

The Complete Cisco Vpn Configuration Guide

An introduction to designing and configuring Cisco IPsec VPNs Understand the basics of the IPsec protocol and learn implementation best practices Study up-to-date IPsec design, incorporating current Cisco innovations in the security and VPN marketplace Learn how to avoid common pitfalls related to IPsec deployment Reinforce theory with case studies, configuration examples showing how IPsec maps to real-world solutions IPsec Virtual Private Network Fundamentals provides a basic working knowledge of IPsec on various Cisco routing and switching platforms. It provides the foundation necessary to understand the different components of Cisco IPsec implementation and how it can be successfully implemented in a variety of network topologies and markets (service provider, enterprise, financial, government). This book views IPsec as an emerging requirement in most major vertical markets, explaining the need for increased information authentication, confidentiality, and non-repudiation for secure transmission of confidential data. The book is written using a layered approach, starting with basic explanations of why IPsec was developed and the types of organizations relying on IPsec to secure data transmissions. It then outlines the basic IPsec/ISAKMP fundamentals that were developed to meet demand for secure data transmission. The book covers the design and implementation of IPsec VPN architectures using an array of Cisco products, starting with basic concepts and proceeding to more advanced topics including high availability solutions and public key infrastructure (PKI). Sample topology diagrams and configuration examples are provided in each chapter to reinforce the fundamentals expressed in text and to assist readers in translating concepts into practical deployment scenarios. Additionally, comprehensive case studies are incorporated throughout to map topics to real-world solutions.

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.

Covers the most important and common configuration scenarios and features which will put you on track to start implementing ASA firewalls right away.

With the recent availability of high-speed Internet connections to the home and the continued move of workers out of central office locations (whether for travel, telecommuting, or branch office expansion), Virtual Private Networks (VPNs) have become a critical part of corporate network architectures. VPNs use advanced encryption and tunneling to permit your organization to establish secure, end-to-end, private network connections over third-party networks, such as the Internet. This new networking paradigm not only adds to the efficiency of the corporate workforce, but it also saves money by leveraging third-party networks and allows you to scale your networks with greater ease. Based on the official instructor-led training course of the same name, Cisco Secure Virtual Private Networks is a comprehensive, results-oriented book designed to give you the knowledge you need to plan, deploy, and manage VPNs in your network environment. Beginning with an overview of VPNs and IPsec, the book introduces you to the Cisco VPN family of products. It then delves into the details of configuring and troubleshooting IPsec site-to-site VPNs on Cisco IOS(r) routers and Cisco PIX(r) Firewalls using preshared keys and digital certificates. You learn how to install the VPN 3000 Concentrator and how to configure it for remote access using preshared keys and digital certificates. Monitoring and administration techniques are also presented. The book concludes with a discussion on the scalability solutions available for IPsec VPNs. Each chapter includes an explicit set of learning objectives and concludes with a set of review questions to assess your understanding of the material. Numerous examples are provided throughout, and detailed diagrams help clarify concepts presented in the text. Whether you are preparing for the Cisco Security Specialist 1 certification or simply want to understand and make the most efficient use of VPNs, Cisco Secure Virtual Private Networks provides you with a complete solution for designing, implementing, and managing Cisco VPN networks. Prepare for the Cisco Security Specialist 1 VPN exam with the official CSVN Coursebook Evaluate the features, functions, and benefits of Cisco VPN products Understand the component technologies that are implemented in Cisco VPN products Learn the procedures, steps, and commands required to configure and test IPsec in Cisco IOS Software and the Cisco PIX Firewall Install and configure the Cisco VPN client to create a secure tunnel to a Cisco VPN Concentrator and Cisco PIX Firewall Configure and verify IPsec in the Cisco VPN Concentrator, Cisco router, and Cisco PIX Firewall Enable interoperability among the Cisco VPN Concentrator, Cisco routers, and Cisco PIX Firewalls Apply scalability and advanced configuration features supported in the Cisco IPsec implementation Andrew G. Mason, CCIE(r) #7144, CSS-1, CCNP(r): Security, and CCDP(r), is the CEO of three UK-based companies: Mason Technologies, CCStudy.com, and Boxing Orange. Andrew has 11 years experience in the networking industry and is currently consulting for the largest ISP in the UK. He is involved daily in the design and implementation of complex secure hosted solutions utilizing products from the Cisco Secure family.

