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Cisco IOS Switch Security Configuration Guide

Switch Security Guidance Activity of the Systems and Network Attack Center (SNAC)

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Cisco Ios Switch Security Configuration Guide Nsa

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Network Administrators Survival Guide Anand Deveriya, 2006 The all in one practical guide to supporting Cisco **Network Security First-step** Thomas Thomas, Thomas, M. Thomas, Donald Stoddard, 2012 networks using freeware tools Learn about network security including the threats and the ways a network is protected from them The book also covers firewalls viruses and virtual private networks Network Security Architectures Sean Convery, 2004 Using case studies complete with migration plans that show how to modify examples into your unique network this work takes the mystery out of network security by using proven examples of sound security best practices IPv6 Security Scott Hogg, Eric Vyncke, 2008-12-11 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 quest 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 Cisco Router and Switch Forensics Dale Liu, 2009-06-03 Cisco IOS the software that runs the vast majority of Cisco routers and all Cisco network switches is the dominant routing platform on the Internet and corporate networks This widespread distribution as well as its architectural deficiencies makes it a valuable target for hackers looking to attack a corporate or private network infrastructure Compromised devices can disrupt stability introduce malicious modification and endanger all communication on the network For security of the network and investigation of attacks in depth analysis and diagnostics are critical but no book currently covers forensic analysis of Cisco network devices in any detail Cisco Router and Switch Forensics is the first book devoted to criminal attacks incident response data collection and legal testimony on the market leader in network devices including routers switches and wireless access points Why is this focus on network devices necessary Because criminals are targeting networks and network devices require a fundamentally different approach than the process taken with traditional forensics By hacking a router an attacker can bypass a network s firewalls issue a denial of service DoS attack to disable the network monitor and record all outgoing and incoming traffic or redirect that communication anywhere they like But capturing this criminal activity cannot be accomplished with the tools and techniques of traditional forensics While forensic analysis of computers or other traditional media typically involves immediate shut down of the target machine creation of a duplicate and analysis of static data this process rarely recovers live system data So when an investigation focuses on live network activity this traditional approach obviously fails Investigators must recover data as it is transferred via the router or switch because it is destroyed when the network device is powered down In this case following the traditional approach outlined in books on general computer forensics techniques is not only insufficient but also essentially harmful to an investigation Jargon buster A network switch is a small hardware device that joins multiple computers together within one local area network LAN A router is a more sophisticated network device that joins multiple wired or wireless networks together The only book devoted to forensic analysis of routers and switches focusing on the operating system that runs the vast majority of network devices in the enterprise and on the Internet Outlines the fundamental differences between router forensics and traditional forensics a critical distinction for responders in an investigation targeting network activity Details where network forensics fits within the entire process of an investigation end to end from incident response and data collection to preparing a report and legal testimony

Implementing Cisco IOS Network Security (IINS) Catherine Paquet, 2009-04-14 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 authorized training 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

Router Security Configuration Guide Supplement - Security for Ipv6 Routers Ziring,2015-02-14 This document is only a guide to recommended security settings for Internet Protocol version 6 IPv6 routers particularly routers running Cisco Systems Internet Operating System IOS versions 12 3 through 12 4 and 12 4T It does not provide comprehensive guidance the directions in this document should be used in conjunction with the NSA Router Security Configuration Guide 1 1c or later The advice in this document cannot replace well designed policy or sound judgment This supplement does not address site specific configuration issues Care must be taken when implementing the security steps specified in this document Ensure that all security steps and procedures chosen from this guide are thoroughly tested and reviewed prior to imposing them on an operational network

Implementing Cisco IOS Network Security (Iins) Catherine Paquet,2009-04-01 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

