

Guide To Network Defense And Countermeasures

Client-side Attacks and Defense Proactive and Dynamic Network Defense Penetration Testing and Network Defense Network Defense and Countermeasures Ten Strategies of a World-Class Cybersecurity Operations Center Practical Packet Analysis Inside Radio: An Attack and Defense Guide Guide to Network Defense and Countermeasures Guide to Tactical Perimeter Defense CompTIA Security+ Guide to Network Security Fundamentals Active Defense The Network Security Test Lab TCP/IP Network Administration Computer Security Fundamentals Situational Awareness in Computer Network Defense: Principles, Methods and Applications Guide to Network Security End-to-End Network Security Network Security Guide to Firewalls and VPNs Cybersecurity ??? Attack and Defense Strategies Cisco Firepower Threat Defense (FTD) Guide to Network Defense and Countermeasures Introduction to Networks Companion Guide Network Defense: Perimeter Defense Mechanisms Fundamentals of Information Systems Security A Practical Introduction to Enterprise Network and Security Management Cybersecurity: The Beginner's Guide Network Administrators Survival Guide The Practice of Network Security Monitoring Guide to Computer Network Security Cyber Reconnaissance, Surveillance and Defense Guide to Network Defense and Countermeasures Network Defense and Countermeasures Hands-On Ethical Hacking and Network Defense Network Attacks and Exploitation Introduction to Network Security AVIEN Malware Defense Guide for the Enterprise Security Sage's Guide to Hardening the Network Infrastructure Windows Networking Tools Moving Target Defense

Client-side Attacks and Defense

The classic guide to network security—now fully updated!"Bob and Alice are back!" Widely regarded as the most comprehensive yet comprehensible guide to network security, the first edition of Network Security received critical acclaim for its lucid and witty explanations of the inner workings of network security protocols. In the second edition, this most distinguished of author teams draws on hard-won experience to explain the latest developments in this field that has become so critical to our global network-dependent society. Network Security, Second Edition brings together clear, insightful, and clever explanations of every key facet of information security, from the basics to advanced cryptography and authentication, secure Web and email services, and emerging security standards. Coverage includes: All-new discussions of the Advanced Encryption Standard (AES), IPsec, SSL, and Web security Cryptography: In-depth, exceptionally clear introductions to secret and public keys, hashes, message digests, and other crucial concepts Authentication: Proving identity across networks, common attacks against authentication systems, authenticating people, and avoiding the pitfalls of authentication handshakes Core Internet security standards: Kerberos 4/5, IPsec, SSL, PKIX, and X.509 Email security: Key elements of a secure email system—plus detailed coverage of PEM, S/MIME, and PGP Web security: Security issues associated with URLs, HTTP, HTML, and cookies Security implementations in diverse platforms, including Windows, NetWare, and Lotus Notes The authors go far beyond documenting standards and technology: They contrast competing schemes, explain strengths and weaknesses, and identify the crucial errors most

likely to compromise secure systems. Network Security will appeal to a wide range of professionals, from those who design or evaluate security systems to system administrators and programmers who want a better understanding of this important field. It can also be used as a textbook at the graduate or advanced undergraduate level.

Proactive and Dynamic Network Defense

End-to-End Network Security Defense-in-Depth Best practices for assessing and improving network defenses and responding to security incidents Omar Santos Information security practices have evolved from Internet perimeter protection to an in-depth defense model in which multiple countermeasures are layered throughout the infrastructure to address vulnerabilities and attacks. This is necessary due to increased attack frequency, diverse attack sophistication, and the rapid nature of attack velocity—all blurring the boundaries between the network and perimeter. End-to-End Network Security is designed to counter the new generation of complex threats. Adopting this robust security strategy defends against highly sophisticated attacks that can occur at multiple locations in your network. The ultimate goal is to deploy a set of security capabilities that together create an intelligent, self-defending network that identifies attacks as they occur, generates alerts as appropriate, and then automatically responds. End-to-End Network Security provides you with a comprehensive look at the mechanisms to counter threats to each part of your network. The book starts with a review of network security technologies then covers the six-step methodology for incident response and best practices from proactive security frameworks. Later chapters cover wireless network security, IP telephony security, data center security, and IPv6 security. Finally, several case studies representing small, medium, and large enterprises provide detailed example configurations and implementation strategies of best practices learned in earlier chapters. Adopting the techniques and strategies outlined in this book enables you to prevent day-zero attacks, improve your overall security posture, build strong policies, and deploy intelligent, self-defending networks. “Within these pages, you will find many practical tools, both process related and technology related, that you can draw on to improve your risk mitigation strategies.” —Bruce Murphy, Vice President, World Wide Security Practices, Cisco Omar Santos is a senior network security engineer at Cisco®. Omar has designed, implemented, and supported numerous secure networks for Fortune 500 companies and the U.S. government. Prior to his current role, he was a technical leader within the World Wide Security Practice and the Cisco Technical Assistance Center (TAC), where he taught, led, and mentored many engineers within both organizations. Guard your network with firewalls, VPNs, and intrusion prevention systems Control network access with AAA Enforce security policies with Cisco Network Admission Control (NAC) Learn how to perform risk and threat analysis Harden your network infrastructure, security policies, and procedures against security threats Identify and classify security threats Trace back attacks to their source Learn how to best react to security incidents Maintain visibility and control over your network with the SAVE framework Apply Defense-in-Depth principles to wireless networks, IP telephony networks, data centers, and IPv6 networks 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: Network security and incident response

Penetration Testing and Network Defense

This book discusses the security issues in a wide range of wireless devices and systems, such as RFID, Bluetooth, ZigBee, GSM, LTE, and GPS. It collects the findings of recent research by the UnicornTeam at 360 Technology, and reviews the state-of-the-art literature on wireless security. The book also offers detailed case studies and theoretical treatments - specifically it lists numerous laboratory procedures, results, plots, commands and screenshots from real-world experiments. It is a valuable reference guide for practitioners and researchers who want to learn more about the advanced research findings and use the off-the-shelf tools to explore the wireless world.

