

[EPUB] Introduction To Security And Network Forensics

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Introduction to Security and Network Forensics

Introduction to Network Security-Jie Wang 2015-09-21 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>

Introduction to Network Security-Douglas Jacobson 2008-11-18 Unlike data communications of the past, today's networks consist of numerous devices that handle the data as it passes from the sender to the receiver. However, security concerns are frequently raised in circumstances where interconnected computers use a network not controlled by any one entity or organization. Introduction to Network Security exam

Introduction to Computer and Network Security-Richard R. Brooks 2013-08-19 Guides Students in Understanding the Interactions between Computing/Networking Technologies and Security Issues Taking an interactive, "learn-by-doing" approach to teaching, Introduction to Computer and Network Security: Navigating Shades of Gray gives you a clear course to teach the technical issues related to security. Unlike most computer security books, which concentrate on software design and implementation, cryptographic tools, or networking issues, this text also explores how the interactions between hardware, software, and users affect system security. The book presents basic principles and concepts, along with examples of current threats to illustrate how the principles can either enable or neutralize exploits. Students see the importance of these concepts in existing and future technologies. In a challenging yet enjoyable way, they learn about a variety of technical topics, including current security exploits, technical factors that enable attacks, and economic and social factors that determine the security of future systems. Extensively classroom-tested, the material is structured around a set of challenging projects. Through staging exploits and choosing countermeasures to neutralize the attacks in the projects, students learn. How computer systems and networks operate How to reverse-engineer processes How to use systems in ways that were never foreseen (or supported) by the original developers Combining hands-on work with technical overviews, this text helps you integrate security analysis into your technical computing curriculum. It will educate your students on security issues, such as side-channel attacks, and deepen their understanding of how computers and networks work.

Introduction to Security and Network Forensics

Introduction to Security and Network Forensics-William J. Buchanan 2011-06-06 Keeping up with the latest developments in cyber security requires ongoing commitment, but without a firm foundation in the principles of computer security and digital forensics, those tasked with safeguarding private information can get lost in a turbulent and shifting sea. Providing such a foundation, Introduction to Security and Network Forensics covers the basic principles of intrusion detection systems, encryption, and authentication, as well as the key academic principles related to digital forensics. Starting with an overview of general security concepts, it addresses hashing, digital certificates, enhanced software security, and network security. The text introduces the concepts of risk, threat analysis, and network forensics, and includes online access to an abundance of ancillary materials, including labs, Cisco challenges, test questions, and web-based videos. The author provides readers with access to a complete set of simulators for routers, switches, wireless access points (Cisco Aironet 1200), PIX/ASA firewalls (Version 6.x, 7.x and 8.x), Wireless LAN Controllers (WLC), Wireless ADUs, ASDMs, SDMs, Juniper, and much more, including: More than 3,700 unique Cisco challenges and 48,000 Cisco Configuration Challenge Elements 60,000 test questions, including for Certified Ethical Hacking and CISSP® 350 router labs, 180 switch labs, 160 PIX/ASA labs, and 80 Wireless labs Rounding out coverage with a look into more advanced topics, including data hiding, obfuscation, web infrastructures, and cloud and grid computing, this book provides the fundamental understanding in computer security and digital forensics required to develop and implement effective safeguards against ever-evolving cyber security threats. Along with this, the text includes a range of online lectures and related material, available at: <http://asecuritybook.com>.

Introduction to Computer Networks and Cybersecurity

Introduction to Computer Networks and Cybersecurity-Chwan-Hwa (John) Wu 2016-04-19 If a network is not secure, how valuable is it? Introduction to Computer Networks and Cybersecurity takes an integrated approach to networking and cybersecurity, highlighting the interconnections so that you quickly understand the complex design issues in modern networks. This full-color book uses a wealth of examples and illustrations to effective

A Practical Introduction to Enterprise Network and Security Management

A Practical Introduction to Enterprise Network and Security Management-Bongsik Shin 2020-09-30 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.

