations--including Cisco, Linksys, and Linux--allowing network administrators and small office/home office computer users to effectively choose and configure their devices. Firewall Fundamentals is written in clear and easy-to-understand language and helps novice users understand what firewalls are and how and where they are used. It introduces various types of firewalls, first conceptually and then by explaining how different firewall implementations actually work. It also provides numerous implementation examples, demonstrating the use of firewalls in both personal and business-related scenarios, and explains how a firewall should be installed and configured. Additionally, generic firewall troubleshooting methodologies and common management tasks are clearly defined and explained.

In this contributed volume, leading international researchers explore configuration modeling and checking, vulnerability and risk assessment, configuration analysis, and diagnostics and discovery. The authors equip readers to understand automated security management systems and techniques that increase overall network assurability and usability. These constantly changing networks defend against cyber attacks by integrating hundreds of security devices such as firewalls, IPSec gateways, IDS/IPS, authentication servers, authorization/RBAC servers, and crypto systems. Automated Security Management presents a number of topics in the area of configuration automation. Early in the book, the chapter authors introduce modeling and validation of configurations based on high-level requirements and discuss how to manage the security risk as a result of configuration settings of network systems. Later chapters delve into the concept of configuration analysis and why it is important in ensuring the security and functionality of a properly configured system. The book concludes with ways to identify problems when things go wrong and more. A wide range of theoretical and practical content make this volume valuable for researchers and professionals who work with network systems.

Power up your network applications with Python programming Key Features Master Python skills to develop powerful network applications Grasp the fundamentals and functionalities of SDN Design multi-threaded, event-driven architectures for echo and chat servers Book Description This Learning Path highlights major aspects of Python network programming such as writing simple networking clients, creating and deploying SDN and NFV systems, and extending your network with Mininet. You'll also learn how to automate legacy and the latest network devices. As you progress through the chapters, you'll use Python for DevOps and open source tools to test, secure, and analyze your network. Toward the end, you'll develop client-side applications, such as web API clients, email clients, SSH, and FTP, using socket programming. By the end of this Learning Path, you will have learned how to analyze a network's security vulnerabilities using advanced network packet capture and analysis techniques. This Learning Path includes content from the following Packt products: Practical Network Automation by Abhishek Ratan Mastering Python Networking by Eric Chou Python Network Programming Cookbook, Second Edition by Pradeeban Kathiravelu, Dr. M. O.

Faruque Sarker What you will learn Create socket-based networks with asynchronous models Develop client apps for web APIs, including S3 Amazon and Twitter Talk to email and remote network servers with different protocols Integrate Python with Cisco, Juniper, and Arista eAPI for automation Use Telnet and SSH connections for remote system monitoring Interact with websites via XML-RPC, SOAP, and REST APIs Build networks with Ryu, OpenDaylight, Floodlight, ONOS, and POX Configure virtual networks in different deployment environments Who this book is for If you are a Python developer or a system administrator who wants to start network programming, this Learning Path gets you a step closer to your goal. IT professionals and DevOps engineers who are new to managing network devices or those with minimal experience looking to expand their knowledge and skills in Python will also find this Learning Path useful. Although prior knowledge of networking is not required, some experience in Python programming will be helpful for a better understanding of the concepts in the Learning Path.

This book constitutes the proceedings of the 17th International Conference on Passive and Active Measurement, PAM 2016, held in Heraklion, Crete, Greece, in March/April 2016. The 30 full papers presented in this volume were carefully reviewed and selected from 93 submissions. They are organized in topical sections named: security and privacy; mobile and cellular; the last mile; testbeds and frameworks; web; DNS and routing; IXPs and MPLS; and scheduling and timing.

Networking with MikroTik: An MTCNA Study Guide is an introduction to the MikroTik network platform and an exploration of the MTCNA certification topics. Written by the author of the MikroTik Security Guide and the leading English-language MikroTik blog at ManitoNetworks.com, this book covers everything you need to get started with RouterOS. Topics include the following: Introduction to MikroTik RouterOS Software MikroTik Defaults Accessing MikroTik Routers Managing Users in RouterOS Configuring Interfaces Network Addresses Routing and Configuring Routes VPNs and Tunnels Queues Firewalls NAT Wireless and Wireless Security Troubleshooting Tools RouterOS Monitoring The Dude For any network administrators getting started with MikroTik, preparing to sit for the MTCNA exam, or just wanting to learn more of the ins-and-outs of RouterOS this is the book to get you started.

