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"Richard Deal's gift of making difficult technology concepts understandable has remained constant. Whether it is presenting to a room of information technology professionals or writing books, Richard's communication skills are unsurpassed. As information technology professionals we are faced with overcoming challenges every day...Cisco ASA Configuration is a great reference and tool for answering our challenges." --From the Foreword by Steve Marcinek (CCIE 7225), Systems Engineer, Cisco Systems A hands-on guide to implementing Cisco ASA Configure and maintain a Cisco ASA platform to meet the requirements of your security policy. Cisco ASA Configuration shows you how to control traffic in the corporate network and protect it from internal and external threats. This comprehensive resource covers the latest features available in Cisco ASA version 8.0, and includes detailed examples of complex configurations and troubleshooting. Implement and manage Cisco's powerful, multifunction network adaptive security appliance with help from this definitive guide. Configure Cisco ASA using the command-line interface (CLI) and Adaptive Security Device Manager (ASDM) Control traffic through the appliance with access control lists (ACLs) and object groups Filter Java, ActiveX, and web content Authenticate and authorize connections using Cut-through Proxy (CTP) Use Modular Policy Framework

(MPF) to configure security appliance features Perform protocol and application inspection Enable IPsec site-to-site and remote access connections Configure WebVPN components for SSL VPN access Implement advanced features, including the transparent firewall, security contexts, and failover Detect and prevent network attacks Prepare and manage the AIP-SSM and CSC-SSM cards The ultimate command reference for configuring Cisco "RM" routers and switches. This guide presents the common elements of complex configurations for Cisco "RM" routers, switches, and firewalls in an intuitive, easy-to-reference format. Create and manage highly-secure Ipsec VPNs with IKEv2 and Cisco FlexVPN The IKEv2 protocol significantly improves VPN security, and Cisco's FlexVPN offers a unified paradigm and command line interface for taking full advantage of it. Simple and modular, FlexVPN relies extensively on tunnel interfaces while maximizing compatibility with legacy VPNs. Now, two Cisco network security experts offer a complete, easy-to-understand, and practical introduction to IKEv2, modern IPsec VPNs, and FlexVPN. The authors explain each key concept, and then guide you through all facets of FlexVPN planning, deployment, migration, configuration, administration, troubleshooting, and optimization. You'll discover how IKEv2 improves on IKEv1, master key IKEv2 features, and learn how to apply them with Cisco FlexVPN. IKEv2 IPsec Virtual Private Networks offers practical design examples for many common scenarios, addressing IPv4 and IPv6, servers, clients, NAT, pre-shared keys, resiliency, overhead, and more. If you're a network engineer, architect, security specialist, or VPN administrator, you'll find all the knowledge you need to protect your organization with IKEv2 and FlexVPN. Understand IKEv2 improvements: anti-DDoS cookies, configuration payloads, acknowledged responses, and more Implement modern secure VPNs with Cisco IOS and IOS-XE Plan and deploy IKEv2 in diverse real-world environments Configure IKEv2 proposals, policies, profiles, keyrings, and authorization Use advanced IKEv2 features, including SGT transportation and IKEv2 fragmentation Understand FlexVPN, its tunnel interface types, and IOS AAA infrastructure Implement FlexVPN Server with EAP authentication, pre-shared keys, and digital signatures Deploy, configure, and customize FlexVPN clients Configure, manage, and troubleshoot the FlexVPN Load Balancer Improve FlexVPN resiliency with dynamic tunnel source, backup peers, and backup tunnels Monitor IPsec VPNs with AAA, SNMP, and Syslog Troubleshoot connectivity, tunnel creation, authentication, authorization, data encapsulation, data encryption, and overlay routing Calculate IPsec overhead and fragmentation Plan your IKEv2 migration: hardware, VPN technologies, routing, restrictions, capacity, PKI, authentication, availability, and more IPv6 Security Protection measures for the next Internet Protocol As the world's networks migrate to the IPv6 protocol, networking professionals need a clearer understanding of the security risks, threats, and challenges this transition presents. In IPv6 Security, two of the world's leading Internet security practitioners review each potential security issue introduced by IPv6 networking and present today's best solutions. IPv6 Security offers guidance for avoiding security problems prior to widespread IPv6 deployment. The book covers every component of today's networks, identifying specific security deficiencies that occur within IPv6 environments and demonstrating how to combat them. The authors describe best practices for identifying and resolving weaknesses as you maintain a dual stack network. Then they describe the security mechanisms you need to implement as you migrate to an IPv6-only network. The authors survey the techniques hackers might use to try to breach your network, such as IPv6 network reconnaissance, address spoofing, traffic interception, denial of