Sql Injection Attacks And Defense

SQL Injection Attacks and Defense, First Edition: Winner of the Best Book Bejtlich Read Award " SQL injection is probably the number one problem for any server-side application, and this book unequaled in its coverage."--Richard Bejtlich, Tao Security blog SQL injection represents one of the most dangerous and well-known, yet misunderstood, security vulnerabilities on the Internet, largely because there is no central repository of information available for penetration testers, IT security consultants and practitioners, and web/software developers to turn to for help. SQL Injection Attacks and Defense, Second Edition is the only book devoted exclusively to this long-established but recently growing threat. This is the definitive resource for understanding, finding, exploiting, and defending against this increasingly popular and particularly destructive type of Internet-based attack. SQL Injection Attacks and Defense, Second Edition includes all the currently known information about these attacks and significant insight from its team of SQL injection experts, who tell you about: Understanding SQL Injection - Understand what it is and how it works Find, confirm and automate SQL injection discovery Tips and tricks for finding SQL injection within code Create exploits for using SQL injection Design apps to avoid the dangers these attacks SQL injection on different databases SQL injection on different technologies SQL injection testing techniques Case Studies Securing SQL Server,

Second Edition is the only book to provide a complete understanding of SQL injection, from the basics of vulnerability to discovery, exploitation, prevention, and mitigation measures. Covers unique, publicly unavailable information, by technical experts in such areas as Oracle, Microsoft SQL Server, and MySQL--including new developments for Microsoft SQL Server 2012 (Denali). Written by an established expert, author, and speaker in the field, with contributions from a team of equally renowned creators of SQL injection tools, applications, and educational materials.

The Basics of Information Security provides fundamental knowledge of information security in both theoretical and practical aspects. This book is packed with key concepts of information security, such as confidentiality, integrity, and availability, as well as tips and additional resources for further advanced study. It also includes practical applications in the areas of operations, physical, network, operating system, and application security. Complete with exercises at the end of each chapter, this book is well-suited for classroom or instructional use. The book consists of 10 chapters covering such topics as identification and authentication; authorization and access control; auditing and accountability; cryptography; operations security; physical security; network security; operating system security; and application security. Useful implementations for each concept are demonstrated using real world examples. PowerPoint lecture slides are available for use in the classroom. This book is an ideal reference for security consultants, IT managers, students, and those new to the InfoSec

field. Learn about information security without wading through huge manuals Covers both theoretical and practical aspects of information security Gives a broad view of the information security field for practitioners, students, and enthusiasts

This book explains how to see one's own network through the eyes of an attacker, to understand their techniques and effectively protect against them. Through Python code samples the reader learns to code tools on subjects such as password sniffing, ARP poisoning, DNS spoofing, SQL injection, Google harvesting and Wifi hacking. Furthermore the reader will be introduced to defense methods such as intrusion detection and prevention systems and log file analysis by diving into code.

This book constitutes the proceedings of the 6th International Conference on Future Data and Security Engineering, FDSE 2019, held in Nha Trang City, Vietnam, in November 2019. The 38 full papers and 14 short papers presented together with 2 papers of keynote speeches were carefully reviewed and selected from 159 submissions. The selected papers are organized into the following topical headings: Invited Keynotes, Advanced Studies in Machine Learning, Advances in Query Processing and Optimization, Big Data Analytics and Distributed Systems, Deep Learning and Applications, Cloud Data Management and Infrastructure, Security and Privacy Engineering, Authentication and Access Control, Blockchain and Cybersecurity, Emerging Data Management Systems and Applications, Short papers: Security and Data Engineering.