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Networks Study Guide Todd Lammle, Carl Timm, 2006-02-20 Here's the book you need to prepare for Exam 642 501 Securing Cisco IOS Networks SECUR This Study Guide provides In depth coverage of every SECUR exam objective Practical information on Cisco security solutions Hundreds of challenging practice questions in the book and on the CD Leading edge exam preparation software including a testing engine and electronic flashcards Authoritative coverage of all exam objectives including Basic Cisco Router Security Advanced AAA Security for Cisco Router Networks Cisco Router Threat Mitigation Cisco IOS Firewall CBAC Configuration Cisco IOS Firewall Authentication Proxy Configuration Cisco IOS Firewall IDS Configuration Building Basic IPSec Using Cisco Routers Building Advanced IPSec VPNs Using Cisco Routers and Certificate Authorities Configuring Cisco Remote Access IPSec VPNs Managing Enterprise VPN Routers Note CD ROM DVD and other supplementary materials are not included as part of eBook file Hacking Exposed Cisco Networks Andrew Vladimirov, Konstantin Gavrilenko, Andrei Mikhailovsky, 2006-01-06 Here is the first book to focus solely on Cisco network hacking security auditing and defense issues Using the proven Hacking Exposed methodology this book shows you how to locate and patch system vulnerabilities by looking at your Cisco network through the eyes of a hacker The book covers device specific and network centered attacks and defenses and offers real world case studies Implemnt Cisco Ios Safar Catherine Paquet, 2009 LAN Switch Security Eric Vyncke, Christopher Paggen, 2007-09-06 Contrary to popular belief Ethernet switches are not inherently secure Security vulnerabilities in Ethernet switches are multiple from the switch implementation to control plane protocols Spanning Tree Protocol STP Cisco Discovery Protocol CDP and so on and data plane protocols such as Address Routing Protocol ARP or Dynamic Host Configuration Protocol DHCP LAN Switch Security explains all the vulnerabilities in a network infrastructure related to Ethernet switches Further this book shows you how to configure a switch to prevent or to mitigate attacks based on those vulnerabilities. This book also includes a section on how to use an Ethernet switch to increase the security of a network and prevent future attacks Divided into four parts LAN Switch Security provides you with steps you can take to ensure the integrity of both voice and data traffic traveling over Layer 2 devices Part I covers vulnerabilities in Layer 2 protocols and how to configure switches to prevent attacks against those vulnerabilities Part II addresses denial of service DoS attacks on an Ethernet switch and shows how those attacks can be mitigated Part III shows how a switch can actually augment the security of a network through the utilization of wirespeed access control list ACL processing and IEEE 802 1x for user authentication and authorization Part IV examines future developments from the LinkSec working group at the IEEE For all parts most of the content is vendor independent and is useful for all network architects deploying Ethernet switches After reading this book you will have an in depth understanding of LAN security and be prepared to plug the security holes that exist in a great number of campus networks Use port security to protect against CAM attacks Prevent spanning tree attacks Isolate VLANs with proper configuration techniques Protect against rogue DHCP servers Block ARP snooping Prevent IPv6 neighbor discovery and router solicitation exploitation Identify Power over Ethernet vulnerabilities Mitigate risks from HSRP and VRPP Stop information leaks with CDP PaGP VTP CGMP and other Cisco ancillary protocols Understand and prevent DoS attacks against switches Enforce simple wirespeed security policies with ACLs Implement user authentication on a port base with IEEE 802 1x Use new IEEE protocols to encrypt all Ethernet frames at wirespeed 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 Router Security Configuration Guide, 2001 This document is only a guide to recommended security settings for Internet Protocol IP routers particularly routers running Cisco Systems Internet Operating System IOS versions 11 and 12 It is not meant to replace well designed policy or sound judgement This guide does not address site specific configuration issues Care must be taken when implementing the security steps specified in this guide Ensure that all security steps and procedures chosen from this guide are thoroughly tested and reviewed prior to imposing them on an operational network **Implementing Cisco IP Switched Networks (SWITCH) Foundation** Learning Guide Richard Froom, Balaji Sivasubramanian, Erum Frahim, 2010-06-21 Implementing Cisco IP Switched Networks SWITCH Foundation Learning Guide Foundation learning for SWITCH 642 813 Richard Froom CCIE No 5102 Balaji Sivasubramanian Erum Frahim CCIE No 7549 Implementing Cisco IP Switched Networks SWITCH Foundation Learning Guide is a Cisco authorized learning tool for CCNP and CCDP preparation As part of the Cisco Press foundation learning series this book covers how to plan configure and verify the implementation of complex enterprise switching solutions using the Cisco Campus Enterprise Architecture The Foundation Learning Guide also covers secure integration of VLANs WLANs voice and video into campus networks Each chapter opens with the list of topics covered to clearly identify the focus of that chapter At the end of each chapter a summary and review questions provide you with an opportunity to assess and reinforce your understanding of the material Throughout the book detailed explanations with commands configurations and diagrams serve to illuminate theoretical concepts Implementing Cisco IP Switched Networks SWITCH Foundation Learning Guide is ideal for certification candidates who are seeking a tool to learn all the topics covered in the SWITCH 642 813 exam Serves as the official book for the Cisco Networking Academy CCNP SWITCH course Provides a thorough presentation of the fundamentals of multilayer switched network design Explains the implementation of the design features such as VLAN Spanning Tree and inter VLAN routing in the multilayer switched environment Explains how to implement high availability technologies and techniques Covers security features in a switched network Presents self assessment review questions chapter topics summaries command syntax explanations network diagrams and configuration examples to facilitate effective studying This book is in the Foundation Learning Guide Series These guides are developed together with Cisco as the only authorized self paced learning tools that help networking professionals build their understanding of networking concepts and prepare for Cisco certification exams **Network Security 1 and 2**

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