service, and tunnel injection. The authors also turn to Cisco® products and protection mechanisms. You learn how to use Cisco IOS® and ASA firewalls and ACLs to selectively filter IPv6 traffic. You also learn about securing hosts with Cisco Security Agent 6.0 and about securing a network with IOS routers and switches. Multiple examples are explained for Windows, Linux, FreeBSD, and Solaris hosts. The authors offer detailed examples that are consistent with today's best practices and easy to adapt to virtually any IPv6 environment. Scott Hogg, CCIE® No. 5133, is Director of Advanced Technology Services at Global Technology Resources, Inc. (GTRI). He is responsible for setting the company's technical direction and helping it create service offerings for emerging technologies such as IPv6. He is the Chair of the Rocky Mountain IPv6 Task Force. Eric Vyncke, Cisco Distinguished System Engineer, consults on security issues throughout Europe. He has 20 years' experience in security and teaches security seminars as a guest professor at universities throughout Belgium. He also participates in the Internet Engineering Task Force (IETF) and has helped several organizations deploy IPv6 securely. Understand why IPv6 is already a latent threat in your IPv4-only network Plan ahead to avoid IPv6 security problems before widespread deployment Identify known areas of weakness in IPv6 security and the current state of attack tools and hacker skills Understand each high-level approach to securing IPv6 and learn when to use each Protect service provider networks, perimeters, LANs, and host/server connections Harden IPv6 network devices against attack Utilize IPsec in IPv6 environments Secure mobile IPv6 networks Secure transition mechanisms in use during the migration from IPv4 to IPv6 Monitor IPv6 security Understand the security implications of the IPv6 protocol, including issues related to ICMPv6 and the IPv6 header structure Protect your network against large-scale threats by using perimeter filtering techniques and service provider—focused security practices Understand the vulnerabilities that exist on IPv6 access networks and learn solutions for mitigating each This security book is part of the Cisco Press® Networking Technology Series. Security titles from Cisco Press help networking professionals secure critical data and resources, prevent and mitigate network attacks, and build end-to-end self-defending networks. Category: Networking: Security Covers: IPv6 Security From Charles M. Kozierok, the creator of the highly regarded www.pcguides.com, comes The TCP/IP Guide. This completely up-to-date, encyclopedic reference on the TCP/IP protocol suite will appeal to newcomers and the seasoned professional alike. Kozierok details the core protocols that make TCP/IP internetworks function and the most important classic TCP/IP applications, integrating IPv6 coverage throughout. Over 350 illustrations and hundreds of tables help to explain the finer points of this complex topic. The book's personal, user-friendly writing style lets readers of all levels understand the dozens of protocols and technologies that run the Internet, with full coverage of PPP, ARP, IP, IPv6, IP NAT, IPsec, Mobile IP, ICMP, RIP, BGP, TCP, UDP, DNS, DHCP, SNMP, FTP, SMTP, NNTP, HTTP, Telnet, and much more. The TCP/IP Guide is a must-have addition to the libraries of internetworking students, educators, networking professionals, and those working toward certification. This is a practical certification guide covering all the exam topics in an easy-to-follow manner backed with self-assessment scenarios for better preparation. Key Features A step-by-step guide to give you a clear understanding of the Network+ Certification Learn about network architecture, protocols, security, and network troubleshooting Confidently ace the N10-007 exam with the help of practice tests Book Description CompTIA certified professionals have always had the upper hand in the information technology industry. This book will be your ideal guide to efficiently passing and achieving this certification. Learn from industry experts and implement their practices to resolve complex IT issues. This book revolves around networking concepts where readers will learn topics like network architecture, security, network monitoring, and troubleshooting. This book will not only prepare the readers conceptually but will also help them pass the N10-007 exam. This guide will also provide practice exercise after every chapter where readers can ensure their concepts are clear. By the end of this book, readers will leverage this guide and the included practice questions to boost their confidence in appearing for the actual certificate. What you will learn Explain the purpose of a variety of networking concepts and implement them appropriately Understand physical security and common attacks while securing wired and wireless networks Understand the fundamentals of IPv4 and IPv6 Determine and explain the appropriate cabling, device, and storage technologies Understand network troubleshooting methodology and appropriate tools to support connectivity and performance Use best practices to manage the network, determine policies, and ensure business continuity Who this book is for This book is ideal for readers wanting to pass the CompTIA Network+ certificate. Rookie network engineers and system administrators interested in