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

The definitive design and deployment guide for secure virtual private networks Learn about IPsec protocols and Cisco IOS IPsec packet processing Understand the differences between IPsec tunnel mode and transport mode Evaluate the IPsec features that improve VPN scalability and fault tolerance, such as dead peer detection and control plane keepalives Overcome the challenges of working with NAT and PMTUD Explore IPsec remote-access features, including extended authentication, mode-configuration, and digital certificates Examine the pros and cons of various IPsec connection models such as native IPsec, GRE, and remote access Apply fault tolerance methods to IPsec VPN designs Employ mechanisms to alleviate the configuration complexity of a large- scale IPsec VPN, including Tunnel End-Point Discovery (TED) and Dynamic Multipoint VPNs (DMVPN) Add services to IPsec VPNs, including voice and multicast Understand how network-based VPNs operate and how to integrate IPsec VPNs with MPLS VPNs Among the many functions that networking technologies permit is the ability for

organizations to easily and securely communicate with branch offices, mobile users, telecommuters, and business partners. Such connectivity is now vital to maintaining a competitive level of business productivity. Although several technologies exist that can enable interconnectivity among business sites, Internet-based virtual private networks (VPNs) have evolved as the most effective means to link corporate network resources to remote employees, offices, and mobile workers. VPNs provide productivity enhancements, efficient and convenient remote access to network resources, site-to-site connectivity, a high level of security, and tremendous cost savings. IPsec VPN Design is the first book to present a detailed examination of the design aspects of IPsec protocols that enable secure VPN communication. Divided into three parts, the book provides a solid understanding of design and architectural issues of large-scale, secure VPN solutions. Part I includes a comprehensive introduction to the general architecture of IPsec, including its protocols and Cisco IOS IPsec implementation details. Part II examines IPsec VPN design principles covering hub-and-spoke, full-mesh, and fault-tolerant designs. This part of the book also covers dynamic configuration models used to simplify IPsec VPN designs. Part III addresses design issues in adding services to an IPsec VPN such as voice and multicast. This part of the book also shows you how to effectively integrate IPsec VPNs with MPLS VPNs. IPsec VPN Design provides you with the field-tested design and configuration advice to help you deploy an effective and secure VPN solution in any environment. 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 only comprehensive assessment, review, and practice guide for Cisco's new Deploying Cisco ASA VPN Solutions exam - direct from Cisco! * *Covers every updated Cisco CCNP Deploying Cisco ASA VPN Solutions exam topic: architecture, policies, inheritance, clientless VPNs/portals/SSL, AnyConnect Remote Access VPNs, Cisco Secure Desktop, Easy VPN, IPsec site-to-site VPNs, and more *New IPv6 coverage, plus new CLI examples throughout. *CD contains realistic practice tests. *Proven features promote efficient study. This is Cisco's official, comprehensive self-study resource for the new Deploying Cisco ASA VPN Solutions (VPN v1.0) exam, required for CCNP Security certification. Designed for beginning-to-intermediate level readers, it covers every objective concisely and logically, with extensive teaching features that promote retention and understanding. Readers will find: * *Pre-chapter quizzes to assess knowledge upfront and focus study more efficiently. *Foundation topics sections that explain concepts and configurations, and link theory to actual configuration commands. *Key topics sections calling attention to every figure, table, and list that candidates must know. *Exam Preparation sections with additional chapter review features. *Final preparation chapter providing tools and a complete final study plan. *Customizable practice test library on CD-ROM This edition has been fully updated for the latest exam objectives, including new IPv6 coverage and integrated CLI configuration examples alongside ASDM configurations throughout.

The definitive insider's guide to planning, installing, configuring, and maintaining the new Cisco Adaptive Security Appliance.

With a CCNA Security certification, you can demonstrate the skills required to develop a security infrastructure, recognize threats to networks, and mitigate security threats. Geared towards Cisco Security, the practical aspects of this book will help you clear the CCNA Security Exam (210-260) by increasing your knowledge of Network Security.