Introduction to Information Security

Introduction to Information Security-Timothy Shimeall 2013-11-12 Most introductory texts provide a technology-based survey of methods and techniques that leaves the reader without a clear understanding of the interrelationships between methods and techniques. By providing a strategy-based introduction, the reader is given a clear understanding of how to provide overlapping defenses for critical information. This understanding provides a basis for engineering and risk-management decisions in the defense of information. Information security is a rapidly growing field, with a projected need for thousands of professionals within the next decade in the government sector alone. It is also a field that has changed in the last decade from a largely theory-based discipline to an experience-based discipline. This shift in the field has left several of the classic texts with a strongly dated feel. Provides a broad introduction to the methods and techniques in the field of information security Offers a strategy-based view of these tools and techniques, facilitating selection of overlapping methods for in-depth defense of information Provides very current view of the emerging standards of practice in information security

Introduction to Network Security-Neal Krawetz 2007 This book will help you increase your understanding of potential threats, learn how to apply practical mitigation options, and react to attacks quickly. It will teach you the skills and knowledge you need to design, develop, implement, analyze, and maintain networks and network protocols.-[Book cover].

Computer Security Basics

Computer Security Basics-Rick Lehtinen 2006-06-13 This is the must-have book for a must-know field. Today, general security knowledge is mandatory, and, if you who need to understand the fundamentals, Computer Security Basics 2nd Edition is the book to consult. The new edition builds on the well-established principles developed in the original edition and thoroughly updates that core knowledge. For anyone involved with computer security, including security administrators, system administrators, developers, and IT managers, Computer Security Basics 2nd Edition offers a clear overview of the security concepts you need to know, including access controls, malicious software, security policy, cryptography, biometrics, as well as government regulations and standards. This handbook describes complicated concepts such as trusted systems, encryption, and mandatory access control in simple terms. It tells you what you need to know to understand the basics of computer security, and it will help you persuade your employees to practice safe computing. Topics include: Computer security concepts Security breaches, such as viruses and other malicious programs Access controls Security policy Web attacks Communications and network security Encryption Physical security and biometrics Wireless network security Computer security and requirements of the Orange Book OSI Model and TEMPEST

Introduction to Internet Security

Introduction to Internet Security-Garry Howard 1995 Information is the most valuable commodity in today's business world. And in this age of electronic access, not taking precautions to protect this hard-earned commodity is a very dangerous risk. This invaluable resource not only provides the means for plugging into the Internet, but also helps determine the level of security that is right for any small business.

A Multidisciplinary Introduction to Information Security

A Multidisciplinary Introduction to Information Security-Stig F. Mjolsnes 2011-11-09 With most services and products now being offered through digital communications, new challenges have emerged for information security specialists. A Multidisciplinary Introduction to Information Security presents a range of topics on the security, privacy, and safety of information and communication technology. It brings together methods in pure mathematics, computer and telecommunication sciences, and social sciences. The book begins with the cryptographic algorithms of the Advanced Encryption Standard (AES) and Rivest, Shamir, and Adleman (RSA). It explains the mathematical reasoning behind public key cryptography and the properties of a cryptographic hash function before presenting the principles and examples of quantum cryptography. The text also describes the use of cryptographic primitives in the communication process, explains how a public key infrastructure can mitigate the problem of crypto-key distribution, and discusses the security problems of wireless network access. After examining past and present protection mechanisms in the global mobile telecommunication system, the book proposes a software engineering practice that prevents attacks and misuse of software. It then presents an evaluation method for ensuring security requirements of products and systems, covers methods and tools of digital forensics and computational forensics, and describes risk assessment as part of the larger activity of risk management. The final chapter focuses on information security from an organizational and people point of view. As our ways of communicating and doing business continue to shift, information security professionals must find answers to evolving issues. Offering a starting point for more advanced work in the field, this volume addresses various security and privacy problems and solutions related to the latest information and communication technology.