Back for the third season, The Hacker Playbook 3 (THP3) takes your offensive game to the pro tier. With a combination of new strategies, attacks, exploits, tips and tricks, you will be able to put yourself in the center of the action toward victory. The main purpose of this book is to answer questions as to why things are still broken. For instance, with all the different security products, secure code reviews, defense in depth, and penetration testing requirements, how are we still seeing massive security breaches happening to major corporations and governments? The real question we need to ask ourselves is, are all the safeguards we are putting in place working? This is what The Hacker Playbook 3 - Red Team Edition is all about. By now, we are all familiar with penetration testing, but what exactly is a Red Team? Red Teams simulate real-world, advanced attacks to test how well your organization's defensive teams respond if you were breached. They find the answers to questions like: Do your incident response teams have the right tools, skill sets, and people to detect and mitigate

these attacks? How long would it take them to perform these tasks and is it adequate? This is where you, as a Red Teamer, come in to accurately test and validate the overall security program. THP3 will take your offensive hacking skills, thought processes, and attack paths to the next level. This book focuses on real-world campaigns and attacks, exposing you to different initial entry points, exploitation, custom malware, persistence, and lateral movement--all without getting caught! This heavily lab-based book will include multiple Virtual Machines, testing environments, and custom THP tools. So grab your helmet and let's go break things! For more information, visit http: //thehackerplaybook.com/about/.
BPF and related observability tools give software professionals unprecedented visibility into software, helping them analyze operating system and application performance, troubleshoot code, and strengthen security. BPF Performance Tools: Linux System and Application Observability is the industry’s most comprehensive guide to using these tools for observability. Brendan Gregg, author of the industry’s definitive guide to system performance, introduces powerful new methods and tools for doing analysis that leads to more robust, reliable, and safer code. This authoritative guide: Explores a wide spectrum of software and hardware targets Thoroughly covers open source BPF tools from the Linux Foundation iovisor project’s bcc and bpftrace repositories Summarizes performance engineering and kernel internals you need to understand Provides and discusses 150+ bpftrace tools, including 80 written specifically for this book: tools you can run as-is, without programming — or customize and develop further, using diverse interfaces and the bpftrace front-end You’ll learn how to use BPF (eBPF) tracing tools to analyze CPUs, memory, disks, file systems, networking, languages, applications, containers, hypervisors, security, and the Linux kernel. You’ll move from basic to advanced tools and techniques, producing new metrics, stack traces, custom latency histograms, and more. It’s like having a superpower: with Gregg’s guidance and tools, you can analyze virtually everything that impacts system performance, so you can improve virtually any Linux operating system or application.
Financial Risk Modelling and Portfolio Optimization with R, 2nd Edition Bernhard Pfaff, Invesco Global Asset Allocation, Germany A must have text for risk modelling and portfolio optimization using R. This book introduces the latest techniques advocated for measuring financial market risk and portfolio optimization, and provides a plethora of R code examples that enable the reader to replicate the results featured throughout the book. This edition has been extensively revised to include new topics on risk surfaces and probabilistic utility optimization as well as an extended introduction to R language. Financial Risk Modelling and Portfolio Optimization with R: Demonstrates techniques in modelling financial risks and applying portfolio optimization techniques as well as recent advances in the field. Introduces stylized facts, loss function and risk measures, conditional and unconditional modelling of risk; extreme value theory, generalized hyperbolic distribution, volatility modelling and concepts for capturing

dependencies. Explores portfolio risk concepts and optimization with risk constraints. Is accompanied by a supporting website featuring examples and case studies in R. Includes updated list of R packages for enabling the reader to replicate the results in the book. Graduate and postgraduate students in finance, economics, risk management as well as practitioners in finance and portfolio optimization will find this book beneficial. It also serves well as an accompanying text in computer-lab classes and is therefore suitable for self-study.