"While Nokia is perhaps most recognized for its leadership in the mobile phone market, they have successfully demonstrated their knowledge of the Internet security appliance market and its customers requirements." --Chris Christiansen, Vice President, Internet Infrastructure and Security Software, IDC. Syngress has a long history of publishing market-leading books for system administrators and security professionals on commercial security products, particularly Firewall and Virtual Private Network (VPN) appliances from Cisco, Check Point, Juniper, SonicWall, and Nokia (see related titles for sales histories). The Nokia Firewall, VPN, and IPSO Configuration Guide will be the only book on the market covering the all-new Nokia Firewall/VPN Appliance suite. Nokia Firewall/VPN appliances are designed to protect and extend the network perimeter. According to IDC research, Nokia Firewall/VPN Appliances hold the #3 worldwide market-share position in this space behind Cisco and Juniper/NetScreen. IDC estimated the total Firewall/VPN market at \$6 billion in 2007, and Nokia owns 6.6% of this market. Nokia's primary customers for security appliances are Mid-size to Large enterprises who need site-to-site connectivity and Mid-size to Large enterprises who need remote access connectivity through enterprise-deployed mobile devices. Nokia appliances for this market are priced from \$1,000 for the simplest devices (Nokia IP60) up to \$60,000 for large enterprise- and service-provider class devices (like the Nokia IP2450 released in Q4 2007). While the feature set of such a broad product range obviously varies greatly, all of the appliances run on the same operating system: Nokia IPSO (IPSO refers to Ipsilon Networks, a company specializing in IP switching acquired by Nokia in 1997. The definition of the acronym has little to no meaning for customers.) As a result of this common operating system across the product line, The Nokia Firewall, VPN, and IPSO Configuration Guide will be an essential reference to users of any of these products. Users manage the Nokia IPSO (which is a Linux variant, specifically designed for these appliances) through a Web interface called Nokia Network Voyager or via a powerful Command Line Interface (CLI). Coverage within the book becomes increasingly complex relative to the product line. The Nokia Firewall, VPN, and IPSO Configuration Guide and companion Web site will provide seasoned network administrators and security professionals with the in-depth coverage and step-by-step walkthroughs they require to properly secure their network perimeters and ensure safe connectivity for remote users. The book contains special chapters devoted to mastering the complex Nokia IPSO command line, as well as tips and tricks for taking advantage of the new "ease of use" features in the Nokia Network Voyager Web interface. In addition, the companion Web site offers downloadable video walkthroughs on various installation and troubleshooting tips from the authors. * Only book on the market covering Nokia Firewall/VPN appliances, which hold 6.6% of a \$6 billion market * Companion website offers video walkthroughs on various installation and troubleshooting tips from the authors * Special chapters detail mastering the complex Nokia IPSO command line, as well as tips and tricks for taking advantage of the new "ease of use" features in the Nokia Network Voyager Web interface

Go-to guide for using Microsoft's updated Hyper-V as a virtualization solution Windows Server 2012 Hyper-V offers greater scalability, new components, and more options than ever before for large enterprises and small/medium businesses. Windows Server 2012 Hyper-V Installation and Configuration Guide is the place to start learning about this new cloud operating system. You'll get up to speed on the architecture, basic deployment and upgrading, creating virtual workloads, designing and implementing advanced network architectures, creating multitenant clouds, backup, disaster recovery, and more. The international team of expert authors offers deep technical detail, as well as hands-on exercises and plenty of real-world scenarios, so you thoroughly understand all features and how best to use them. Explains how to deploy, use, manage, and maintain the Windows Server 2012 Hyper-V virtualization solutions in large enterprises and small- to medium-businesses Provides deep technical detail and plenty of exercises showing you how to work with Hyper-V in real-world settings Shows you how to quickly configure Hyper-V from the GUI and use PowerShell to script and automate common tasks Covers deploying Hyper-V hosts, managing virtual machines, network fabrics, cloud computing, and using file servers Also explores virtual SAN storage, creating guest clusters, backup and disaster recovery, using Hyper-V for Virtual Desktop Infrastructure (VDI), and other topics Help make your Hyper-V virtualization solution a success with Windows Server 2012 Hyper-V Installation and Configuration Guide.

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

VPNs (Virtual Private Networks) allow for secure communications over publicly shared infrastructure, such as the Internet. This is a guide to implementing Cisco private networks, as well as providing an overview of VPNs. The guide contains blueprints that show the reader how the technology fits into the network architecture. Each chapter provides a technical overview of the technology, the commands and hardware required to implement the technology and a case study.