Network Defense and Countermeasures

Introductory textbook in the important area of network security for undergraduate and graduate students. Comprehensively covers fundamental concepts with newer topics such as electronic cash, bit-coin, P2P, SHA-3, E-voting, and Zigbee security. Fully updated to reflect new developments in network security. Introduces a chapter on Cloud security, a very popular and essential topic. Uses everyday examples that most computer users experience to illustrate important principles and mechanisms. Features a companion website with Powerpoint slides for lectures and solution manuals to selected exercise problems, available at <http://www.cs.uml.edu/~wang/NetSec>

Ten Strategies of a World-Class Cybersecurity Operations Center

Computer networking and cybersecurity are challenging subjects, partly because of the constant rise and fall of related technologies and IT paradigms. As the title implies, much focus of this book is on providing the audience with practical, as well as, theoretical knowledge necessary to build a solid ground for a successful professional career. A Practical Introduction to Enterprise Network and Security Management contains 12 chapters of the correct amount of coverage for a semester or quarter. It balances introductory and fairly advanced subjects on computer networking and cybersecurity to deliver effectively technical and managerial knowledge. It explains sometimes challenging concepts in a manner that students can follow with careful reading. A Practical Introduction to Enterprise Network and Security Management is designed to offer impactful, hands-on learning experiences without relying on a computer lab. First, each chapter comes with practical exercise questions. In the class setting, they are good as individual or group assignments. Many of them are based on simulated or real cases, and take advantage of actual industry products and systems for a reader to better relate theories to practice. Second, there are a number of information-rich screen shots, figures, and tables in each chapter carefully constructed to solidify concepts and thus enhance visual learning. A Practical Introduction to Enterprise Network and Security Management Is written for students studying management

information systems, accounting information systems, or computer science in a semester of 15 to 16 weeks, and exposed to the subject for the first time Takes advantage of many real cases and examples, and actual industry products and services (software, hardware, and configurations) so that students can better relate concepts and theories to practice Explains subjects in a systematic, but very practical manner that students can follow through Provides students with practical understanding of both computer networking and cybersecurity Contains highly practical exercise questions, which can be individual or group assignments within or without the class, included in each chapter to reinforce learning. In addition to the thorough technical details, managerial issues including, enterprise network planning, design, and management from the practitioner's perspective are embedded throughout the text to assist balanced learning. Bearing in mind of the critical importance of security in today's enterprise networks, the text discusses the implications of network design and management on enterprise security whenever appropriate. Lastly, to reinforce knowledge in security management further, two chapters introduce the fundamentals of cybersecurity in terms of threat types and defense techniques.

Practical Packet Analysis

Members of AVIEN (the Anti-Virus Information Exchange Network) have been setting agendas in malware management for several years: they led the way on generic filtering at the gateway, and in the sharing of information about new threats at a speed that even anti-virus companies were hard-pressed to match. AVIEN members represent the best-protected large organizations in the world, and millions of users. When they talk, security vendors listen: so should you. AVIEN's sister organization AVIEWS is an invaluable meeting ground between the security vendors and researchers who know most about malicious code and anti-malware technology, and the top security administrators of AVIEN who use those technologies in real life. This new book uniquely combines the knowledge of these two groups of experts. Anyone who is responsible for the security of business information systems should be aware of this major addition to security literature. * "Customer Power" takes up the theme of the sometimes stormy relationship between the antivirus industry and its customers, and tries to dispel some common myths. It then considers the roles of the independent researcher, the vendor-employed specialist, and the corporate security specialist. * "Stalkers on Your Desktop" considers the thorny issue of malware nomenclature and then takes a brief historical look at how we got here, before expanding on some of the malware-related problems we face today. * "A Tangled Web" discusses threats and countermeasures in the context of the World Wide Web. * "Big Bad Bots" tackles bots and botnets, arguably Public Cyber-Enemy Number One. * "Crème de la CyberCrime" takes readers into the underworld of old-school virus writing, criminal business models, and predicting future malware hotspots. * "Defense in Depth" takes a broad look at DiD in the enterprise, and looks at some specific tools and technologies. * "Perilous Outsorcery" offers sound advice on how to avoid the perils and pitfalls of outsourcing, incorporating a few horrible examples of how not to do it. * "Education in Education" offers some insights into user education from an educationalist's perspective, and looks at various aspects of security in schools and other educational establishments. * "DIY Malware Analysis" is a hands-on, hands-dirty approach to security management, considering malware analysis and

forensics techniques and tools. * "Antivirus Evaluation & Testing" continues the D-I-Y theme, discussing at length some of the thorny issues around the evaluation and testing of antimalware software. * "AVIEN & AVIEWS: the Future" looks at future developments in AVIEN and AVIEWS. * Unique, knowledgeable, unbiased and hype-free commentary. * Written by members of the anti-malware community; most malware books are written by outsiders. * Combines the expertise of truly knowledgeable systems administrators and managers, with that of the researchers who are most experienced in the analysis of malicious code, and the development and maintenance of defensive programs.