This IBM® Redbooks® publication shows how to integrate IBM Software Defined Network for Virtual Environments (IBM SDN VE) seamlessly within a new or existing data center. This book is aimed at pre- and post-sales support, targeting network administrators and other technical professionals that want to get an overview of this new and exciting technology, and see how it fits into the overall vision of a truly Software Defined Environment. It shows you all of the steps that are required to design, install, maintain, and troubleshoot the IBM SDN VE product. It also highlights specific, real-world examples that showcase the power and flexibility that IBM SDN VE has over traditional solutions with a legacy network infrastructure that is applied to virtual systems. This book assumes that you have a general familiarity with networking and virtualization. It does not assume an in-depth understanding of KVM or VMware. It is written for administrators who want to get a quick start with IBM SDN VE in their respective virtualized infrastructure, and to get some virtual machines up and running by using the rich features of the product in a short amount of time (days, not week, or months).

Our unique Monogram Cover Notebook Collections is a unique gift For Writing, Drawing and Sketching. Suitable for note taking, diary, daily planner, perfect for story writing, and other journaling ideas Product Details: 120 lines pages of acid free pure white thick (55Ib) paper to minimize ink bleed Pages allow for perfect absorbency with ink, gel pens, or pencil College ruled notebook with plenty of room for easy writing Large 8inx10in book size Soft paperback cover Perfect for gift giving Our Monogram Journals & Notebooks are also available in different book Sizes, please check our author page for more cover options and sizes

This IBM® RedpaperTM publication takes you on a journey that surveys cloud computing to answer several fundamental questions about storage cloud technology. What are storage clouds? How can a storage cloud help solve your current and future data storage business requirements? What can IBM do to help you implement a storage cloud solution that addresses these needs? This paper shows how IBM storage clouds use the extensive cloud computing experience, services, proven technologies, and products of IBM to support a smart storage cloud solution designed for your storage optimization efforts. Clients face many common storage challenges and some have variations that make them unique. It describes various successful client storage cloud implementations and the options that are available to meet your current needs and position you to avoid storage issues in the future. IBM CloudTM Services (IBM Cloud Managed

Services® and IBM SoftLayer®) are highlighted as well as the contributions of IBM to OpenStack cloud storage. This paper is intended for anyone who wants to learn about storage clouds and how IBM addresses data storage challenges with smart storage cloud solutions. It is suitable for IBM clients, storage solution integrators, and IBM specialist sales representatives.

A step-by-step guide to identifying and defending against attacks on the virtual environment As more and more data is moved into virtual environments the need to secure them becomes increasingly important. Useful for service providers as well as enterprise and small business IT professionals the book offers a broad look across virtualization used in various industries as well as a narrow view of vulnerabilities unique to virtual environments. A companion DVD is included with recipes and testing scripts. Examines the difference in a virtual model versus traditional computing models and the appropriate technology and procedures to defend it from attack Dissects and exposes attacks targeted at the virtual environment and the steps necessary for defense Covers information security in virtual environments: building a virtual attack lab, finding leaks, getting a side-channel, denying or compromising services, abusing the hypervisor, forcing an interception, and spreading infestations Accompanying DVD includes hands-on examples and code This how-to guide arms IT managers, vendors, and architects of virtual environments with the tools they need to protect against common threats.

This scenario-focused title provides concise technical guidance and insights for troubleshooting and optimizing networking with Hyper-V. Written by experienced virtualization professionals, this little book packs a lot of value into a few pages, offering a lean read with lots of real-world insights and best practices for Hyper-V networking optimization in Windows Server 2012. Focused guide extends your knowledge and capabilities with Hyper-V networking in Windows Server 2012 Shares hands-on insights from a team of Microsoft virtualization experts Provides pragmatic troubleshooting and optimization guidance from the field

The proceedings includes a selection of papers covering a range of subjects focusing on topical areas of computer networks and security with a specific emphasis of novel environments, ranging from 5G and virtualised infrastructures to Internet of things, smart environments and cyber security issues. Networking represents the underlying core of current IT systems, providing the necessary communication support for complex infrastructures. Recent years have witnessed a number of novel concepts moving from theory to large scale implementations, such as Software Defined Networking, Network Function Virtualisation, 5G, smart environments, and IoT. These concepts change fundamentally the paradigms used in traditional networking, with a number of areas such as network routing and system or business security having to adjust or redesign to accommodate them. While the benefits are clear, through the advent of new applications, use cases, improved user interaction and experience, they also introduce new challenges for generic network architectures, mobility, security, traffic engineering.