"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

Fast answers and reliable solutions for all widely-used Cisco router features - all in one time-saving guide Organized for maximum efficiency: describes actual commands and options in the sequence they should be used Helps network pros eliminate time-consuming documentation searches Extensive updates: IPv6, MPLS, AutoQoS, SIP, MGCP, voice troubleshooting, VPNs, security, and more "At-a-glance" illustrations offer fast answers and easy double-checking Locating reliable Cisco router configuration command information can require extensive, time-consuming research. Cisco Router Configuration Handbook, 2/e, is the solution: a day-to-day reference to the most widely used Cisco router features and configurations. Straight from Cisco experts, it covers every facet of router configuration, including fundamentals, network protocols, packet processing, voice/telephony, security, and more. This book is organized for maximum efficiency. Related features are covered together, and features and options are covered in the sequence in which they are typically used. Shaded tabs mark each section for quick reference. Information on each feature, technology, or protocol is presented in a concise one- or two-page format, with sections presenting quick facts, configuration information, and step-by-step examples, including both required and optional commands. Simply put, this book brings together all the Cisco routing configuration information most network professionals will ever need - and organizes it more efficiently than any other resource.

Master advanced MPLS VPN deployment solutions to design, deploy, and troubleshoot advanced or large-scale networks. This title builds on the bestselling success of the first volume with more advanced features to get more out of a network.

Implementing Cisco IOS Network Security (IINS) is a Cisco-authorized, self-paced learning tool for CCNA® Security foundation learning. This book provides you with the knowledge needed to secure Cisco® routers and switches and their associated networks. By reading this book, you will gain a thorough understanding of how to troubleshoot and monitor network devices to maintain integrity, confidentiality, and availability of data and devices, as well as the technologies that Cisco uses in its security infrastructure. This book focuses on the necessity of a comprehensive security policy and how it affects the posture of the network. You will learn how to perform basic tasks to secure a small branch type office network using Cisco IOS® security features available through the Cisco Router and Security Device Manager (SDM) web-based graphical user interface (GUI) and through the command-line interface (CLI) on Cisco routers and switches. The author also provides, when appropriate, parallels with Cisco ASA appliances. Whether you are preparing for CCNA Security certification or simply want to gain a better understanding of Cisco IOS security fundamentals, you will benefit from the information provided in this book. Implementing Cisco IOS Network Security (IINS) 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 offered by authorized Cisco Learning Partners worldwide, please visit www.cisco.com/go/authorizedtraining. Develop a comprehensive network security policy to counter threats against information security Configure routers on the network perimeter with Cisco IOS Software security features Configure firewall features including ACLs and Cisco IOS zone-based policy firewalls to perform basic security operations on a network Configure site-to-site VPNs using Cisco IOS features Configure IPS on Cisco network routers Configure LAN devices to control access, resist attacks, shield other network devices and systems, and protect the integrity and confidentiality of network traffic This volume is in the Certification Self-Study Series offered by Cisco Press®. Books in this series provide officially developed self-study solutions to help networking professionals understand technology implementations and prepare for the Cisco Career Certifications examinations.

Your resource to passing the Cisco CCSP CSVPN Certification Exam! Join the ranks of readers who have trusted Exam Cram 2 to their certification preparation needs! TheCCSP CSVPN Exam Cram 2 (Exam 642-511)is focused on what you need to know to pass the CCSP CSI exam. The Exam Cram 2 Method of Study provides you with a concise method to learn the exam topics. The book includes tips, exam notes, acronyms and memory joggers in order to help you pass the exam. Included in the CCSP CSVPN Exam Cram 2: A tear-out "Cram Sheet" for last

minute test preparation. Covers the current exam objectives for the 642-511. The PrepLogic Practice Tests, test engine to simulate the testing environment and test your knowledge. Trust in the series that has helped many others achieve certification success -Exam Cram 2.