Inside Radio: An Attack and Defense Guide

Individuals wishing to attack a company's network have found a new path of least resistance—the end user. A client-side attack is one that uses the inexperience of the end user to create a foothold in the user's machine and therefore the network. Client-side attacks are everywhere and hidden in plain sight. Common hiding places are malicious Web sites and spam. A simple click of a link will allow the attacker to enter. This book presents a framework for defending your network against these attacks in an environment where it might seem impossible. The most current attacks are discussed along with their delivery methods, such as browser exploitation, use of rich Internet applications, and file format vulnerabilities. The severity of these attacks is examined along with defences against them, including antivirus and anti-spyware, intrusion detection systems, and end-user education. Design and implement your own attack, and test methodologies derived from the approach and framework presented by the authors Learn how to strengthen your network's host- and network-based defense against attackers' number one remote exploit—the client-side attack Defend your network against attacks that target your company's most vulnerable asset—the end user

Guide to Network Defense and Countermeasures

At a time when online surveillance and cybercrime techniques are widespread, and are being used by governments, corporations, and individuals, Cyber Reconnaissance, Surveillance and Defense gives you a practical resource that explains how these activities are being carried out and shows how to defend against them. Expert author Rob Shimonski shows you how to carry out advanced IT surveillance and reconnaissance, describes when and how these techniques are used, and provides a full legal background for each threat. To help you understand how to defend against these attacks, this book describes many new and leading-edge surveillance, information-gathering, and personal exploitation threats taking place today, including Web cam breaches, home privacy systems, physical and logical tracking, phone tracking, picture metadata, physical device tracking and geo-location, social media security, identity theft, social engineering, sniffing, and more. Understand how IT surveillance and reconnaissance techniques are being used to track and monitor activities of individuals and organizations Find out about the legal basis of these attacks and threats — what is legal and what is not — and how to defend against any type of surveillance Learn how to thwart monitoring and surveillance threats with practical tools and techniques Real-world examples teach using key concepts from cases in the news around the world

Guide to Tactical Perimeter Defense

The practical guide to simulating, detecting, and responding to network attacks
Create step-by-step testing plans Learn to perform social engineering and host reconnaissance Evaluate session hijacking methods Exploit web server vulnerabilities Detect attempts to breach database security Use password crackers to obtain access information Circumvent Intrusion Prevention Systems (IPS) and firewall protections and disrupt the service of routers and switches Scan and penetrate wireless networks Understand the inner workings of Trojan Horses, viruses, and other backdoor applications Test UNIX, Microsoft, and Novell servers for vulnerabilities Learn the root cause of buffer overflows and how to prevent them Perform and prevent Denial of Service attacks Penetration testing is a growing field but there has yet to be a definitive resource that instructs ethical hackers on how to perform a penetration test with the ethics and responsibilities of testing in mind. Penetration Testing and Network Defense offers detailed steps on how to emulate an outside attacker in order to assess the security of a network. Unlike other books on hacking, this book is specifically geared towards penetration testing. It includes important information about liability issues and ethics as well as procedures and documentation. Using popular open-source and commercial applications, the book shows you how to perform a penetration test on an organization's network, from creating a test plan to performing social engineering and host reconnaissance to performing simulated attacks on both wired and wireless networks. Penetration Testing and Network Defense also goes a step further than other books on hacking, as it demonstrates how to detect an attack on a live network. By detailing the method of an attack and how to spot an attack on your network, this book better prepares you to guard against hackers. You will learn how to configure, record, and thwart these attacks and how to harden a system to protect it against future internal and external attacks. Full of real-world examples and step-by-step procedures, this book is both an enjoyable read and full of practical advice that will help you assess network security and develop a plan for locking down sensitive data and company resources. "This book goes to great lengths to explain the various testing approaches that are used today and gives excellent insight into how a responsible penetration testing specialist executes his trade." -Bruce Murphy, Vice President, World Wide Security Services, Cisco Systems

CompTIA Security+ Guide to Network Security Fundamentals

Incorporate offense and defense for a more effective network security strategy
Network Attacks and Exploitation provides a clear, comprehensive roadmap for developing a complete offensive and defensive strategy to engage in or thwart hacking and computer espionage. Written by an expert in both government and corporate vulnerability and security operations, this guide helps you understand the principles of the space and look beyond the individual technologies of the moment to develop durable comprehensive solutions. Numerous real-world examples illustrate the offensive and defensive concepts at work, including Conficker, Stuxnet, the Target compromise, and more. You will find clear guidance toward strategy, tools, and implementation, with practical advice on blocking systematic computer espionage and the theft of information from governments, companies, and individuals. Assaults and manipulation of computer networks are rampant around

the world. One of the biggest challenges is fitting the ever-increasing amount of information into a whole plan or framework to develop the right strategies to thwart these attacks. This book clears the confusion by outlining the approaches that work, the tools that work, and resources needed to apply them. Understand the fundamental concepts of computer network exploitation. Learn the nature and tools of systematic attacks. Examine offensive strategy and how attackers will seek to maintain their advantage. Understand defensive strategy, and how current approaches fail to change the strategic balance. Governments, criminals, companies, and individuals are all operating in a world without boundaries, where the laws, customs, and norms previously established over centuries are only beginning to take shape. Meanwhile computer espionage continues to grow in both frequency and impact. This book will help you mount a robust offense or a strategically sound defense against attacks and exploitation. For a clear roadmap to better network security, *Network Attacks and Exploitation* is your complete and practical guide.