enhancing their networking skills would also benefit from this book. No Prior knowledge on networking would be needed. This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. For organizations of all sizes, the Cisco ASA product family offers powerful new tools for maximizing network security. Cisco ASA: All-in-One Firewall, IPS, Anti-X and VPN Adaptive Security Appliance, Second Edition, is Cisco's authoritative practitioner's guide to planning, deploying, managing, and troubleshooting security with Cisco ASA. Written by two leading Cisco security experts, this book presents each Cisco ASA solution in depth, offering comprehensive sample configurations, proven troubleshooting methodologies, and debugging examples. Readers will learn about the Cisco ASA Firewall solution and capabilities; secure configuration and troubleshooting of site-to-site and remote access VPNs; Intrusion Prevention System features built into Cisco ASA's Advanced Inspection and Prevention Security Services Module (AIP-SSM); and Anti-X features in the ASA Content Security and Control Security Services Module (CSC-SSM). This new edition has been updated with detailed information on the latest ASA models and features. Everything network professionals need to know to identify, mitigate, and respond to network attacks with Cisco ASA Includes detailed configuration examples, with screenshots and command line references Covers the ASA 8.2 release Presents complete troubleshooting methodologies and architectural references CCIE Collaboration Quick Reference provides you with detailed information, highlighting the key topics on the latest CCIE Collaboration v1.0 exam. This fact-filled Quick Reference allows you to get all-important information at a glance, helping you to focus your study on areas of weakness and to enhance memory retention of important concepts. With this book as your guide, you will review and reinforce your knowledge of and experience with collaboration solutions integration and operation, configuration, and troubleshooting in complex networks. You will also review the challenges of video, mobility, and presence as the foundation for workplace collaboration solutions. Topics covered include Cisco collaboration infrastructure, telephony standards and protocols, Cisco Unified Communications Manager (CUCM), Cisco IOS UC applications and features, Quality of Service and Security in Cisco collaboration solutions, Cisco Unity Connection, Cisco Unified Contact Center Express, and Cisco Unified IM and Presence. This book provides a comprehensive final review for candidates taking the CCIE Collaboration v1.0 exam. It steps through exam objectives one-by-one, providing concise and accurate review for all topics. Using this book, exam candidates will be able to easily and effectively review test objectives without having to wade through numerous books and documents for relevant content for final review. Routing TCP/IP, Volume II: CCIE Professional Development, Second Edition The definitive guide to Cisco exterior routing protocols and advanced IP routing issues—now completely updated Praised in its first edition for its readability, breadth, and depth, Routing TCP/IP, Volume II, Second Edition will help you thoroughly understand modern exterior routing protocols and implement them with Cisco routers. Best-selling author Jeff Doyle offers crucial knowledge for every network professional who must manage routers to support growth and change. You'll find configuration and troubleshooting lessons that would cost thousands to learn in a classroom, plus up-to-date case studies, examples, exercises, and solutions. Routing TCP/IP, Volume II, Second Edition covers routing and switching techniques that form the foundation of all Cisco CCIE tracks. Its expert content and CCIE structured review makes it invaluable for anyone pursuing this elite credential. While its examples focus on Cisco IOS, the book illuminates concepts that are fundamental to virtually all modern networks and routing platforms. Therefore, it serves as an exceptionally practical reference for network designers, administrators, and engineers in any environment. · Review core inter-domain routing concepts, and discover how exterior routing protocols have evolved · Master BGP's modern operational components · Effectively configure and troubleshoot BGP · Control path attributes and selection to define better routes · Take full advantage of NLRI and routing policies · Provide for load balancing and improved network scalability · Extend BGP to multiprotocol environments via MP-BGP · Deploy, configure, manage, troubleshoot, and scale IP multicast routing · Implement Protocol Independent Multicast (PIM): Dense Mode, Sparse Mode, and Bidirectional · Operate, configure, and troubleshoot NAT in IPv4-IPv4 (NAT44) and IPv6-IPv4 (NAT64) environments · Avoid policy errors and other mistakes that damage network performance This book is part of the CCIE Professional Development series, which offers expert-level instruction on network design, deployment, and support methodologies to help networking professionals manage complex networks and prepare for the CCIE exams. Category: Networking Covers: BGP, Multicast, and NAT This Cisco-authorized, self-paced foundation learning tool for both the CCENT 100-101 and CCNA® 200-120 exams offers a comprehensive overview of the diverse technologies found in modern internetworks. From routing and switching concepts to practical configuration and security, it teaches with numerous examples, illustrations, and real-world scenarios, helping you rapidly gain both expertise and confidence. This book provides you with all the knowledge you need to install, operate and troubleshoot a small enterprise branch network, including basic network security. Whether you are preparing for certification or simply want to understand basic Cisco networking, you'll find this guide exceptionally valuable. Topics covered include: TCP/IP models and protocols; LANs and Ethernet; running Cisco IOS; VLANs and trunks; IP addressing and subnetting; packet delivery; static and dynamic routing; DHCP and NAT; network security; WANs, IPv6, and more. This edition has been fully updated to reflect the new Cisco ICND1 100-101 exam blueprint. Content has been reorganized, simplified, and expanded to help you learn even more efficiently. New Production Network Simulation questions offer more real-world review, and new web video resources in each chapter walks you through many key tasks. Interconnecting Cisco Network Devices, Part 1 (ICND1) Foundation Learning Guide, Fourth Edition is part of a recommended learning path from Cisco that includes simulation and hands-on training from authorized Cisco Learning Partners and self-study products from Cisco Press. To find out more about instructor-led training, e-learning, and hands-on instruction from authorized Cisco Learning Partners worldwide, please visit www.cisco.com/go/authorizedtraining. Network functions, components, models, layers, topologies, and applications LAN, Ethernet, switching, routing, and packet delivery concepts Network management with Cisco IOS software and its command-line interface VLANs and segmentation: techniques for optimizing performance and flexibility Easy ways to create efficient IP addressing and subnetting schemes Cisco router configuration, including static and dynamic routing DHCP and NAT: dynamically providing IP addresses and handling limited address availability Essential network security techniques Traffic management with Access Control Lists WAN concepts, technologies, and options IPv6 configuration in dynamically routed network environments Multimedia over IP and Wireless Networks is an indispensable guide for professionals or researchers working in areas such as networking, communications, data compression, multimedia processing, streaming architectures, and computer graphics. Beginning with a concise overview of the fundamental principles and challenges of multimedia communication and networking, this book then branches off organically to tackle compression and networking next before moving on to systems, wireless multimedia and more advanced topics. The Compression section advises on the best means and methodology to ensure multimedia signal (images, text, audio and data) integrity for transmissions on wireless and wired systems. The Networking section addresses channel protection and performance. In the Systems section, the focus is on streaming media on demand, live broadcast and video and voice's role in real-time communication. Wireless multimedia transmission and Quality of Service issues are discussed in the Wireless Multimedia section. An Advanced Topics section concludes the book with an assortment of topics including Peer-to-Peer multimedia communication and multipath networks. Up-to-date coverage of existing standards for multimedia networking Synergistic tutorial approach reinforces knowledge gained in previous chapters Balanced treatment of audio and video with coverage of end-to-end systems Introduction to Cisco Router Configuration is based on Cisco System's ICRC course that is taught in training centers worldwide. Providing a thorough introduction to the course material, Introduction to Cisco Router