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 complete field guide, authorized by Juniper Networks, is the perfect hands-on reference for deploying, configuring, and operating Juniper's SRX Series networking device. Authors Brad Woodberg and Rob Cameron provide field-tested best practices for getting the most out of SRX deployments, based on their extensive field experience. While their earlier book, Junos Security, covered the SRX platform, this book focuses on the SRX Series devices themselves. You'll learn how to use SRX gateways to address an array of network requirements—including IP routing, intrusion detection, attack mitigation, unified threat management, and WAN acceleration. Along with case studies and troubleshooting tips, each chapter provides study questions and lots of useful illustrations. Explore SRX components, platforms, and various deployment scenarios Learn best practices for configuring SRX's core networking features Leverage SRX system services to attain the best operational state Deploy SRX in transparent mode to act as a Layer 2 bridge Configure, troubleshoot, and deploy SRX in a highly available manner Design and configure an effective security policy in your network Implement and configure network address translation (NAT) types Provide security against deep threats with AppSecure, intrusion protection services, and unified threat management tools

Juniper Networks Secure Access SSL VPN appliances provide a complete range of remote access appliances for the smallest companies up to the largest service providers. As a system administrator or security professional, this comprehensive configuration guide will allow you to configure these appliances to allow remote and mobile access for employees. If you manage and secure a larger enterprise, this book will help you to provide remote and/or extranet access, for employees, partners, and customers from a single platform. Complete coverage of the Juniper Networks Secure Access SSL VPN line including the 700, 2000, 4000, 6000, and 6000 SP. Learn to scale your appliances to meet the demands of remote workers and offices. Use the NEW coordinated threat control with Juniper Networks IDP to manage the security of your entire enterprise.

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

Authorized Self-Study Guide Cisco Voice over IP (CVOICE) Third Edition Foundation learning for CVOICE exam 642-436 Kevin Wallace, CCIE No. 7945 Cisco Voice over IP (CVOICE), Third Edition, is a Cisco-authorized, self-paced learning tool for CCVP foundation learning. This book provides you with the knowledge and skills required to plan, design, and deploy a Cisco voice-over-IP (VoIP) network and to integrate gateways and gatekeepers into an enterprise VoIP network. By reading this book, you will gain a thorough understanding of converged voice and data networks and also the challenges you will face implementing various network technologies. Cisco Voice over IP (CVOICE) presents you with information on the foundational elements of VoIP

calls, the description of dial plans, and the implementation of gateways, gatekeepers, and Cisco Unified Border Elements (Cisco UBEs). The book gives you the information needed to implement and support data and voice integration solutions at the network-access level. Whether you are preparing for CCVP certification or simply want to gain a better understanding of VoIP fundamentals, you will benefit from the foundation information presented in this book. Cisco Voice over IP (CVOICE), Third 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 offered by authorized Cisco Learning Partners worldwide, please visit <http://www.cisco.com/go/authorizedtraining>. Kevin Wallace, CCIE No. 7945, is a certified Cisco instructor, and he teaches courses in the Cisco CCSP, CCVP, and CCNP® tracks. With 19 years of Cisco networking experience, Kevin has been a network design specialist for the Walt Disney World Resort and a network manager for Eastern Kentucky University. Integrate VoIP into an existing data network Design a VoIP network for optimal voice quality Examine the various call types in a VoIP network Configure analog voice interfaces and dial peers Perform call signaling over digital voice ports Implement H.323, MGCP, and SIP protocols on Cisco IOS® gateways Identify dial plan characteristics Configure advanced dial plans Deploy H.323 gatekeepers Implement a Cisco UBE router to provide protocol interworking

Network threats are emerging and changing faster than ever before. Cisco Next-Generation Network Security technologies give you all the visibility and control you need to anticipate and meet tomorrow's threats, wherever they appear. Now, three Cisco network security experts introduce these products and solutions, and offer expert guidance for planning, deploying, and operating them. The authors present authoritative coverage of Cisco ASA with FirePOWER Services; Cisco Firepower Threat Defense (FTD); Cisco Next-Generation IPS appliances; the Cisco Web Security Appliance (WSA) with integrated Advanced Malware Protection (AMP); Cisco Email Security Appliance (ESA) with integrated Advanced Malware Protection (AMP); Cisco AMP ThreatGrid Malware Analysis and Threat Intelligence, and the Cisco Firepower Management Center (FMC). You'll find everything you need to succeed: easy-to-follow configurations, application case studies, practical triage and troubleshooting methodologies, and much more. Effectively respond to changing threat landscapes and attack continuums Design Cisco ASA with FirePOWER Services and Cisco Firepower Threat Defense (FTD) solutions Set up, configure, and troubleshoot the Cisco ASA FirePOWER Services module and Cisco Firepower Threat Defense Walk through installing AMP Private Clouds Deploy Cisco AMP for Networks, and configure malware and file policies Implement AMP for Content Security, and configure File Reputation and File Analysis Services Master Cisco AMP for Endpoints, including custom detection, application control, and policy management Make the most of the AMP ThreatGrid dynamic malware analysis engine Manage Next-Generation Security Devices with the Firepower Management Center (FMC) Plan, implement, and configure Cisco Next-Generation IPS—including performance and redundancy Create Cisco Next-Generation IPS custom reports and analyses Quickly identify the root causes of security problems