Active Defense

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

The Network Security Test Lab

Hands-On Ethical Hacking and Network Defense, Second Edition provides an in-depth understanding of how to effectively protect computer networks. This book describes the tools and penetration testing methodologies used by ethical hackers and provides a thorough discussion of what and who an ethical hacker is and how important they are in protecting corporate and government data from cyber attacks. Readers are provided with updated computer security resources that describe new vulnerabilities and innovative methods to protect networks. Also included is a thorough update of federal and state computer crime laws, as well as changes in penalties for illegal computer hacking. With cyber-terrorism and corporate espionage threatening the fiber of our world, the need for trained network security professionals continues to grow. Hands-On Ethical Hacking and Network Defense, Second Edition provides a structured knowledge base to prepare readers to be security professionals who understand how to protect a network by using the skills and tools of an ethical hacker. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

TCP/IP Network Administration

GUIDE TO NETWORK DEFENSE AND COUNTERMEASURES provides a thorough guide to perimeter defense fundamentals, including intrusion detection and firewalls. This trusted text also covers more advanced topics such as security policies, network address translation (NAT), packet filtering and analysis, proxy servers, virtual private networks (VPN), and network traffic signatures. Thoroughly updated, the new third edition reflects the latest technology, trends, and techniques including virtualization, VMware, IPv6, and ICMPv6 structure, making it easier for current and aspiring professionals to stay on the cutting edge and one step ahead of potential security threats. A clear writing style and numerous screenshots and illustrations make even complex technical material easier to understand, while tips, activities, and projects throughout the text allow you to hone your skills by applying what you learn. Perfect for students and professionals alike in this high-demand, fast-growing field, GUIDE TO NETWORK DEFENSE AND COUNTERMEASURES, Third Edition, is a must-have resource for success as a network security professional. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Computer Security Fundamentals

Provides information on ways to use Wireshark to capture and analyze packets, covering such topics as building customized capture and display filters, graphing traffic patterns, and building statistics and reports.

Situational Awareness in Computer Network Defense: Principles, Methods and Applications

This best-selling guide provides a complete, practical, up-to-date introduction to network and computer security. SECURITY+ GUIDE TO NETWORK SECURITY FUNDAMENTALS, Fifth Edition, maps to the new CompTIA Security+ SY0-401 Certification Exam, providing thorough coverage of all domain objectives to help readers prepare for professional certification and career success. The text covers the essentials of network security, including compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography. The extensively updated Fifth Edition features a new structure based on major domains, a new chapter dedicated to mobile device security, expanded coverage of attacks and defenses, and new and updated information reflecting recent developments and emerging trends in information security, such as virtualization. New hands-on and case activities help readers review and apply what they have learned, and end-of-chapter exercises direct readers to the Information Security Community Site for additional activities and a wealth of learning resources, including blogs, videos, and current news and information relevant to the information security field. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Guide to Network Security

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

End-to-End Network Security

Guide to Tactical Perimeter Defense examines the critical defensive technologies needed to secure network perimeters. Written to map to the Security Certified Network Specialist certification (SCO-451), this book includes coverage of network security threats and goals, advanced TCP/IP concepts, router security, intrusion detection, firewall design and configuration, IPSec and virtual private network (VPN) design, and wireless network design and security.

Network Security

The ultimate hands-on guide to IT security and proactive defense The Network Security Test Lab is a hands-on, step-by-step guide to ultimate IT security implementation. Covering the full complement of malware, viruses, and other

attack technologies, this essential guide walks you through the security assessment and penetration testing process, and provides the set-up guidance you need to build your own security-testing lab. You'll look inside the actual attacks to decode their methods, and learn how to run attacks in an isolated sandbox to better understand how attacker target systems, and how to build the defenses that stop them. You'll be introduced to tools like Wireshark, Networkminer, Nmap, Metasploit, and more as you discover techniques for defending against network attacks, social networking bugs, malware, and the most prevalent malicious traffic. You also get access to open source tools, demo software, and a bootable version of Linux to facilitate hands-on learning and help you implement your new skills. Security technology continues to evolve, and yet not a week goes by without news of a new security breach or a new exploit being released. The Network Security Test Lab is the ultimate guide when you are on the front lines of defense, providing the most up-to-date methods of thwarting would-be attackers. Get acquainted with your hardware, gear, and test platform Learn how attackers penetrate existing security systems Detect malicious activity and build effective defenses Investigate and analyze attacks to inform defense strategy The Network Security Test Lab is your complete, essential guide.

Guide to Firewalls and VPNs

This timely textbook presents a comprehensive guide to the core topics in cybersecurity, covering issues of security that extend beyond traditional computer networks to the ubiquitous mobile communications and online social networks that have become part of our daily lives. In the context of our growing dependence on an ever-changing digital ecosystem, this book stresses the importance of security awareness, whether in our homes, our businesses, or our public spaces. This fully updated new edition features new material on the security issues raised by blockchain technology, and its use in logistics, digital ledgers, payments systems, and digital contracts. Topics and features: Explores the full range of security risks and vulnerabilities in all connected digital systems Inspires debate over future developments and improvements necessary to enhance the security of personal, public, and private enterprise systems Raises thought-provoking questions regarding legislative, legal, social, technical, and ethical challenges, such as the tension between privacy and security Describes the fundamentals of traditional computer network security, and common threats to security Reviews the current landscape of tools, algorithms, and professional best practices in use to maintain security of digital systems Discusses the security issues introduced by the latest generation of network technologies, including mobile systems, cloud computing, and blockchain Presents exercises of varying levels of difficulty at the end of each chapter, and concludes with a diverse selection of practical projects Offers supplementary material for students and instructors at an associated website, including slides, additional projects, and syllabus suggestions This important textbook/reference is an invaluable resource for students of computer science, engineering, and information management, as well as for practitioners working in data- and information-intensive industries.