Over 75% of network attacks are targeted at the web application layer. This book provides explicit hacks, tutorials, penetration tests, and step-by-step demonstrations for security professionals and Web application developers to defend their most vulnerable applications. This book defines Web application security, why it should be addressed earlier in the lifecycle in development and quality assurance, and how it differs from other types of Internet security. Additionally, the book examines the procedures and technologies that are essential to developing, penetration testing and releasing a secure Web application. Through a review of recent Web application breaches, the book will expose the prolific methods hackers use to execute Web attacks using common vulnerabilities such as SQL Injection, Cross-Site Scripting and Buffer Overflows in the application layer. By taking an in-depth look at the techniques hackers use to exploit Web applications, readers will be better equipped to protect confidential. The Yankee Group estimates the market for Web application-security products and services will grow to $1.74 billion by 2007 from $140 million in 2002 Author Michael Cross is a highly sought after speaker who regularly delivers Web Application presentations at leading conferences including: Black Hat, TechnoSecurity, CanSec West, Shmoo Con, Information Security, RSA Conferences, and more Telecommunication Systems and Technologies theme is a component of Encyclopedia of Physical Sciences, Engineering and Technology Resources in the global Encyclopedia of Life Support Systems (EOLSS), which is an integrated compendium of

twenty one Encyclopedias. Telecommunication systems are emerging as the most important infrastructure asset to enable business, economic opportunities, information distribution, culture dissemination and cross-fertilization, and social relationships. As any crucial infrastructure, its design, exploitation, maintenance, and evolution require multi-faceted know-how and multi-disciplinary vision skills. The theme is structured in four main topics: Fundamentals of Communication and Telecommunication Networks; Telecommunication Technologies; Management of Telecommunication Systems/Services; Cross-Layer Organizational Aspects of Telecommunications, which are then expanded into multiple subtopics, each as a chapter. These two volumes are aimed at the following five major target audiences: University and College students Educators, Professional practitioners, Research personnel and Policy analysts, managers, and decision makers and NGOs

Protect your data from attack by using SQL Server technologies to implement a defense-in-depth strategy for your database enterprise. This new edition covers threat analysis, common attacks and countermeasures, and provides an introduction to compliance that is useful for meeting regulatory requirements such as the GDPR. The multi-layered approach in this book helps ensure that a single breach does not lead to loss or compromise of confidential, or business sensitive data. Database professionals in today’s world deal increasingly with repeated data attacks against high-profile organizations and sensitive data. It is more important than ever to keep your

company’s data secure. Securing SQL Server demonstrates how developers, administrators and architects can all play their part in the protection of their company’s SQL Server enterprise. This book not only provides a comprehensive guide to implementing the security model in SQL Server, including coverage of technologies such as Always Encrypted, Dynamic Data Masking, and Row Level Security, but also looks at common forms of attack against databases, such as SQL Injection and backup theft, with clear, concise examples of how to implement countermeasures against these specific scenarios. Most importantly, this book gives practical advice and engaging examples of how to defend your data, and ultimately your job, against attack and compromise. What You'll Learn Perform threat analysis Implement access level control and data encryption Avoid non-reputability by implementing comprehensive auditing Use security metadata to ensure your security policies are enforced Mitigate the risk of credentials being stolen Put countermeasures in place against common forms of attack Who This Book Is For Database administrators who need to understand and counteract the threat of attacks against their company’s data, and useful for SQL developers and architects

The book contains the extended version of the works that have been presented and discussed in the Second International Doctoral Symposium on Applied Computation and Security Systems (ACSS 2015) held during May 23-25, 2015 in Kolkata, India. The symposium has been jointly organized by the AGH University of Science & Technology,

Cracow, Poland; Ca' Foscari University, Venice, Italy and University of Calcutta, India. The book is divided into volumes and presents dissertation works in the areas of Image Processing, Biometrics-based Authentication, Soft Computing, Data Mining, Next Generation Networking and Network Security, Remote Healthcare, Communications, Embedded Systems, Software Engineering and Service Engineering.