This easy-to-follow text/reference presents a practical guide to the configuration of Cisco routers, from tasks for beginners to advanced operations. The work 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. This updated and expanded new edition has been enhanced with a more detailed treatment of each topic, supported by a set of training scenarios. Features: discusses basic configuration, domestic duties, standard and advanced routing, WAN technologies, security, router management, remote connectivity, and practical tips; explains in detail the steps required to configure different protocols on Cisco routers; includes coverage of MPLS, multicasting, GRE, HSRP, reflexive and timed-access lists, and configuration steps for IPv6 (NEW); provides an extensive selection of training scenarios, designed to offer hands-on practice in the relevant tasks (NEW).

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 publication seeks to assist organizations in mitigating the risks associated with the transmission of sensitive information across networks by providing practical guidance on implementing security services based on Internet Protocol Security (IPsec).

The official study guide for the Cisco Secure VPN exam #9E0-121 The only Cisco authorized exam certification guide for the new CSVPN exam Pre- and post-chapter quizzes help assess knowledge and identify areas of weakness Overviews and Foundation Summaries present complete and quick review of all CSVPN exam topics CD-ROM test engine provides practice with more than 200 questions As security demands continue to increase for enterprise and service provider networks, the number of employees working from remote locations requiring an efficient and rapid virtual private network connection grows as well. The Cisco Secure line of products and services are focused on providing the seamless operation of these remote networks with the maximum level of security available. Organizations using this suite of products and services need networking professionals with proven skills at getting the highest levels of both security and network operability. This need has created a booming demand for the Cisco Systems security certifications that verify those skills and abilities. The CSVPN exam is one of the components of the Cisco Systems security designation. "CSS-1 Cisco Secure VPN Exam Certification Guide" provides CSVPN exam candidates with a comprehensive preparation tool for testing success. With pre- and post-chapter tests, a CD-ROM-based testing engine with more than 200 questions, and comprehensive training on all exam topics, this title brings the proven exam preparation tools from the popular Cisco Press Exam Certification Guide series to the CSVPN candidate. John Roland, CCNP, CCDP, CSS-1, is a security specialist for Ajilon Consulting and has worked in the IT field for more than 22years--from COBOL programming on IBM mainframes, to LAN/WAN implementation on military networks, to developing Cisco certification training materials. Mark J. Newcomb is the owner and lead Security Engineer for Secure Networks in Spokane, Washington. Mark has more than 20 years experience in the networking industry, focusing on the financial and medical industries.

A complete configuration manual for MPLS, MPLS VPNs, MPLS TE, QoS, Any Transport over MPLS (AToM), and VPLS Understand the crucial Cisco commands for various MPLS scenarios Understand fundamentals of MPLS operation and learn to configure basic MPLS in Frame Relay and ATM-based environments Master fundamentals of MPLS VPN operation including Multiprotocol BGP (MBGP) operation, VPNv4 route exchange, and basic MPLS VPN configuration in the provider network Understand and configure various PE-CE routing protocols in MPLS VPN networks Understand MPLS VPN provisioning in an Inter-provider VPN (Inter-AS) and Carrier Supporting Carrier (CSC) environment Learn MPLS TE and its advanced features Examine AToM with configuration examples for like-to-like and any-to-any L2 VPN implementations and VPLS components and operation, VPLS configuration and verification, and VPLS topologies Learn about MPLS QoS, including configuration and implementation of uniform and short pipe modes MPLS Configuration on Cisco IOS Software is a complete and detailed resource to the configuration of Multiprotocol Label Switching (MPLS) networks and associated features. Through its practical, hands-on approach, you'll become familiar with MPLS technologies and their configurations using Cisco IOS® Software. MPLS Configuration on Cisco IOS Software covers basic-to-advanced MPLS concepts and configuration. Beyond its emphasis on MPLS, you'll learn about applications and deployments associated with MPLS, such as traffic engineering (TE), Layer 2 virtual private