Cybersecurity ??? Attack and Defense Strategies

Firewalls are among the best-known network security tools in use today, and their

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

Cisco Firepower Threat Defense (FTD)

This is the only computer book to focus completely on infrastructure security: network devices, protocols and architectures. It offers unique coverage of network design so administrators understand how they should design and protect their enterprises. Network security publishing has boomed in the last several years with a proliferation of materials that focus on various elements of the enterprise. * This is the only computer book to focus completely on infrastructure security: network devices, protocols and architectures * It offers unique coverage of network design so administrators understand how they should design and protect their enterprises * Helps provide real practical solutions and not just background theory

Guide to Network Defense and Countermeasures

Network Defense and Countermeasures: Principles and Practices Everything you need to know about modern network attacks and defense, in one book Clearly explains core network security concepts, challenges, technologies, and skills Thoroughly updated for the latest attacks and countermeasures The perfect beginner's guide for anyone interested in a network security career Security is the IT industry's hottest topic-and that's where the hottest opportunities are, too. Organizations desperately need professionals who can help them safeguard against the most sophisticated attacks ever created-attacks from well-funded global criminal syndicates, and even governments. Today, security begins with defending the organizational network. Network Defense and Countermeasures, Second Edition is today's most complete, easy-to-understand introduction to modern network attacks and their effective defense. From malware and DDoS attacks to firewalls and encryption, Chuck Easttom blends theoretical foundations with up-to-the-minute best-practice techniques. Starting with the absolute basics, he discusses crucial topics many security books overlook, including the emergence of network-based espionage and terrorism. If you have a basic understanding of networks, that's all the background you'll need to succeed with this book: no math or advanced computer science is required. You'll find projects, questions,

exercises, case studies, links to expert resources, and a complete glossary—all designed to deepen your understanding and prepare you to defend real-world networks. Chuck Easttom has worked in all aspects of IT, including network administration, software engineering, and IT management. For several years, he has taught IT topics in college and corporate environments, worked as an independent IT consultant, and served as an expert witness in court cases involving computers. He holds 28 industry certifications, including CISSP, ISSAP, Certified Ethical Hacker, Certified Hacking Forensics Investigator, EC Council Certified Security Administrator, and EC Council Certified Instructor. He served as subject matter expert for CompTIA in its development or revision of four certification tests, including Security+. He recently assisted the EC Council in developing its new advanced cryptography course. Easttom has authored 13 books on topics including computer security and crime. Learn how to

- Understand essential network security concepts, challenges, and careers
- Learn how modern attacks work
- Discover how firewalls, intrusion detection systems (IDS), and virtual private networks (VPNs) combine to protect modern networks
- Select the right security technologies for any network environment
- Use encryption to protect information
- Harden Windows and Linux systems and keep them patched
- Securely configure web browsers to resist attacks
- Defend against malware
- Define practical, enforceable security policies
- Use the "6 Ps" to assess technical and human aspects of system security
- Detect and fix system vulnerability
- Apply proven security standards and models, including Orange Book, Common Criteria, and Bell-LaPadula
- Ensure physical security and prepare for disaster recovery
- Know your enemy: learn basic hacking, and see how to counter it
- Understand standard forensic techniques and prepare for investigations of digital crime

Introduction to Networks Companion Guide

Understand the nitty-gritty of Cybersecurity with ease

Key Features

- Align your security knowledge with industry leading concepts and tools
- Acquire required skills and certifications to survive the ever changing market needs
- Learn from industry experts to analyse, implement, and maintain a robust environment

Book Description

It's not a secret that there is a huge talent gap in the cybersecurity industry. Everyone is talking about it including the prestigious Forbes Magazine, Tech Republic, CSO Online, DarkReading, and SC Magazine, among many others. Additionally, Fortune CEO's like Satya Nadella, McAfee's CEO Chris Young, Cisco's CIO Colin Seward along with organizations like ISSA, research firms like Gartner too shine light on it from time to time. This book put together all the possible information with regards to cybersecurity, why you should choose it, the need for cyber security and how can you be part of it and fill the cybersecurity talent gap bit by bit. Starting with the essential understanding of security and its needs, we will move to security domain changes and how artificial intelligence and machine learning are helping to secure systems. Later, this book will walk you through all the skills and tools that everyone who wants to work as security personal need to be aware of. Then, this book will teach readers how to think like an attacker and explore some advanced security methodologies. Lastly, this book will deep dive into how to build practice labs, explore real-world use cases and get acquainted with various cybersecurity certifications. By the end of this book, readers will be well-versed with the security domain and will be capable of making the right

choices in the cybersecurity field. What you will learn Get an overview of what cybersecurity is and learn about the various faces of cybersecurity as well as identify domain that suits you best Plan your transition into cybersecurity in an efficient and effective way Learn how to build upon your existing skills and experience in order to prepare for your career in cybersecurity Who this book is for This book is targeted to any IT professional who is looking to venture in to the world cyber attacks and threats. Anyone with some understanding or IT infrastructure workflow will benefit from this book. Cybersecurity experts interested in enhancing their skill set will also find this book useful.