Edward L. Haletky’s Complete, Solutions-Focused Guide to Running ESX Server 3.5, vSphere, and VMware 4.x Extensively updated and revised, this is the definitive real-world guide to planning, deploying, and managing VMware ESX Server 3.5, VMware vSphere Hypervisor (ESXi), or VMware vSphere 4.x cloud computing in mission-critical environments. Drawing on his extensive experience consulting on enterprise VMware implementations, renowned expert Edward L. Haletky offers a “soup-to-nuts” collection of field-tested best practices and solutions. He illuminates the real benefits, issues, tradeoffs, and pitfalls associated with VMware’s newest platforms, using real-world examples that draw upon both VMware and third-party products. This edition features detailed coverage of new vSphere features such as Storage IO Control, Network IO Control, Load-Based Teaming, Distributed Virtual Switches, ESXi, hardware and processors, and a significantly expanded discussion of auditing and monitoring. Haletky offers new or enhanced coverage of VM Hardware, virtual networking, VMsafe, and more. All new coverage is thoroughly integrated into Haletky’s insightful discussion of the entire lifecycle: planning, installation, templates, monitoring, tuning, clustering, security, disaster recovery, and more. Haletky consistently presents the most efficient procedures, whether they use graphical tools or the command line. You’ll learn how to: • Assess VMware datacenter and infrastructure hardware requirements • Understand technical, licensing, and management differences between ESX/ESXi 3.5 and 4.x • Plan installation for your environment and identify potential “gotchas” • Select, configure, utilize, and support storage cost-effectively • Manage key operational issues associated with virtual infrastructure • Adapt existing network and security infrastructure to virtualization • Configure ESX from host connections • Configure ESX Server from Virtual Centers or hosts • Create, modify, and manage VMs (with detailed Windows, Linux, and NetWare examples) • Troubleshoot VM issues with eDirectory, private labs, firewalls, and clusters • Utilize vSphere 4.1’s improved Dynamic Resource Load Balancing (DRLB) • Implement disaster recovery, business continuity, and backup • Plan for vApps and the future of virtualization VMware ESX and ESXi in the Enterprise has long been the definitive single-source guide to VMware planning, deployment, and management. For today’s VMware architects, administrators, and managers, this edition will be even more valuable.

The definitive guide to troubleshooting today’s complex BGP networks This is today’s best single source for the techniques you need to troubleshoot BGP issues in modern Cisco IOS, IOS XR, and NxOS environments. BGP has expanded from being an Internet routing protocol and provides a scalable control plane for a variety of technologies, including MPLS VPNs and VXLAN. Bringing together content previously spread across multiple sources, Troubleshooting BGP describes BGP functions in today’s blended service provider and enterprise environments. Two expert authors emphasize the BGP-related issues you’re most likely to encounter in real-world deployments, including problems that have caused massive network outages. They fully address convergence and scalability, as well as common concerns such as BGP slow peer, RT constraint filtering, and missing BGP routes. For each issue, key concepts are presented, along with basic configuration, detailed troubleshooting methods, and clear illustrations. Wherever appropriate, OS-specific behaviors are described and analyzed. Troubleshooting BGP is an indispensable technical resource for all consultants, system/support engineers, and operations professionals working with BGP in even the largest, most complex environments. · Quickly review the BGP protocol, configuration, and commonly used features · Master generic troubleshooting methodologies that are relevant to BGP networks · Troubleshoot BGP peering issues, flapping peers, and dynamic BGP peering · Resolve issues related to BGP route installation, path selection, or route policies · Avoid and fix convergence problems · Address platform issues such as high CPU or memory usage · Scale BGP using route reflectors, diverse paths, and other advanced features · Solve problems with BGP edge architectures, multihoming, and load balancing · Secure BGP inter-domain routing with RPKI · Mitigate DDoS attacks with RTBH and BGP Flowspec · Understand common BGP problems with MPLS Layer 3 or Layer 2 VPN services · Troubleshoot IPv6 BGP for service providers, including 6PE and 6VPE · Overcome problems with VXLAN BGP EVPN data center deployments · Fully leverage BGP High Availability features, including GR, NSR, and BFD · Use new BGP enhancements for link-state distribution or tunnel setup This book is part of the