Computer and Information Security Handbook

Computer and Information Security Handbook-John R. Vacca 2012-11-05 The second edition of this comprehensive handbook of computer and information security provides the most complete view of computer security and privacy available. It offers in-depth coverage of security theory, technology, and practice as they relate to established technologies as well as recent advances. It explores practical solutions to many security issues. Individual chapters are authored by leading experts in the field and address the immediate and long-term challenges in the authors' respective areas of expertise. The book is organized into 10 parts comprised of 70 contributed chapters by leading experts in the areas of networking and systems security, information management, cyber warfare and security, encryption technology, privacy, data storage, physical security, and a host of advanced security topics. New to this edition are chapters on intrusion detection, securing the cloud, securing web apps, ethical hacking, cyber forensics, physical security, disaster recovery, cyber attack deterrence, and more. Chapters by leaders in the field on theory and practice of computer and information security technology, allowing the reader to develop a new level of technical expertise Comprehensive and up-to-date coverage of security issues allows the reader to remain current and fully informed from multiple viewpoints Presents methods of analysis and problem-solving techniques, enhancing the reader's grasp of the material and ability to implement practical solutions

Biometrics for Network Security

Biometrics for Network Security-Paul Reid 2004 2014 Reid (senior product manager, Cryptometrics) introduces the technical capabilities and limitations of computer biometric systems for measuring fingerprints, eye characteristics, or other body information as a computer security measure serving a similar purpose to personal identification numbers. He describes the workings of the different types of technologies and examines some of the mathematics behind biometric systems. He also describes the conceptualization and implementation of a particular system with which he was involved. Annotation : 2004 Book News, Inc., Portland, OR (booknews.com).

Security and Privacy in Social Networks

Security and Privacy in Social Networks-Yaniv Altshuler 2012-08-14 Security and Privacy in Social Networks brings to the forefront innovative approaches for analyzing and enhancing the security and privacy dimensions in online social networks, and is the first comprehensive attempt dedicated entirely to this field. In order to facilitate the transition of such methods from theory to mechanisms designed and deployed in existing online social networking services, the book aspires to create a common language between the researchers and practitioners of this new area- spanning from the theory of computational social sciences to conventional security and network engineering.

Guide to Computer Network Security

Guide to Computer Network Security-Joseph Migga Kizza 2020-06-03 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,

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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.

Network Security Through Data Analysis

Network Security Through Data Analysis-Michael Collins 2014-02-10 Traditional intrusion detection and logfile analysis are no longer enough to protect today's complex networks. In this practical guide, security researcher Michael Collins shows you several techniques and tools for collecting and analyzing network traffic datasets. You'll understand how your network is used, and what actions are necessary to protect and improve it. Divided into three sections, this book examines the process of collecting and organizing data, various tools for analysis, and several different analytic scenarios and techniques. It's ideal for network administrators and operational security analysts familiar with scripting. Explore network, host, and service sensors for capturing security data Store data traffic with relational databases, graph databases, Redis, and Hadoop Use SILK, the R language, and other tools for analysis and visualization Detect unusual phenomena through Exploratory Data Analysis (EDA) Identify significant structures in networks with graph analysis Determine the traffic that's crossing service ports in a network Examine traffic volume and behavior to spot DDoS and database raids Get a step-by-step process for network mapping and inventory

Introduction to Computer Security

Introduction to Computer Security-Matthew A. Bishop 2005 In this authoritative book, widely respected practitioner and teacher Matt Bishop presents a clear and useful introduction to the art and science of information security. Bishop's insights and realistic examples will help any practitioner or student understand the crucial links between security theory and the day-to-day security challenges of IT environments. Bishop explains the fundamentals of security: the different types of widely used policies, the mechanisms that implement these policies, the principles underlying both policies and mechanisms, and how attackers can subvert these tools--as well as how to defend against attackers. A practicum demonstrates how to apply these ideas and mechanisms to a realistic company. Coverage includes Confidentiality, integrity, and availability Operational issues, cost-benefit and risk analyses, legal and human factors Planning and implementing effective access control Defining security, confidentiality, and integrity policies Using cryptography and public-key systems, and recognizing their limits Understanding and using authentication: from passwords to biometrics Security design principles: least-privilege, fail-safe defaults, open design, economy of mechanism, and more Controlling information flow through systems and networks Assuring security throughout the system lifecycle Malicious logic: Trojan horses, viruses, boot sector and executable infectors, rabbits, bacteria, logic bombs--and defenses against them Vulnerability analysis, penetration studies, auditing, and intrusion detection and prevention Applying security principles to networks, systems, users, and programs Introduction to Computer Security is adapted from Bishop's comprehensive and widely praised book, Computer Security: Art and Science. This shorter version of the original work omits much mathematical formalism, making it more accessible for professionals and students who have a less formal mathematical background, or for readers with a more practical than theoretical interest.