Configuration will further serve as a reference and reinforcement to the actual ICRC course. 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. BGP is the building block of the internet. Building a complete network topology from the ground up this book will teach you what BGP is, how to configure neighbors (eBGP and iBGP), route reflectors, confederations, building the BGP routing table, how BGP works with IGP's such as EIGRP, OSPF and RIP, and advanced topics such as route filtering, dynamic peering, summarization, tuning the BGP routing decision process, multiprotocol BGP with IPv6 and configuring policies. There are troubleshooting steps from the very basic checks through to more advanced issues. This book has been written for the Cisco CCIE Routing and Switching version 5.0, and covers all the topics required for the written and lab exam. This book is aimed at those studying for the CCIE but will suit anyone looking to get a solid understanding and familiarity of BGP on Cisco IOS and IOS-XE, including CCNA and CCNP students. Covers topics covered in the ICND1 100-101, ICND2 200-101, and CCNA 200-120 exams along with a summarization of commands, keywords, command augments, and associated prompts. Cisco Firewalls Concepts, design and deployment for Cisco Stateful Firewall solutions

- “ In this book, Alexandre proposes a totally different approach to the important subject of firewalls: Instead of just presenting configuration models, he uses a set of carefully crafted examples to illustrate the theory in action. A must read!” —Luc Billot, Security Consulting Engineer at Cisco
- Cisco Firewalls thoroughly explains each of the leading Cisco firewall products, features, and solutions, and shows how they can add value to any network security design or operation. The author tightly links theory with practice, demonstrating how to integrate Cisco firewalls into highly secure, self-defending networks. Cisco Firewalls shows you how to deploy Cisco firewalls as an essential component of every network infrastructure. The book takes the unique approach of illustrating complex configuration concepts through step-by-step examples that demonstrate the theory in action. This is the first book with detailed coverage of firewalling Unified Communications systems, network virtualization architectures, and environments that include virtual machines. The author also presents indispensable information about integrating firewalls with other security elements such as IPS, VPNs, and load balancers; as well as a complete introduction to firewalling IPv6 networks. Cisco Firewalls will be an indispensable resource for engineers and architects designing and implementing firewalls; security administrators, operators, and support professionals; and anyone preparing for the CCNA Security, CCNP Security, or CCIE Security certification exams.
- Alexandre Matos da Silva Pires de Moraes, CCIE No. 6063, has worked as a Systems Engineer for Cisco Brazil since 1998 in projects that involve not only Security and VPN technologies but also Routing Protocol and Campus Design, IP Multicast Routing, and MPLS Networks Design. He coordinated a team of Security engineers in Brazil and holds the CISSP, CCSP, and three CCIE certifications (Routing/Switching, Security, and Service Provider). A frequent speaker at Cisco Live, he holds a degree in electronic engineering from the Instituto Tecnológico de Aeronáutica (ITA – Brazil).
- Create advanced security designs utilizing the entire Cisco firewall product family
- Choose the right firewalls based on your performance requirements
- Learn firewall configuration fundamentals and master the tools that provide insight about firewall operations
- Properly insert firewalls in your network's topology using Layer 3 or Layer 2 connectivity
- Use Cisco firewalls as part of a robust, secure virtualization architecture
- Deploy Cisco ASA firewalls with or without NAT
- Take full advantage of the classic IOS firewall feature set (CBAC)
- Implement flexible security policies with the Zone Policy Firewall (ZPF)
- Strengthen stateful inspection with antispoofing, TCP normalization, connection limiting, and IP fragmentation handling
- Use application-layer inspection capabilities built into Cisco firewalls
- Inspect IP voice protocols, including SCCP, H.323, SIP, and MGCP
- Utilize identity to provide user-based stateful functionality
- Understand how multicast traffic is handled through firewalls
- Use firewalls to protect your IPv6 deployments

This security book is part of the Cisco Press Networking Technology Series. Security titles from Cisco Press help networking professionals secure critical data and resources, prevent and mitigate network attacks, and build end-to-end, self-defending networks. The reader-friendly explanation of how the IP address space works and how it is used

- A reader-friendly introduction to the complex and confusing topic of IP addressing
- Thorough and understandable explanations of the binary mathematics behind IP addressing
- Complete coverage of the IPv4 address space without distractions of routing or transport protocols
- Detailed explanations of subnetting and supernetting, Variable Length Subnet Masks (VLSMs), CIDR, NAT, portable address spaces, and IPv6
- Strategies for managing an address space for enterprise WANs, data centers, and ISPs
- Numerous examples and an easy-to-read style of writing that imparts a profound understanding of IP addressing

The Internet Protocol (IP) is the native protocol suite of the Internet and has become predominant in virtually all networks and internetworks. Managing an IP address space requires a solid command of binary mathematics, particularly as it is applied within the IP addressing architecture. The mathematics of the IP address space, however, are not intuitive and can be very difficult to grasp. Consequently, learning about IP addressing can be a lot like trying to piece together a jigsaw puzzle—but without knowing what the puzzle is supposed to look like. IP Addressing Fundamentals explains simply and clearly how the IP address space works and how it is used. This is a reader-friendly book that details the fundamentals of the IP address space from the ground up. IP Addressing Fundamentals unravels the mysteries of subnetting, supernetting, and CIDR; thoroughly explains the binary mathematics of IPv4's addressing space; and demonstrates how an IP address becomes an active component in both networks and internetworks. Author Mark Sportack prepares you for real-world success by walking you through some of the issues and traps that lie in wait for anyone who needs to plan or manage the use of an IP address space. Most importantly, this book doesn't presume you already know what the entire IP addressing puzzle looks like. IP Addressing Fundamentals imparts a profound command of IP addressing through a clear and concise writing style. Basics are reinforced with detailed information and numerous examples of how the concepts work. This book builds upon concepts presented in earlier chapters and concludes with fairly advanced topics that will become increasingly useful to midlevel network engineers. After reading IP Addressing Fundamentals, you'll finally understand IP addressing and appreciate both its mechanics and relevance, and you'll know how to efficiently apply your new knowledge. Three exams, two certifications, one complete Cisco training solution for networking professionals! The CCNA exam is an entry-level IT certification from Cisco Systems for professionals installing and maintaining route and switched networks. The current exam material covers networking concepts along with new and updated content on network security fundamentals and the basics of wireless networking. This book can be used as a study guide for either track you choose to receive your CCNA – the single exam, 640-802 or the combined 640-822 and 640-816, and for the CCENT certification which a student will receive upon completion of the 640-822 exam. The author team has arranged the content so that you can easily identify the objectives for each half of the combined exam.