Network Defense: Perimeter Defense Mechanisms

PART OF THE NEW JONES & BARTLETT LEARNING INFORMATION SYSTEMS SECURITY & ASSURANCE SERIES! Fundamentals of Information System Security provides a comprehensive overview of the essential concepts readers must know as they pursue careers in information systems security. The text opens with a discussion of the new risks, threats, and vulnerabilities associated with the transformation to a digital world, including a look at how business, government, and individuals operate today. Part 2 is adapted from the Official (ISC)2 SSCP Certified Body of Knowledge and presents a high-level overview of each of the seven domains within the System Security Certified Practitioner certification. The book closes with a resource for readers who desire additional material on information security standards, education, professional certifications, and compliance laws. With its practical, conversational writing style and step-by-step examples, this text is a must-have resource for those entering the world of information systems security. Instructor Materials for Fundamentals of Information System Security include: PowerPoint Lecture Slides Exam Questions Case Scenarios/Handouts .

Fundamentals of Information Systems Security

This book discusses and summarizes current research issues, identifies challenges, and outlines future directions for proactive and dynamic network defense. This book also presents the latest fundamental research results toward understanding proactive and dynamic network defense by top researchers in related areas. It includes research results that offer formal frameworks to define proactive and dynamic network defense, and develop novel models to analyze and evaluate proactive designs and strategies in computer systems, network systems, cyber-physical systems and wireless networks. A wide variety of scientific techniques have been highlighted to study these problems in the fundamental domain. As the convergence of our physical and digital worlds grows fast pace, protecting information systems from being tampered or unauthorized access is becoming one of the most importance issues. The traditional mechanisms of network defense are built upon a static, passive, and reactive nature, which has insufficient to defend against today's attackers that attempt to persistently analyze, probe, circumvent or fool such mechanisms. It has not yet been fully investigated to address the early stage of "cyber kill chain" when adversaries carry out sophisticated reconnaissance to plan attacks against a defense system. Recently, proactive and dynamic network defense has been proposed as an important alternative towards comprehensive network defense. Two representative types of such defense are

moving target defense (MTD) and deception-based techniques. These emerging approaches show great promise to proactively disrupt the cyber-attack kill chain and are increasingly gaining interest within both academia and industry. However, these approaches are still in their preliminary design stage. Despite the promising potential, there are research issues yet to be solved regarding the effectiveness, efficiency, costs and usability of such approaches. In addition, it is also necessary to identify future research directions and challenges, which is an essential step towards fully embracing proactive and dynamic network defense. This book will serve as a great introduction for advanced-level computer science and engineering students who would like to start R&D efforts in the field of proactive and dynamic network defense. Researchers and professionals who work in this related field will also find this book useful as a reference.

A Practical Introduction to Enterprise Network and Security Management

Provides a solid foundation in network security fundamentals with an emphasis on intrusion detection, and prepares the reader for the second exam, Network Defense and Countermeasures, in the Security Certified Network Professional (SCNP) Certification.

Cybersecurity: The Beginner's Guide

"This book provides academia and organizations insights into practical and applied solutions, frameworks, technologies, and implementations for situational awareness in computer networks"--Provided by publisher.

Network Administrators Survival Guide

Moving Target Defense: Creating Asymmetric Uncertainty for Cyber Threats was developed by a group of leading researchers. It describes the fundamental challenges facing the research community and identifies new promising solution paths. Moving Target Defense which is motivated by the asymmetric costs borne by cyber defenders takes an advantage afforded to attackers and reverses it to advantage defenders. Moving Target Defense is enabled by technical trends in recent years, including virtualization and workload migration on commodity systems, widespread and redundant network connectivity, instruction set and address space layout randomization, just-in-time compilers, among other techniques. However, many challenging research problems remain to be solved, such as the security of virtualization infrastructures, secure and resilient techniques to move systems within a virtualized environment, automatic diversification techniques, automated ways to dynamically change and manage the configurations of systems and networks, quantification of security improvement, potential degradation and more. Moving Target Defense: Creating Asymmetric Uncertainty for Cyber Threats is designed for advanced -level students and researchers focused on computer science, and as a secondary text book or reference. Professionals working in this field will also find this book valuable.

The Practice of Network Security Monitoring

Introduction to Networks Companion Guide is the official supplemental textbook for the Introduction to Networks course in the Cisco® Networking Academy® CCNA® Routing and Switching curriculum. The course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. The principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, you will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. 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 more than 195 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. Related Title: Introduction to Networks Lab Manual ISBN-10: 1-58713-312-1 ISBN-13: 978-1-58713-312-1 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 more than 50 different exercises from the online course identified throughout the book with this icon. Videos—Watch the videos embedded within the online course. Packet Tracer Activities—Explore and visualize networking concepts using Packet Tracer exercises interspersed throughout the chapters. Hands-on Labs—Work through all 66 course labs and Class Activities that are included in the course and published in the separate Lab Manual. This book is part of the Cisco Networking Academy Series from Cisco Press®. Books in this series support and complement the Cisco Networking Academy curriculum.