Guide to Network Security

Guide to Network Security-Michael E. Whitman 2012-09-20 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.

Computer Systems and Software Engineering: Concepts, Methodologies, Tools, and Applications

Computer Systems and Software Engineering: Concepts, Methodologies, Tools, and Applications-Management Association, Information Resources 2017-12-01 Professionals in the interdisciplinary field of computer science focus on the design, operation, and maintenance of computational systems and software. Methodologies and tools of engineering are utilized alongside computer applications to develop efficient and precise information databases. Computer Systems and Software Engineering: Concepts, Methodologies, Tools, and Applications is a comprehensive reference source for the latest scholarly material on trends, techniques, and uses of various technology applications and examines the benefits and challenges of these computational developments. Highlighting a range of pertinent topics such as utility computing, computer security, and information systems applications, this multi-volume book is ideally designed for academicians, researchers, students, web designers, software developers, and practitioners interested in computer systems and software engineering.

Computer Network Security

Computer Network Security-Jie Wang 2010 This text introduces a complete and concise view of network security. It provides in-depth theoretical coverage of recent advancements and practical solutions to network security threats, including the most recent topics on wireless network security.

Network Performance and Security

Network Performance and Security-Chris Chapman 2016-03-10 Network Performance Security: Testing and Analyzing Using Open Source and Low-Cost Tools gives mid-level IT engineers the practical tips and tricks they need to use the best open source or low cost tools available to harden their IT infrastructure. The book details how to use the tools and how to interpret them. Network Performance Security: Testing and Analyzing Using Open Source and Low-Cost Tools begins with an overview of best practices for testing security and performance across devices and the network. It then shows how to document assets--such as servers, switches, hypervisor hosts, routers, and firewalls--using publicly available tools for network inventory. The book explores security zoning the network, with an emphasis on isolated entry points for various classes of access. It shows how to use open source tools to test network configurations for malware attacks, DDoS, botnet, rootkit and worm attacks, and concludes with tactics on how to prepare and execute a mediation schedule of the who, what, where, when, and how, when an attack hits. Network security is a requirement for any modern IT infrastructure. Using Network Performance Security: Testing and Analyzing Using Open Source and Low-Cost Tools makes the network stronger by using a layered approach of practical advice and good testing practices. Offers coherent, consistent guidance for those tasked with securing the network within an organization and ensuring that it is appropriately tested Focuses on practical, real world implementation and testing Employs a vetted "security testing by example" style to demonstrate best practices and minimize false positive testing Gives practical advice for securing BYOD devices on the network, how to test and defend against internal threats, and how to continuously validate a firewall device, software, and configuration Provides analysis in addition to step by step methodologies