- * Layout of the guide parallels the CCNA/CCENT exam objectives for ease of study
- * Details all aspects of the exams including security and wireless networking essentials
- * Covers everything from introductory to advanced topics—keeping the beginner and intermediate IT professional in mind
- * Chapter ending questions and answers allow for graduated learning
- * Two practice exams on the accompanying DVD help eliminate test-day jitters

The authoritative visual guide to Cisco Firepower Threat Defense (FTD) This is the definitive guide to best practices and advanced troubleshooting techniques for the Cisco flagship Firepower Threat Defense (FTD) system running on Cisco ASA platforms, Cisco Firepower security appliances, Firepower eXtensible Operating System (FXOS), and VMware virtual appliances. Senior Cisco engineer Nazmul Rajib draws on unsurpassed experience supporting and training Cisco Firepower engineers worldwide, and presenting detailed knowledge of Cisco Firepower deployment, tuning, and

troubleshooting. Writing for cybersecurity consultants, service providers, channel partners, and enterprise or government security professionals, he shows how to deploy the Cisco Firepower next-generation security technologies to protect your network from potential cyber threats, and how to use Firepower's robust command-line tools to investigate a wide variety of technical issues. Each consistently organized chapter contains definitions of keywords, operational flowcharts, architectural diagrams, best practices, configuration steps (with detailed screenshots), verification tools, troubleshooting techniques, and FAQs drawn directly from issues raised by Cisco customers at the Global Technical Assistance Center (TAC). Covering key Firepower materials on the CCNA Security, CCNP Security, and CCIE Security exams, this guide also includes end-of-chapter quizzes to help candidates prepare.

- Understand the operational architecture of the Cisco Firepower NGFW, NGIPS, and AMP technologies
- Deploy FTD on ASA platform and Firepower appliance running FXOS
- Configure and troubleshoot Firepower Management Center (FMC)
- Plan and deploy FMC and FTD on VMware virtual appliance
- Design and implement the Firepower management network on FMC and FTD
- Understand and apply Firepower licenses, and register FTD with FMC
- Deploy FTD in Routed, Transparent, Inline, Inline Tap, and Passive Modes
- Manage traffic flow with detect-only, block, trust, and bypass operations
- Implement rate limiting and analyze quality of service (QoS)
- Blacklist suspicious IP addresses via Security Intelligence
- Block DNS queries to the malicious domains
- Filter URLs based on category, risk, and reputation
- Discover a network and implement application visibility and control (AVC)
- Control file transfers and block malicious files using advanced malware protection (AMP)
- Halt cyber attacks using Snort-based intrusion rule
- Masquerade an internal host's original IP address using Network Address Translation (NAT)
- Capture traffic and obtain troubleshooting files for advanced analysis
- Use command-line tools to identify status, trace packet flows, analyze logs, and debug messages

Become a Cisco security specialist by developing your skills in network security and explore advanced security technologies

Key Features

Enhance your skills in network security by learning about Cisco's device configuration and installation

Unlock the practical aspects of CCNA security to secure your devices

Explore tips and tricks to help you achieve the CCNA Security 210-260 Certification

Book Description

With CCNA Security certification, a network professional can demonstrate the skills required to develop security infrastructure, recognize threats and vulnerabilities to networks, and mitigate security threats. The CCNA Security 210-260 Certification Guide will help you grasp the fundamentals of network security and prepare you for the Cisco CCNA Security Certification exam. You'll begin by getting a grip on the fundamentals of network security and exploring the different tools available. Then, you'll see how to securely manage your network devices by implementing the AAA framework and configuring different management plane protocols. Next, you'll learn about security on the data link layer by implementing various security toolkits. You'll be introduced to various firewall technologies and will understand how to configure a zone-based firewall on a Cisco IOS device. You'll configure a site-to-site VPN on a Cisco device and get familiar with different types of VPNs and configurations. Finally, you'll delve into the concepts of IPS and endpoint security to secure your organization's network infrastructure. By the end of this book, you'll be ready to take the CCNA Security Exam (210-260).

What you will learn

- Grasp the fundamentals of network security
- Configure routing protocols to secure network devices
- Mitigate different styles of security attacks using Cisco devices
- Explore the different types of firewall technologies
- Discover the Cisco ASA functionality and gain insights into some advanced ASA configurations
- Implement IPS on a Cisco device and understand the concept of endpoint security

Who this book is for

CCNA Security 210-260 Certification Guide can help you become a network security engineer, a cyber security professional, or a security administrator. You should have valid CCENT or CCNA Routing and Switching certification before taking your CCNA Security exam.

Cisco® ASA All-in-One Next-Generation Firewall, IPS, and VPN Services, Third Edition

Identify, mitigate, and respond to today's highly-sophisticated network attacks. Today, network attackers are far more sophisticated, relentless, and dangerous. In response, Cisco ASA: All-in-One Next-Generation Firewall, IPS, and VPN Services has been fully updated to cover the newest techniques and Cisco technologies for maximizing end-to-end security in your environment. Three leading Cisco security experts guide you through every step of creating a complete security plan with Cisco ASA, and then deploying, configuring, operating, and troubleshooting your solution. Fully updated for today's newest ASA releases, this edition adds new coverage of ASA 5500-X, ASA 5585-X, ASA Services Module, ASA next-generation firewall services, EtherChannel, Global ACLs, clustering, IPv6 improvements, IKEv2, AnyConnect Secure Mobility VPN clients, and more. The authors explain significant recent licensing changes; introduce enhancements to ASA IPS; and walk you through configuring IPsec, SSL VPN, and NAT/PAT. You'll learn how to apply Cisco ASA adaptive identification and mitigation services to systematically strengthen security in network environments of all sizes and types. The authors present up-to-date sample configurations, proven design scenarios, and actual debugs— all designed to help you make the most of Cisco ASA in your rapidly evolving network.