Guide to Computer Network Security

Windows Networking Tools: The Complete Guide to Management, Troubleshooting, and Security explains how to use built-in Windows networking tools and third-party networking products to diagnose network problems, address performance issues, and enhance the overall security of your system and network. It starts with a review of the major components of the TCP/IP protocol suite, as well as IP and MAC addressing, to provide a clear understanding of the various networking tools and how they are used in a LAN and a TCP/IP networking environment. Although the book focuses on built-in Windows networking tools, it also investigates a number of third-party products that can enhance the performance of your computer. It identifies tools to help you to understand the traffic flow and operational status of your network, illustrates the use of numerous tools, and shows you several methods to protect your computers from malicious software. It also examines one of the best programs for examining the flow of data on a network—Wireshark—and explains how to use this program to scan for open ports and discover vulnerability issues. In addition to helping you gain insight into existing problems, the text highlights built-in Windows networking tools that can help to determine if you can

expect future bandwidth bottlenecks or other problems to occur under different growth scenarios. Placing the proven methods of an industry veteran at your fingertips, the book includes a chapter devoted to software programs that can enhance the security of your network. It explains how to negate the operation of unwanted advertisement trackers as well as how to minimize and alleviate the various types of hacking—from keyboard loggers to network viruses. In the event your computational device is lost or stolen a cryptographic program is described that results in data becoming meaningless to the person or persons attempting to read your stored information.

Cyber Reconnaissance, Surveillance and Defense

Network defense and countermeasures: principles and practices (Prentice Hall Security)

Guide to Network Defense and Countermeasures

This complete guide to setting up and running a TCP/IP network is essential for network administrators, and invaluable for users of home systems that access the Internet. The book starts with the fundamentals -- what protocols do and how they work, how addresses and routing are used to move data through the network, how to set up your network connection -- and then covers, in detail, everything you need to know to exchange information via the Internet. Included are discussions on advanced routing protocols (RIPv2, OSPF, and BGP) and the gated software package that implements them, a tutorial on configuring important network services -- including DNS, Apache, sendmail, Samba, PPP, and DHCP -- as well as expanded chapters on troubleshooting and security. TCP/IP Network Administration is also a command and syntax reference for important packages such as gated, pppd, named, dhcpd, and sendmail. With coverage that includes Linux, Solaris, BSD, and System V TCP/IP implementations, the third edition contains: Overview of TCP/IP Delivering the data Network services Getting started M Basic configuration Configuring the interface Configuring routing Configuring DNS Configuring network servers Configuring sendmail Configuring Apache Network security Troubleshooting Appendices include dip, ppd, and chat reference, a gated reference, a dhcpd reference, and a sendmail reference This new edition includes ways of configuring Samba to provide file and print sharing on networks that integrate Unix and Windows, and a new chapter is dedicated to the important task of configuring the Apache web server. Coverage of network security now includes details on OpenSSH, stunnel, gpg, iptables, and the access control mechanism in xinetd. Plus, the book offers updated information about DNS, including details on BIND 8 and BIND 9, the role of classless IP addressing and network prefixes, and the changing role of registrars. Without a doubt, TCP/IP Network Administration, 3rd Edition is a must-have for all network administrators and anyone who deals with a network that transmits data over the Internet.

Network Defense and Countermeasures

GUIDE TO NETWORK SECURITY is a wide-ranging new text that provides a detailed review of the network security field, including essential terminology, the history of

the discipline, and practical techniques to manage implementation of network security solutions. It begins with an overview of information, network, and web security, emphasizing the role of data communications and encryption. The authors then explore network perimeter defense technologies and methods, including access controls, firewalls, VPNs, and intrusion detection systems, as well as applied cryptography in public key infrastructure, wireless security, and web commerce. The final section covers additional topics relevant for information security practitioners, such as assessing network security, professional careers in the field, and contingency planning. Perfect for both aspiring and active IT professionals, GUIDE TO NETWORK SECURITY is an ideal resource for students who want to help organizations protect critical information assets and secure their systems and networks, both by recognizing current threats and vulnerabilities, and by designing and developing the secure systems of the future. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Hands-On Ethical Hacking and Network Defense

Enhance your organization's secure posture by improving your attack and defense strategies

Key Features

- Gain a clear understanding of the attack methods, and patterns to recognize abnormal behavior within your organization with Blue Team tactics.
- Learn to unique techniques to gather exploitation intelligence, identify risk and demonstrate impact with Red Team and Blue Team strategies.
- A practical guide that will give you hands-on experience to mitigate risks and prevent attackers from infiltrating your system.

Book Description

The book will start talking about the security posture before moving to Red Team tactics, where you will learn the basic syntax for the Windows and Linux tools that are commonly used to perform the necessary operations. You will also gain hands-on experience of using new Red Team techniques with powerful tools such as python and PowerShell, which will enable you to discover vulnerabilities in your system and how to exploit them. Moving on, you will learn how a system is usually compromised by adversaries, and how they hack user's identity, and the various tools used by the Red Team to find vulnerabilities in a system. In the next section, you will learn about the defense strategies followed by the Blue Team to enhance the overall security of a system. You will also learn about an in-depth strategy to ensure that there are security controls in each network layer, and how you can carry out the recovery process of a compromised system. Finally, you will learn how to create a vulnerability management strategy and the different techniques for manual log analysis. By the end of this book, you will be well-versed with Red Team and Blue Team techniques and will have learned the techniques used nowadays to attack and defend systems.