Introduction to Modern Cryptography, Second Edition

Introduction to Modern Cryptography, Second Edition-Jonathan Katz 2014-11-06 Cryptography is ubiquitous and plays a key role in ensuring data secrecy and integrity as well as in securing computer systems more broadly. Introduction to Modern Cryptography provides a rigorous yet accessible treatment of this fascinating subject. The authors introduce the core principles of modern cryptography, with an emphasis on formal definitions, clear assumptions, and rigorous proofs of security. The book begins by focusing on private-key cryptography, including an extensive treatment of private-key encryption, message authentication codes, and hash functions. The authors also present design principles for widely used stream ciphers and block ciphers including RC4, DES, and AES, plus provide provable constructions of stream ciphers and block ciphers from lower-level primitives. The second half of the book covers public-key cryptography, beginning with a self-contained introduction to the number theory needed to understand the RSA, Diffie-Hellman, and El Gamal cryptosystems (and others), followed by a thorough treatment of several standardized public-key encryption and digital signature schemes. Integrating a more practical perspective without sacrificing rigor, this widely anticipated Second Edition offers improved treatment of: Stream ciphers and block ciphers, including modes of operation and design principles Authenticated encryption and secure communication sessions Hash functions, including hash-function applications and design principles Attacks on poorly implemented cryptography, including attacks on chained-CBC encryption, padding-oracle attacks, and timing attacks The random-oracle model and its application to several standardized, widely used public-key encryption and signature schemes Elliptic-curve cryptography and associated standards such as DSA/ECDSA and DHIES/ECIES Containing updated exercises and worked examples, Introduction to Modern Cryptography, Second Edition can serve as a textbook for undergraduate- or graduate-level courses in cryptography, a valuable reference for researchers and practitioners, or a general introduction suitable for self-study.

Computer Security and the Internet

Computer Security and the Internet-Paul C. van Oorschot 2020-04-04 This book provides a concise yet comprehensive overview of computer and Internet security, suitable for a one-term introductory course for junior/senior undergrad or first-year graduate students. It is also suitable for self-study by anyone seeking a solid footing in security - including software developers and computing professionals, technical managers and government staff. An overriding focus is on brevity, without sacrificing breadth of core topics or technical detail within them. The aim is to enable a broad understanding in roughly 350 pages. Further prioritization is supported by designating as optional selected content within this. Fundamental academic concepts are reinforced by specifics and examples, and related to applied problems and real-world incidents. The first chapter provides a gentle overview and 20 design principles for security. The ten chapters that follow provide a framework for understanding computer and Internet security. They regularly refer back to the principles, with supporting examples. These principles are the conceptual counterparts of security-related error patterns that have been recurring in software and system designs for over 50 years. The book is "elementary" in that it assumes no background in security, but unlike "soft" high-level texts it does not avoid low-level details, instead it selectively dives into fine points for exemplary topics to concretely illustrate concepts and principles. The book is rigorous in the sense of being technically sound, but avoids both mathematical proofs and lengthy source-code examples that typically make books inaccessible to general audiences. Knowledge of elementary operating system and networking concepts is helpful, but review sections summarize the essential background. For graduate students, inline exercises and supplemental references provided in per-chapter endnotes provide a bridge to further topics and a springboard to the research literature; for those in industry and government, pointers are provided to helpful surveys and relevant standards, e.g., documents from the Internet Engineering Task Force (IETF), and the U.S. National Institute of Standards and Technology.

Security in Fixed and Wireless Networks

Security in Fixed and Wireless Networks-Guenther Schaefer 2016-08-19 Introduces aspects on security threats and their countermeasures in both fixed and wireless networks, advising on how countermeasures can provide secure communication infrastructures. Enables the reader to understand the risks of inappropriate network security, what mechanisms and protocols can be deployed to counter these risks, and how these mechanisms and protocols work.

Foundations of Information Security

Foundations of Information Security-Jason Andress 2019 Foundations of Information Security provides readers with fundamental knowledge of information security in both theoretical and practical aspects. Each chapter explores one main security concept, lists scenarios in which the concept is applicable, and discusses the implementation of that concept in detail, often by going over rival models or strategies. Readers will come away with a sense of what types of assets need protecting, what kinds of risks exist, and what kinds of defensive measures can be taken.

The Oxford Handbook of Political Networks

The Oxford Handbook of Political Networks-Jennifer Nicoll Victor 2018 Politics is intuitively about relationships, but until recently the network perspective has not been a dominant part of the methodological paradigm that political scientists use to study politics. This volume is a foundational statement about networks in the study of politics.