Jazib Frahim, CCIE® No. 5459 (Routing and Switching; Security), Principal Engineer in the Global Security Solutions team, guides top-tier Cisco customers in security-focused network design and implementation. He architects, develops, and launches new security services concepts. His books include Cisco SSL VPN Solutions and Cisco Network Admission Control, Volume II: NAC Deployment and Troubleshooting.

Omar Santos, CISSP No. 463598, Cisco Product Security Incident Response Team (PSIRT) technical leader, leads and mentors engineers and incident managers in investigating and resolving vulnerabilities in Cisco products and protecting Cisco customers. Through 18 years in IT and cybersecurity, he has designed, implemented, and supported numerous secure networks for Fortune® 500 companies and the U.S. government. He is also the author of several other books and numerous whitepapers and articles.

Andrew Ossipov, CCIE® No. 18483 and CISSP No. 344324, is a Cisco Technical Marketing Engineer focused on firewalls, intrusion prevention, and data center security. Drawing on more than 16 years in networking, he works to solve complex customer technical problems, architect new features and products, and define future directions for Cisco's product portfolio. He holds several pending patents.

Understand, install, configure, license, maintain, and troubleshoot the newest ASA devices

- Efficiently implement Authentication, Authorization, and Accounting (AAA) services
- Control and provision network access with packet filtering, context-aware Cisco ASA next-generation firewall services, and new NAT/PAT concepts
- Configure IP routing, application inspection, and QoS
- Create firewall contexts with unique configurations, interfaces, policies, routing tables, and administration
- Enable integrated protection against many types of malware and advanced persistent threats (APTs) via Cisco Cloud Web Security and Cisco Security Intelligence Operations (SIO)
- Implement high availability with failover and elastic scalability with clustering
- Deploy, troubleshoot, monitor, tune, and manage Intrusion Prevention System (IPS) features
- Implement site-to-site IPsec VPNs and all forms of remote-access VPNs (IPsec, clientless SSL, and client-based SSL)
- Configure and troubleshoot Public Key Infrastructure (PKI)
- Use IKEv2 to more effectively resist attacks against VPNs
- Leverage IPv6 support for IPS, packet inspection, transparent firewalls, and site-to-site IPsec VPNs

While several publishers (including O'Reilly) supply excellent documentation of router features, the trick is knowing when, why, and how to use these features. There are often many different ways to solve any given networking problem using Cisco devices, and some solutions are clearly more effective than others. The pressing question for a network engineer is which of the many potential solutions is the most appropriate for a particular situation. Once you have decided to use a particular feature, how should you implement it? Unfortunately, the documentation describing a particular command or feature frequently does very little to answer either of these questions.

Everybody who has worked with Cisco routers for any length of time has had to ask their friends and co-workers for example router configuration files that show how to solve a common problem. A good working configuration example can often save huge amounts of time and frustration when implementing a feature