Networking Technology Series from Cisco Press, which offers networking professionals valuable information for constructing efficient networks, understanding new technologies, and building successful careers.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Computer Networks and Internets is appropriate for all introductory-to-intermediate courses in computer networking, the Internet, or Internet applications; readers need no background in networking, operating systems, or advanced mathematics. Leading networking authority Douglas Comer presents a wide-ranging, self-contained tour of the concepts, principles, and technologies that enable today's Internet to support applications ranging from web browsing to telephony and multimedia. This Fifth Edition has been thoroughly reorganized, revised, and updated: it includes extensive new coverage of topics ranging from wireless protocols to network performance, while reducing or eliminating coverage of older protocols and technologies. Comer begins by illuminating the applications and facilities offered by today's Internet. Next, he systematically introduces the underlying network technologies and protocols that make them possible: low-level data communications; packet switching, LAN, and WAN technologies; and Internet protocols such as TCP, IP, UDP, and IPv6. With these concepts and technologies established, he introduces several of the most important contemporary issues faced by network implementers and managers, including quality of service, Internet telephony, multimedia, network security, and network management. Comer has carefully designed this book to support both top-down and bottom-up teaching approaches. Students need no background in operating systems, and no sophisticated math: Comer relies throughout on figures, drawings, examples, and analogies, not mathematical proofs.

Introduction to Networks (CCNA v7) Companion Guide is designed as a portable desk reference to use anytime, anywhere to reinforce the material from the Introduction to Networks course and organize your time. The book's features help you focus on important concepts to succeed in this course: Chapter Objectives - Review core concepts by answering the focus questions listed at the beginning of each chapter. Key Terms - Refer to the lists of networking vocabulary introduced and highlighted in context in each chapter. Glossary - Consult the comprehensive Glossary with more than 250 terms. Summary of Activities and Labs - Maximize your study time with this complete list of all associated practice exercises at the end of each chapter. Check Your Understanding - Evaluate your readiness with the end-of-chapter questions that match the style of questions you see in the online course quizzes. The answer key explains each answer. How To - Look for this icon to study the steps you need to learn to perform certain tasks. Interactive Activities - Reinforce your understanding of topics with dozens of exercises from the online course identified throughout the book with this icon. Videos - Watch the videos embedded within the online course. Packet Tracer Activities - Explore and visualize networking concepts using Packet Tracer. There are 40 exercises interspersed throughout the chapters and provided in the accompanying Labs & Study Guide book. Part of the Cisco Networking Academy Series from Cisco Press, books in this series support and complement the Cisco Networking Academy curriculum.

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

"Shows readers how to create and manage virtual networks on a PC using the popular open-source platform GNS3, with tutorial-based explanations"--

This book describes and compares both the IPv4 and IPv6 versions of OSPF and IS-IS. It explains OSPF and IS-IS by grounding the analysis on the principles of Link State Routing

(LSR). It deliberately separates principles from technologies. Understanding the principles behind the technologies makes the learning process easier and more solid. Moreover, it helps uncovering the dissimilarities and commonalities of OSPF and IS-IS and exposing their stronger and weaker features. The chapters on principles explain the features of LSR protocols and discuss the alternative design options, independently of technologies. The chapters on technologies provide a comprehensive description of OSPF and IS-IS with enough detail for professionals that need to work with these technologies. The final part of the book describes and discusses a large set of experiments with Cisco routers designed to illustrate the various features of OSPF and IS-IS. In particular, the experiments related to the synchronization mechanisms are not usually found in the literature.