networks (VPN), and Virtual Private LAN Service (VPLS). You'll receive practical guidance and deployment scenarios that can be enhanced by re-creation of the setups and configurations demonstrated within this book. You'll move quickly from a brief overview of MPLS technology and basic MPLS configuration on Cisco® routers to more advanced topics. Several chapters provide instruction on VPN connectivity options, including implementing Border Gateway Protocol (BGP) in MPLS VPNs. You'll receive configuration guidelines for advanced MPLS implementations such as MPLS TE, quality of service (QoS), and extranet VPNs. You'll learn about implementation of Layer 2 VPNs versus Layer 3 VPNs with Cisco Any Transport over MPLS (AToM). And you'll see demonstrations of implementing VPLS on Cisco routers complete with the configurations and platform support. "I highly recommend MPLS Configuration on Cisco IOS Software as required reading for those in search of practical guidance of the technology and nuances of configuring MPLS for next-generation networks for voice, video, data, and application service offerings across a wide variety of deployment scenarios." --Carlos Dominguez, Senior Vice President, Worldwide Service Provider Operations, Cisco Systems® 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.

With increased use of Internet connectivity and less reliance on private WAN networks, virtual private networks (VPNs) provide a much-needed secure method of transferring critical information. As Cisco Systems integrates security and access features into routers, firewalls, clients, and concentrators, its solutions become ever more accessible to companies with networks of all sizes. The Complete Cisco VPN Configuration Guide contains detailed explanations of all Cisco VPN products, describing how to set up IPsec and Secure Sockets Layer (SSL) connections on any type of Cisco device, including concentrators, clients, routers, or Cisco PIX and Cisco ASA security appliances. With copious configuration examples and troubleshooting scenarios, it offers clear information on VPN implementation designs. - A complete resource for understanding VPN components and VPN design issues - Learn how to employ state-of-the-art VPN connection types and implement complex VPN configurations on Cisco devices, including routers, Cisco PIX and Cisco ASA security appliances, concentrators, and remote access clients - Discover troubleshooting tips and techniques from real-world scenarios based on the author's vast field experience - Filled with relevant configurations you can use immediately in your own network

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

A firewall is as good as its policies and the security of its VPN connections. The latest generation of firewalls offers a dizzying array of powerful options; they key to success is to write concise policies that provide the appropriate level of access while maximizing security. This book covers the leading firewall products: Cisco PIX, Check Point NGX, Microsoft ISA Server, Juniper's NetScreen Firewall, and SonicWall. It describes in plain English what features can be controlled by a policy, and walks the reader through the steps for writing the policy to fit the objective. Because of their vulnerability and their complexity, VPN policies are covered in more depth with numerous tips for troubleshooting remote connections. · The only book that focuses on creating policies that apply to multiple products. · Included is a bonus chapter on using Ethereal, the most popular protocol analyzer, to monitor and analyze network traffic. · Shows what features can be controlled by a policy, and walks you through the steps for writing the policy to fit the objective at hand