that you've never used before. The Cisco Cookbook gathers hundreds of example router configurations all in one place. As the name suggests, Cisco Cookbook is organized as a series of recipes. Each recipe begins with a problem statement that describes a common situation that you might face. After each problem statement is a brief solution that shows a sample router configuration or script that you can use to resolve this particular problem. A discussion section then describes the solution, how it works, and when you should or should not use it. The chapters are organized by the feature or protocol discussed. If you are looking for information on a particular feature such as NAT, NTP or SNMP, you can turn to that chapter and find a variety of related recipes. Most chapters list basic problems first, and any unusual or complicated situations last. The Cisco Cookbook will quickly become your "go to" resource for researching and solving complex router configuration issues, saving you time and making your network more efficient. It covers: Router Configuration and File Management Router Management User Access and Privilege Levels TACACS+ IP Routing RIP EIGRP OSPF BGP Frame Relay Queueing and Congestion Tunnels and VPNs Dial Backup NTP and Time DLSw Router Interfaces and Media Simple Network Management Protocol Logging Access Lists DHCP NAT Hot Standby Router Protocol IP Multicast This revised version of the bestselling first edition provides a self-study complement to the Cisco CCIP training course implementing Cisco MPLS. Extensive case studies guide readers through the design and deployment of real-world MPLS/VPN networks MPLS and VPN Architectures. Go beyond layer 2 broadcast domains with this in-depth tour of advanced link and internetwork layer protocols, and learn how they enable you to expand to larger topologies. An ideal follow-up to Packet Guide to Core Network Protocols, this concise guide dissects several of these protocols to explain their structure and operation. This isn't a book on packet theory. Author Bruce Hartpence built topologies in a lab as he wrote this guide, and each chapter includes several packet captures. You'll learn about protocol classification, static vs. dynamic topologies, and reasons for installing a particular route. This guide covers: Host routing—Process a routing table and learn how traffic starts out across a network Static routing—Build router routing tables and understand how forwarding decisions are made and processed Spanning Tree Protocol—Learn how this protocol is an integral part of every network containing switches Virtual Local Area Networks—Use VLANs to address the limitations of layer 2 networks Trunking—Get an in-depth look at VLAN tagging and the 802.1Q protocol Routing Information Protocol—Understand how this distance vector protocol works in small, modern communication networks Open Shortest Path First—Discover why convergence times of OSPF and other link state protocols are improved over distance vectors The complete guide to seamless anytime/anywhere networking with LISP In an era of ubiquitous clouds, virtualization, mobility, and the Internet of Things, information and resources must be accessible anytime, from anywhere. Connectivity to devices and workloads must be seamless even when people move, and their location must be fully independent of device identity. The Locator/ID Separation Protocol (LISP) makes all this possible. The LISP Network is the first comprehensive, in-depth guide to LISP concepts, architecture, techniques, behavior, and applications. Co-authored by LISP co-creator Dino Farinacci and Victor Moreno—co-developer of the Cisco LISP implementation—it will help you identify the opportunities and benefits of deploying LISP in any data center, campus and branch access, WAN edge, or service provider core network. This largely implementation-agnostic guide will be valuable to architects, engineers, consultants, technical sales professionals, and senior IT professionals in any largescale network environment. The authors show how LISP overcomes key problems in large-scale networking, thoroughly introduce its key applications, guide you through designing real-world solutions, and present detailed deployment case studies based on their pioneering experience. · Understand LISP's core principles, history, motivation, and applications · Explore LISP's technical architecture, components, mechanisms, and workflows · Use LISP to seamlessly deliver diverse network services and enable major advances in data center connectivity · Improve mobility, network segmentation, and policy management · Leverage software-defined WANs (SD-WANs) to efficiently move traffic from access to data center · Evolve access networks to provide pervasive, mega-scale, high-density modern connectivity · Integrate comprehensive security into the networking control and data plane, and learn how LISP infrastructure is protected against attacks · Enforce access control policies, connection integrity, confidentiality for data in flight, and end-point anonymity · Discover how LISP mobility mechanisms anticipate tomorrow's application use cases Fully updated and expanded edition to include current versions of Cisco family of routers. Multi-purpose guide--great for on-the-job and reflects changes in the CCIE exam so it can be used for exam preparation. Thorough coverage--contains information that goes beyond available Cisco documentation and the competition. New material using MentorLabs Software for Web-enhanced help. Includes a number of different exercises, this book covers the CCIE v5 topics for tunnelling, DMVPN (Dynamic Multipoint VPN), VPNs, and NAT and will show you how to create a network from the beginning. -- This book is a concise one-stop desk reference and synopsis of basic knowledge and skills for Cisco certification prep. For beginning and experienced network engineers tasked with building LAN, WAN, and data center connections, this book lays out clear directions for installing, configuring, and troubleshooting networks with Cisco devices. The full range of certification topics is covered, including all aspects of IOS, NX-OS, and ASA software. The emphasis throughout is on solving the real-world challenges engineers face in configuring network devices, rather than on exhaustive descriptions of hardware features. This practical desk companion doubles as a comprehensive overview of the basic knowledge and skills needed by CCENT, CCNA, and CCNP exam takers. It distills a comprehensive library of cheat sheets, lab configurations, and advanced commands that the authors assembled as senior network engineers for the benefit of junior engineers they train, mentor on the job, and prepare for Cisco certification exams. Prior familiarity with Cisco routing and switching is desirable but not necessary, as Chris Carthern, Dr. Will Wilson, Noel Rivera, and Richard Bedwell start their book with a review of the basics of configuring routers and switches. All the more advanced chapters have labs and exercises to reinforce the concepts learned. This book differentiates itself from other Cisco books on the market by approaching network security from a hacker's perspective. Not only does it provide network security recommendations but it teaches you how to use black-hat tools such as oclHashcat, Loki, Burp Suite, Scapy, Metasploit, and Kali to actually test the security concepts learned. Readers of Cisco Networks will learn How to configure Cisco switches, routers, and data center devices in typical corporate network architectures The skills and knowledge needed to pass Cisco CCENT, CCNA, and CCNP certification exams How to set up and configure at-home labs using virtual machines and lab exercises in the book to practice advanced Cisco commands How to implement networks of Cisco devices supporting WAN, LAN, and data center configurations How to implement secure network configurations and configure the Cisco ASA firewall How to use black-hat tools and network penetration techniques to test the security of your network This introduction to networking on Linux now covers firewalls, including the use of ipchains and Netfilter, masquerading, and accounting. Other new topics in this second edition include Novell (NCP/IPX) support and INN (news administration). This is a biography of the author's encounters with the Super Natural. "How to master CCNA shows you, step-by-step, everything you need to know to master the CCNA Routing & Switching exam. You will discover all the different protocols that are used on networks and you will learn how to build networks yourself! Plus you will receive an overview of labs that you should practice from GNS3vault.com."--Page 4 of cover. This work has been selected by scholars as being culturally important, and is part of the knowledge base of civilization as we know it. This work was reproduced from the original artifact, and remains as true to the original work as possible. Therefore, you will see the original copyright references, library stamps (as most of these works have been housed in our most important libraries around the world), and other notations in the work. This work is in the public domain in the United States of America, and possibly other nations. 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a reproduction of a historical artifact, this work may contain missing or blurred pages, poor pictures, errant marks, etc. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