Industrial Network Security

Industrial Network Security-Eric D. Knapp 2014-12-15 As the sophistication of cyber-attacks increases, understanding how to defend critical infrastructure systems-energy production, water, gas, and other vital systems-becomes more important, and heavily mandated. Industrial Network Security, Second Edition arms you with the knowledge you need to understand the vulnerabilities of these distributed supervisory and control systems. The book examines the unique protocols and applications that are the foundation of industrial control systems, and provides clear guidelines for their protection. This how-to guide gives you thorough understanding of the unique challenges facing critical infrastructures, new guidelines and security measures for critical infrastructure protection, knowledge of new and evolving security tools, and pointers on SCADA protocols and security implementation. All-new real-world examples of attacks against control systems, and more diagrams of systems Expanded coverage of protocols such as 61850, Ethernet/IP, CIP, ISA-99, and the evolution to IEC62443 Expanded coverage of Smart Grid security New coverage of signature-based detection, exploit-based vs. vulnerability-based detection, and signature reverse engineering

Hacking Exposed Wireless

Hacking Exposed Wireless-Johnny Cache 2007-04-10 Secure Your Wireless Networks the Hacking Exposed Way Defend against the latest pervasive and devastating wireless attacks using the tactical security information contained in this comprehensive volume. Hacking Exposed Wireless reveals how hackers zero in on susceptible networks and peripherals, gain access, and execute debilitating attacks. Find out how to plug security holes in Wi-Fi/802.11 and Bluetooth systems and devices. You'll also learn how to launch wireless exploits from Metasploit, employ bulletproof authentication and encryption, and sidestep insecure wireless hotspots. The book includes vital details on new, previously unpublished attacks alongside real-world countermeasures. Understand the concepts behind RF electronics, Wi-Fi/802.11, and Bluetooth Find out how hackers use NetStumbler, WiSPY, Kismet, KisMAC, and AiroPeek to target vulnerable wireless networks Defend against WEP key brute-force, aircrack, and traffic injection hacks Crack WEP at new speeds using Field Programmable Gate Arrays or your spare PS3 CPU cycles Prevent rogue AP and certificate authentication attacks Perform packet injection from Linux Launch DoS attacks using device driver-independent tools Exploit wireless device drivers using the Metasploit 3.0 Framework Identify and avoid malicious hotspots Deploy WPA/802.11i authentication and encryption using PEAP, FreeRADIUS, and WPA pre-shared keys

IoT Security-Madhusanka Liyanage 2019-12-02 An up-to-date guide to an overview of authentication in the Internet of Things (IoT) The Internet of things (IoT) is the network of the countless physical devices that have the possibility to connect and exchange data. Among the various security requirements, authentication to the IoT is the first step to prevent the impact of attackers. IoT Security offers an important guide into the development of the many authentication mechanisms that provide IoT authentication at various levels such as user level, device level and network level. The book covers a wide range of topics including an overview of IoT and addresses in detail the security challenges at every layer by considering both the technologies and the architecture used. The authors—noted experts on the topic—provide solutions for remediation of compromised security, as well as methods for risk mitigation, and offer suggestions for prevention and improvement. In addition, IoT Security offers a variety of illustrative use cases. This important book: Offers an authoritative reference designed for use by all IoT stakeholders Includes information for securing devices at the user, device, and network levels Contains a classification of existing vulnerabilities Written by an international group of experts on the topic Provides a guide to the most current information available on IoT security Written for network operators, cloud operators, IoT device manufacturers, IoT device users, wireless users, IoT standardization organizations, and security solution developers, IoT Security is an essential guide that contains information on security features, including underlying networks, architectures, and security requirements.