What you will learn

- Learn the importance of having a solid foundation for your security posture
- Understand the attack strategy using cyber security kill chain
- Learn how to enhance your defense strategy by improving your security policies, hardening your network, implementing active sensors, and leveraging threat intelligence
- Learn how to perform an incident investigation
- Get an in-depth understanding of the recovery process
- Understand continuous security monitoring and how to implement a vulnerability management strategy
- Learn how to perform log analysis to identify suspicious activities

Who this book is for

This book aims at IT professional who want to venture the IT security domain. IT pentester, Security consultants, and ethical hackers will also find this course

useful. Prior knowledge of penetration testing would be beneficial.

Network Attacks and Exploitation

The Network Defense Series from EC-Council | Press is comprised of 5 books designed to educate learners from a vendor-neutral standpoint how to defend the networks they manage. This series covers the fundamental skills in evaluating internal and external threats to network security and design, how to enforce network level security policies, and how to ultimately protect an organization's information. The books in the series cover a broad range of topics from secure network fundamentals, protocols & analysis, standards and policy, hardening infrastructure, to configuring IPS, IDS, firewalls, bastion host and honeypots. Learners completing this series will have a full understanding of defensive measures taken to secure their organization's information, and along with the proper experience these books will prepare readers for the EC-Council Network Security Administrator (E|NSA) certification. An organization is only as strong as its weakest link. The same is true in network security. Mis-configurations, outdated software and technical glitches are often the easiest point of entry for a hacker. This book, the third in the series, is designed to teach the potential security practitioner how to harden the network infrastructure, evaluate hardware and software configurations and introduce log analysis, creating a strong foundation for Network Security Troubleshooting, response, and repair. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Introduction to Network Security

Network security is not simply about building impenetrable walls—determined attackers will eventually overcome traditional defenses. The most effective computer security strategies integrate network security monitoring (NSM): the collection and analysis of data to help you detect and respond to intrusions. In *The Practice of Network Security Monitoring*, Mandiant CSO Richard Bejtlich shows you how to use NSM to add a robust layer of protection around your networks—no prior experience required. To help you avoid costly and inflexible solutions, he teaches you how to deploy, build, and run an NSM operation using open source software and vendor-neutral tools. You'll learn how to:

- Determine where to deploy NSM platforms, and size them for the monitored networks
- Deploy stand-alone or distributed NSM installations
- Use command line and graphical packet analysis tools, and NSM consoles
- Interpret network evidence from server-side and client-side intrusions
- Integrate threat intelligence into NSM software to identify sophisticated adversaries

There's no foolproof way to keep attackers out of your network. But when they get in, you'll be prepared. *The Practice of Network Security Monitoring* will show you how to build a security net to detect, contain, and control them. Attacks are inevitable, but losing sensitive data shouldn't be.

AVIEN Malware Defense Guide for the Enterprise

Active Defense is our new comprehensive guide to implementing effective network security using the latest technologies. Superb coverage of all security threats

(internal and external) and ways to combat them. Includes coverage of Virtual Private Networks, the newest encryption technologies, firewalls, and much more! Coverage includes Windows, including Windows 2000, and sections on Unix and Linux.

Security Sage's Guide to Hardening the Network Infrastructure

The all-in-one practical guide to supporting Cisco networks using freeware tools.

Windows Networking Tools

GUIDE TO NETWORK DEFENSE AND COUNTERMEASURES provides a thorough guide to perimeter defense fundamentals, including intrusion detection and firewalls. This trusted text also covers more advanced topics such as security policies, network address translation (NAT), packet filtering and analysis, proxy servers, virtual private networks (VPN), and network traffic signatures. Thoroughly updated, the new third edition reflects the latest technology, trends, and techniques including virtualization, VMware, IPv6, and ICMPv6 structure, making it easier for current and aspiring professionals to stay on the cutting edge and one step ahead of potential security threats. A clear writing style and numerous screenshots and illustrations make even complex technical material easier to understand, while tips, activities, and projects throughout the text allow you to hone your skills by applying what you learn. Perfect for students and professionals alike in this high-demand, fast-growing field, GUIDE TO NETWORK DEFENSE AND COUNTERMEASURES, Third Edition, is a must-have resource for success as a network security professional. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Moving Target Defense

One-volume coverage of all the core concepts, terminology, issues, and practical skills modern computer security professionals need to know * *The most up-to-date computer security concepts text on the market. *Strong coverage and comprehensive analysis of key attacks, including denial of service, malware, and viruses. *Covers oft-neglected subject areas such as cyberterrorism, computer fraud, and industrial espionage. *Contains end-of-chapter exercises, projects, review questions, and plenty of realworld tips. Computer Security Fundamentals, Second Edition is designed to be the ideal one volume gateway into the entire field of computer security. It brings together thoroughly updated coverage of all basic concepts, terminology, and issues, along with the practical skills essential to security. Drawing on his extensive experience as both an IT professional and instructor, Chuck Easttom thoroughly covers core topics such as vulnerability assessment, virus attacks, buffer overflow, hacking, spyware, network defense, firewalls, VPNs, Intrusion Detection Systems, and passwords. Unlike many other authors, however, he also fully addresses more specialized issues, including cyber terrorism, industrial espionage and encryption - including public/private key systems, digital signatures, and certificates. This edition has been extensively updated to address the latest issues and technologies, including

cyberbullying/cyberstalking, session hijacking, steganography, and more. Its examples have been updated to reflect the current state-of-the-art in both attacks and defense. End-of-chapter exercises, projects, and review questions guide readers in applying the knowledge they've gained, and Easttom offers many tips that readers would otherwise have to discover through hard experience.

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