Harden Routers with Cisco IOSR Firewalls to Ensure Network Perimeter Security Cisco Express Forwarding Understanding and troubleshooting CEF in Cisco routers and switches Nakia Stringfield, CCIE® No. 13451/Russ White, CCIE No. 2635/Stacia McKee How does a router switch a packet? What is the difference between routing a packet, switching a frame, and packet switching? What is the Cisco® Express Forwarding (CEF) feature referred to in Cisco documentation and commonly found in Cisco IOS® commands? CEF is a general term that describes the mechanism by which Cisco routers and Catalyst® switches packet-switch (route) frames. CEF is found in almost all Cisco routers and Catalyst switches, and understanding how CEF operates can improve the performance, scalability, and efficiency of your network. Cisco Express Forwarding demystifies the internal workings of Cisco routers and switches, making it easier for you to optimize performance and troubleshoot issues that arise in Cisco network environments. This book addresses common misconceptions about CEF and packet switching across various platforms, helping you to improve your troubleshooting skills for CEF- and non-CEF-related problems. The first part of the book provides an overview of packet-switching architectures and CEF operation and advanced features. It also covers the enhanced CEF structure and general troubleshooting. The second part of the book provides case studies that focus on the common topics that have been problematic for customers and those supporting Cisco networks. Full of practical examples and configurations, this book draws on years of experience to help you keep your Cisco networks running efficiently. Learn the key features of packet-switching architectures Understand the basics of the CEF architecture and operation Examine the enhanced CEF structure, which improves scalability Learn how to troubleshoot in software-switching environments Understand the effect of CEF on a Cisco Catalyst 6500 Supervisor 720 Configure and troubleshoot load sharing with CEF Evaluate the effect of CEF in an MPLS VPN environment Review CEF design considerations that impact scalability 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. Category: Networking Covers: Routing and Switching The Second Edition of the Best Damn Firewall Book Period is completely revised and updated to include all of the most recent releases from Microsoft, Cisco, Juniper Network, and Check Point. Compiled from the best of the Syngress firewall library and authored by product experts such as Dr. Tom Shinder on ISA Server, this volume is an indispensable addition to a serious networking professionals toolkit. Coverage includes migrating to ISA Server 2006, integrating Windows Firewall and Vista security into your enterprise, successfully integrating Voice over IP applications around firewalls, and analyzing security log files. Sections are organized by major vendor, and include hardware, software and VPN configurations for each product line. New to this Edition: Microsoft firewall protection, from Windows Firewall to ISA Server 2006 Cisco PIX Version 7, including VPN configuration and IDS Analyzing Firewall Logs and Reports VoIP and Firewall Bypassing This work provides a guide to the configuration of Cisco routers, from tasks for beginners to advanced operations. A collection of detailed "how-to" instructions are presented, which will be of use to all professionals and students who engage with Cisco routers in the field or in the lab. The guide starts with the simple step-by-step task of connecting the router and performing basic configuration, before building up to complex and sensitive operations such as router IOS upgrade and Site-to-Site VPNs. Cisco Routers for the Small Business provides, in plain English, a no-nonsense approach to setting up all the features of the Cisco IOS for a small business using broadband technologies. This book explains how to use a Cisco router to setup cable modems, DSL and PPPoE, and explains how to configure NAT, Access Control Lists, Firewalls, DMZs and an IPSec VPN between two sites using advanced encryption. The chapters are tutorial-based and provide easy-to-follow, step-by-step instructions for all tasks that small businesses need to perform using a router. Easy-to-implement example configurations are included in the appendices. Written for the small business using common, broadband connections such as cable Internet and DSL. Provides easily-followed, step-by-step instructions for tasks that small businesses need to perform, such as configuring virtual private network (VPN) connections, creating firewalls, securing the router, and more. Contains appendixes with example configurations that are short, to the point, and dead-simple to implement. Implementing Cisco IP Routing (ROUTE) Foundation Learning Guide is a Cisco authorized, self-paced learning tool for CCNP preparation. This book teaches readers how to design, configure, maintain, and scale routed networks that are growing in size and complexity. The book covers all routing principles covered in the CCNP Implementing Cisco IP Routing course. As part of the Cisco Press Self-Study series, Implementing Cisco IP Routing (ROUTE) Foundation Learning Guide provides comprehensive foundation learning for the CCNP ROUTE exam. This revision to the popular Foundation Learning Guide format for Advanced Routing at the Professional level is fully updated to include complete coverage of all routing topics covered in the new Implementing Cisco IP Routing (ROUTE) course. The proposed book is an intermediate-level text, which assumes that readers have been exposed to beginner-level networking concepts contained in the CCNA (ICND1 and ICND2) certification curriculum. No previous exposure to the CCNP level subject matter is required, so the book provides a great deal of detail on the topics covered. Each chapter opens with a list of objectives to help focus the reader's study. Configuration exercises at the end of each chapter and a master lab exercise that ties all the topics together in the last chapter help illuminate theoretical concepts. Key terms will be highlighted and defined throughout. Each chapter will conclude with a summary to help review key concepts, as well as review questions to reinforce the reader's understanding of what was covered. The Best Damn Cisco Internetworking Book Period shows readers everything they need to know about all Cisco internetworking topics. The book provides an understanding of Cisco's current VoIP solutions and the means to put them to work, showing how to configure all of Cisco's core VoIP products—among them Cisco CallManager software, Cisco 7910 series phones, and server-based IP PBXs. It discusses IPv6 Protocols, as well as IP Quality of Service (QoS) and how it applies to Enterprise and Internet Service Provider (ISP) environments. In addition, Cisco wireless technologies are covered in detail. Cisco has placed a high priority on security and here readers will find complete coverage of all the Cisco Security products such as the PIX firewall suite of products, Network Address Translation (NAT), Cisco VPN Concentrator and IPSec, Cisco Authentication, Authorization, and Accounting (AAA), Content Services Switch (CSS), and the Cisco Secure Network Intrusion Detection System. This book is sure to become a dog eared reference for all Cisco engineers and administrators. - The one book that covers all major Cisco Internetworking concepts and configurations. - The only book to cross reference Cisco internetworking topics: Voice Over IP, Remote Access, Wireless, AVVID, and QoS. In addition, new technologies are covered in depth: AVVID, SIP, MGCP, and more. - A 1-stop reference for Cisco professionals needing coverage of core Cisco exam topics.