Securing the Internet of Things-Shancang Li 2017-01-30 Securing the Internet of Things provides network and cybersecurity researchers and practitioners with both the theoretical and practical knowledge they need to know regarding security in the Internet of Things (IoT). This booming field, moving from strictly research to the marketplace, is advancing rapidly, yet security issues abound. This book explains the fundamental concepts of IoT security, describing practical solutions that account for resource limitations at IoT end-node, hybrid network architecture, communication protocols, and application characteristics. Highlighting the most important potential IoT security risks and threats, the book covers both the general theory and practical implications for people working in security in the Internet of Things. Helps researchers and practitioners understand the security architecture in IoT and the state-of-the-art in IoT security countermeasures Explores how the threats in IoT are different from traditional ad hoc or infrastructural networks Provides a comprehensive discussion on the security challenges and solutions in RFID, WSNs, and IoT Contributed material by Dr. Imed Romdhani

Computer Security Fundamentals- 2006

Network Security Principles and Practices-Saadat Malik 2003 Expert solutions for securing network infrastructures and VPNs Build security into the network by defining zones, implementing secure routing protocol designs, and building safe LAN switching environments Understand the inner workings of the Cisco PIX Firewall and analyze in-depth Cisco PIX Firewall and Cisco IOS Firewall features and concepts Understand what VPNs are and how they are implemented with protocols such as GRE, L2TP, and IPSec Gain a packet-level understanding of the IPSec suite of protocols, its associated encryption and hashing functions, and authentication techniques Learn how network attacks can be categorized and how the Cisco IDS is designed and can be set upto protect against them Control network access by learning how AAA fits into the Cisco security model and by implementing RADIUS and TACACS+ protocols Provision service provider security using ACLs, NBAR, and CAR to identify and control attacks Identify and resolve common implementation failures by evaluating real-world troubleshooting scenarios As organizations increase their dependence on networks for core business processes and increase access to remote sites and mobile workers via virtual private networks (VPNs), network security becomes more and more critical. In today's networked era, information is an organization's most valuable resource. Lack of customer, partner, and employee access to e-commerce and data servers can impact both revenue and productivity. Even so, most networks do not have the proper degree of security. Network Security Principles and Practices provides an in-depth understanding of the policies, products, and expertise that brings organization to this extremely complex topic and boosts your confidence in the performance and integrity of your network systems and services. Written by the CCIE engineer who wrote the CCIE Security lab exam and who helped develop the CCIE Security written exam, Network Security Principles and Practices is the first book to help prepare candidates for the CCIE Security exams. Network Security Principles and Practices is a comprehensive guide to network security threats and the policies and tools developed specifically to combat those threats. Taking a practical, applied approach to building security into networks, the book shows you how to build secure network architectures from the ground up. Security aspects of routing protocols, Layer 2 threats, and switch security features are all analyzed. A comprehensive treatment of VPNs and IPsec is presented in extensive packet-by-packet detail. The book takes a behind-the-scenes look at how the Cisco PIX(r) Firewall actually works, presenting many difficult-to-understand and new Cisco PIX Firewall and Cisco IOS(r) Firewall concepts. The book launches into a discussion of intrusion detection systems (IDS) by analyzing and breaking down modern-day network attacks, describing how an IDS deals with those threats in general, and elaborating on the Cisco implementation of IDS. The book also discusses AAA, RADIUS, and TACACS+ and their usage with some of the newer security implementations such as VPNs and proxy authentication. A complete section devoted to service provider techniques for enhancing customer security and providing support in the event of an attack is also included. Finally, the book concludes with a section dedicated to discussing tried-and-tested troubleshooting tools and techniques that are not only invaluable to candidates working toward their CCIE Security lab exam but also to the security network administrator running the operations of a network on a daily basis.

Introduction to Networking-Richard Alan McMahon 2003 The Mike Meyers' Computer Skills series offers students of varying ability and experience a practical working knowledge of baseline IT skills and technologies. This full-color text is filled with real-world case studies, step-by-step tutorials, illustrations with callouts, end-of-chapter questions, challenging lab exercises, and review questions. You'll get full coverage of networking concepts including design and administration of local area networks (LANs).