Trust the best selling Official Cert Guide series from Cisco Press to help you learn, prepare, and practice for exam success. They are built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. CCNP Security VPN 642-647 Official Cert Guide presents you with an organized test preparation routine through the use of proven series elements and techniques. "Do I Know This Already?" quizzes open each chapter and enable you to decide how much time you need to spend on each section. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Master Cisco CCNP Security VPN 642-647 EAM topics Assess your knowledge with chapter-opening quizzes Review key concepts with exam preparation tasks Practice with realistic exam questions on the CD-ROM CCNP Security VPN 642-647 Official Cert Guide, focuses specifically on the objectives for the CCNP Security VPN exam. Cisco Certified Internetwork Expert (CCIE) Howard Hooper share 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. The companion CD-ROM contains a powerful Pearson IT Certification Practice Test engine that enables you to focus on individual topic areas or take a complete, timed exam. The assessment engine also tracks your performance and provides feedback on a module-by-module basis, laying out a complete assessment of your knowledge to help you focus your study where it is needed most. Well-regarded for its level of detail, assessment features, comprehensive design scenarios, and challenging review questions and exercises, this official study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time. The official study guide helps you master all the topics on the CCNP Security VPN exam, including: Configuring policies, inheritance, and attributes AnyConnect Remote Access VPN solution AAA and Dynamic Access Policies (DAP) High availability and performance Clientless VPN solutions SSL VPN with Cisco Secure Desktop Easy VPN solutions IPsec VPN clients and site-to-site VPNs CCNP Security VPN 642-647 Official Cert Guide 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 offered by authorized Cisco Learning Partners worldwide, please visit www.cisco.com/go/authorizedtraining. The print edition of the CCNP Security VPN 642-647 Official Cert Guide contains a free, complete practice exam. Also available from Cisco Press for Cisco CCNP Security study is the CCNP Security VPN 642-647 Official Cert Guide Premium Edition eBook and Practice Test. This digital-only certification preparation product combines an eBook with enhanced Pearson IT Certification Practice Test. This integrated learning package: Allows you to focus on individual topic areas or take complete, timed exams Includes direct links from each question to detailed tutorials to help you understand the concepts behind the questions Provides unique sets of exam-realistic practice questions Tracks your performance and provides feedback on a module-by-module basis, laying out a complete assessment of your knowledge to help you focus your study where it is needed most

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

Connecting Networks v6 Companion Guide is the official supplemental textbook for the Connecting Networks version 6 course in the Cisco Networking Academy CCNA Routing and Switching curriculum. The Companion Guide is designed as a portable desk reference to use anytime, anywhere to reinforce the material from the 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 347 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. Packet Tracer Activities—Explore and visualize networking concepts using Packet Tracer exercises interspersed throughout the chapters and provided in the accompanying Labs & Study Guide book. Videos—Watch the videos embedded within the online course. Hands-on Labs—Work through all the course labs and additional Class Activities that are included in the course and published in the separate Labs & Study Guide.

Learn how to secure your network with the official MCNS Coursebook

Become an expert in Cisco VPN technologies with this practical and comprehensive configuration guide. Learn how to configure IPSEC VPNs (site-to-site, hub-and-spoke, remote access), SSL VPN, DMVPN, GRE, VTI etc. This book is packed with step-by-step configuration tutorials and real world scenarios to implement VPNs on Cisco ASA Firewalls (v8.4 and above and v9.x) and on Cisco Routers. It is filled with raw practical concepts, around 40 network diagrams to explain the scenarios, troubleshooting instructions, 20 complete configurations on actual devices and much more. Both beginners and experts will find some golden nuggets inside this practical guide. Every Cisco Networking Professional in this planet will have to configure some kind of VPN sooner or later in his/her professional career. This VPN Guide, therefore, will be a great reference for years to come. Some of the topics covered include the following: Policy-Based (IPSEC) and Route-Based VPNs (Comparison and Applications). Practical Applications of each VPN Technology. Configuration of Site-to-Site, Hub-and-Spoke and Remote Access IPSEC VPNs on Cisco Routers. Configuration of Route-Based VPNs using GRE, Static VTI, Dynamic VTI. Configuration of Dynamic Multipoint VPN (DMVPN) on Cisco Routers. Configuration of PPTP VPNs on Cisco Routers. Configuration of Site-to-Site and Hub-and-Spoke IPSEC VPNs (including IKEv2 IPSEC) on Cisco ASA Firewalls. Configuration of Remote Access IPSEC VPN and Anyconnect SSL VPN on Cisco ASA Firewalls. VPN Authentication using Active Directory, RSA Server and external AAA Server. PLUS MUCH MORE In addition to the most popular VPN topologies and scenarios, the book contains also some special cases for which you will not find information easily anywhere else. Some special cases and scenarios included in the book: VPNs with sites having dynamic public IP address. Implementations of hub-and-spoke together with remote access VPNs on the same device. Using Dynamic Routing Protocols (EIGRP) to make VPNs on Routers more scalable. Spoke to Spoke communication via the Hub Site (using VPN Hairpinning on ASA). Remote Access users to communicate with Spoke sites via the Hub (using VPN Hairpinning on ASA). Site-to-Site IPSEC VPN with duplicate subnets on the two sites. IPSEC VPN Failover with backup ISP.

A detailed guide for deploying PPTP, L2TPv2, L2TPv3, MPLS Layer-3, AToM, VPLS and IPsec virtual private networks.

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