Virtualization is a skill that most IT or security pros take for granted. The sheer number of choices and requirements can be a daunting challenge to face for beginners and veterans alike. With this book, you'll learn how to build a robust, customizable virtual environments suitable for both a personal home lab, as well as a dedicated office training environment. You will learn how to: - Understand the mechanics of virtualization and how they influence the design of your lab - Build an extensive baseline lab environment on any one of five commonly used hypervisors (VMware vSphere Hypervisor, VMware Fusion, VMware Workstation, Oracle Virtualbox, and Microsoft Client Hyper-V) - Harden your lab environment against VM escapes and other security threats - Configure the pfSense firewall distribution to provide security, segmentation, and network services to your virtual lab - Deploy either Snort or Suricata open-source IDS platforms in IPS mode to further enhance the flexibility, segmentation and security of your lab network - Deploy Splunk as a log management solution for your lab - Reconfigure the provided baseline lab environment to better suit your individual needs Easy to follow steps and illustrations provide detailed, comprehensive guidance as you build your custom-tailored lab. Both IT and security professionals need practice environments to better hone their craft. Learn how to build and maintain your own with Building Flexible Virtual Machine Labs

Software Defined Networks: A Comprehensive Approach, Second Edition provides in-depth coverage of the technologies collectively known as Software Defined Networking (SDN). The book shows how to explain to business decision-makers the benefits and risks in shifting parts of a network to the SDN model, when to integrate SDN technologies in a network, and how to develop or acquire SDN applications. In addition, the book emphasizes the parts of the technology that encourage opening up the network, providing treatment for alternative approaches to SDN that expand the definition of SDN as networking vendors adopt traits of SDN to their existing solutions. Since the first edition was published, the SDN market has matured, and is being gradually integrated and morphed into something more compatible with mainstream networking vendors. This book reflects these changes, with coverage of the OpenDaylight controller and its support for multiple southbound protocols, the Inclusion of NETCONF in discussions on controllers and devices, expanded coverage of NFV, and updated coverage of the latest approved version (1.5.1) of the OpenFlow specification. Contains expanded coverage of controllers Includes a new chapter on NETCONF and SDN Presents expanded coverage of SDN in optical networks Provides support materials for use in computer networking courses

This IBM® Redbooks® publication is based on the Presentations Guide of the course A Practical Approach to Cloud IaaS with IBM SoftLayer, which was developed by the IBM Redbooks team in partnership with IBM Middle East and Africa University Program. This course is designed to teach university students how to build a simple infrastructure as a service (IaaS) cloud environment based on IBM SoftLayer®. It provides students with the fundamental skills to design, implement, and manage an IaaS cloud environment using the IBM SoftLayer platform as an example. The primary target audience for this course is university students in undergraduate computer science and computer engineer programs with no previous experience working in cloud environments. However, anyone new to cloud computing can benefit from this course. The workshop materials were created in July 2015. Thus, all IBM SoftLayer features discussed in this Presentations Guide are current as of July 2015.

Among the many configuration management tools available, Ansible has some distinct advantages—it’s minimal in nature, you don’t need to install anything on your nodes, and it has an easy learning curve. This practical guide shows you how to be productive with this tool quickly, whether you’re a developer deploying code to production or a system administrator looking for a better automation solution. Author Lorin Hochstein shows you how to write playbooks (Ansible’s configuration management scripts), manage remote servers, and explore the tool’s real power: built-in declarative modules. You’ll discover that Ansible has the functionality you need and the simplicity you desire. Understand how Ansible differs from other configuration management systems Use the YAML file format to write your own playbooks Learn Ansible’s support for variables and facts Work with a complete example to deploy a non-trivial application Use roles to simplify and reuse playbooks Make playbooks run faster with ssh multiplexing, pipelining, and parallelism Deploy applications to Amazon EC2 and other cloud platforms Use Ansible to create Docker images and deploy Docker containers

From small start-ups to major corporations, companies of all sizes have embraced cloud computing for the scalability, reliability, and cost benefits it can provide. It has even been said that cloud computing may have a greater effect on our lives than the PC and dot-com revolutions combined.Filled with comparative charts and decision trees, Impleme

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.

If you are a virtualization professional who wants to unleash the power of automation and combat the complexity of sprawling virtual environments, this book is ideal for you. This book will enhance your skills of administering VMware vSphere and vCloud Director with PowerCLI.