Critical Approaches to Security-Laura J. Shepherd 2013-01-03 Focusing on critical approaches to security, this new textbook offers readers both an overview of the key theoretical perspectives and a variety of methodological techniques. With a careful explication of core concepts in each chapter and an introduction that traces the development of critical approaches to security, this textbook will encourage all those who engage with it to develop a curiosity about the study and practices of security politics. Challenging the assumptions of conventional theories and approaches, unsettling that which was previously taken for granted – these are among the ways in which such a curiosity works. Through its attention to the fact that, and the ways in which, security matters in global politics, this work will both pioneer new ways of studying security and acknowledge the noteworthy scholarship without which it could not have been thought. This textbook will be

essential reading to advanced undergraduate and postgraduate students of critical security studies, and highly recommended to students of traditional security studies, International Relations and Politics.

Network Security-Owen Poole 2003 First Published in 2002. Routledge is an imprint of Taylor & Francis, an informa company.

Handbook of Computer Networks and Cyber Security-Brij B. Gupta 2019-12-31 This handbook introduces the basic principles and fundamentals of cyber security towards establishing an understanding of how to protect computers from hackers and adversaries. The highly informative subject matter of this handbook, includes various concepts, models, and terminologies along with examples and illustrations to demonstrate substantial technical details of the field. It motivates the readers to exercise better protection and defense mechanisms to deal with attackers and mitigate the situation. This handbook also outlines some of the exciting areas of future research where the existing approaches can be implemented. Exponential increase in the use of computers as a means of storing and retrieving security-intensive information, requires placement of adequate security measures to safeguard the entire computing and communication scenario. With the advent of Internet and its underlying technologies, information security aspects are becoming a prime concern towards protecting the networks and the cyber ecosystem from variety of threats, which is illustrated in this handbook. This handbook primarily targets professionals in security, privacy and trust to use and improve the reliability of businesses in a distributed manner, as well as computer scientists and software developers, who are seeking to carry out research and develop software in information and cyber security. Researchers and advanced-level students in computer science will also benefit from this reference.

Trends in Intelligent Robotics, Automation, and Manufacturing-S.G. Poonambalam 2012-11-28 This book constitutes the proceedings of the First International Conference on Intelligent Robotics and Manufacturing, IRAM 2012, held in Kuala Lumpur, Malaysia, in November 2012. The 64 revised full papers included in this volume were carefully reviewed and selected from 102 initial submissions. The papers are organized in topical sections named: mobile robots, intelligent autonomous systems, robot vision and robust, autonomous agents, micro, meso and nano-scale automation and assembly, flexible manufacturing systems, CIM and micro-machining, and fabrication techniques.

Mastering Bitcoin-Andreas M. Antonopoulos 2017-06-12 Join the technological revolution that's taking the financial world by storm. Mastering Bitcoin is your guide through the seemingly complex world of bitcoin, providing the knowledge you need to participate in the internet of money. Whether you're building the next killer app, investing in a startup, or simply curious about the technology, this revised and expanded second edition provides essential detail to get you started. Bitcoin, the first successful decentralized digital currency, is still in its early stages and yet it's already spawned a multi-billion-dollar global economy open to anyone with the knowledge and passion to participate. Mastering Bitcoin provides the knowledge. You simply supply the passion. The second edition includes: A broad introduction of bitcoin and its underlying blockchain—ideal for non-technical users, investors, and business executives An explanation of the technical foundations of bitcoin and cryptographic currencies for developers, engineers, and software and systems architects Details of the bitcoin decentralized network, peer-to-peer architecture, transaction lifecycle, and security principles New developments such as Segregated Witness, Payment Channels, and Lightning Network A deep dive into blockchain applications, including how to combine the building blocks offered by this platform into higher-level applications User stories, analogies, examples, and code snippets illustrating key technical concepts

TCP/IP Network Administration-Craig Hunt 2002-04-04 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, dhcpcd, 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 startedM 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 dhcpcd 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.

An Introduction to Computer Security-Barbara Guttman 1995-04-01 Covers: elements of computer security; roles and responsibilities; common threats; computer security policy; computer security program and risk management; security and planning in the computer system life cycle; assurance; personnel/user issues; preparing for contingencies and disasters; computer security incident handling; awareness, training, and education; physical and environmental security; identification and authentication; logical access control; audit trails; cryptography; and assessing and mitigating the risks to a hypothetical computer system.