This dissertation addresses the top two "most critical web-application security risks" by combining two high-level contributions. The first high-level contribution introduces and evaluates collaborative authentication, or coauthentication, a single-factor technique in which multiple registered devices work together to authenticate a user. Coauthentication provides security benefits similar to those of multi-factor techniques, such as mitigating theft of any one authentication secret, without some of the inconveniences of multi-factor techniques, such as having to enter passwords or biometrics. Coauthentication provides additional security benefits, including: preventing phishing, replay, and man-in-the-middle attacks; basing authentications on high-entropy secrets that can be generated and updated automatically; and availability protections against, for example, device misplacement and denial-of-service attacks. Coauthentication is amenable to many applications, including m-out-of-n, continuous, group, shared-device, and anonymous authentications. The principal security properties of

coauthentication have been formally verified in ProVerif, and implementations have performed efficiently compared to password-based authentication. The second high-level contribution defines a class of SQL-injection attacks that are based on injecting identifiers, such as table and column names, into SQL statements. An automated analysis of GitHub shows that 15.7% of 120,412 posted Java source files contain code vulnerable to SQL-Identifier Injection Attacks (SQL-IDIAs). We have manually verified that some of the 18,939 Java files identified during the automated analysis are indeed vulnerable to SQL-IDIAs, including deployed Electronic Medical Record software for which SQL-IDIAs enable discovery of confidential patient information. Although prepared statements are the standard defense against SQL injection attacks, existing prepared-statement APIs do not protect against SQL-IDIAs. This dissertation therefore proposes and evaluates an extended prepared-statement API to protect against SQL-IDIAs.

Technological advancements have led to many beneficial developments in the electronic world, especially in relation to online commerce. Unfortunately, these advancements have also created a prime hunting ground for hackers to obtain financially sensitive information and deterring these breaches in security has been difficult. Cryptographic Solutions for Secure Online Banking and Commerce

discusses the challenges of providing security for online applications and transactions. Highlighting research on digital signatures, public key infrastructure, encryption algorithms, and digital certificates, as well as other e-commerce protocols, this book is an essential reference source for financial planners, academicians, researchers, advanced-level students, government officials, managers, and technology developers.

This book captures the state of the art research in the area of malicious code detection, prevention and mitigation. It contains cutting-edge behavior-based techniques to analyze and detect obfuscated malware. The book analyzes current trends in malware activity online, including botnets and malicious code for profit, and it proposes effective models for detection and prevention of attacks using. Furthermore, the book introduces novel techniques for creating services that protect their own integrity and safety, plus the data they manage.

API Security in Action teaches you how to create secure APIs for any situation. By following this hands-on guide you'll build a social network API while mastering techniques for flexible multi-user security, cloud key management, and lightweight cryptography. Summary A web API is an efficient way to communicate with an application or service. However, this convenience opens your systems to new security risks. API Security in Action gives you the skills to

build strong, safe APIs you can confidently expose to the world. Inside, you'll learn to construct secure and scalable REST APIs, deliver machine-to-machine interaction in a microservices architecture, and provide protection in resource-constrained IoT (Internet of Things) environments. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology APIs control data sharing in every service, server, data store, and web client. Modern data-centric designs—including microservices and cloud-native applications—demand a comprehensive, multi-layered approach to security for both private and public-facing APIs. About the book API Security in Action teaches you how to create secure APIs for any situation. By following this hands-on guide you'll build a social network API while mastering techniques for flexible multi-user security, cloud key management, and lightweight cryptography. When you're done, you'll be able to create APIs that stand up to complex threat models and hostile environments. What's inside Authentication Authorization Audit logging Rate limiting Encryption About the reader For developers with experience building RESTful APIs. Examples are in Java. About the author Neil Madden has in-depth knowledge of applied cryptography, application security, and current API security technologies. He holds a Ph.D. in Computer Science. Table of Contents PART 1 - FOUNDATIONS

1 What is API security? 2 Secure API development 3 Securing the Natter API PART 2 - TOKEN-BASED AUTHENTICATION 4 Session cookie authentication 5 Modern token-based authentication 6 Self-contained tokens and JWTs PART 3 - AUTHORIZATION 7 OAuth2 and OpenID Connect 8 Identity-based access control 9 Capability-based security and macaroons PART 4 - MICROSERVICE APIs IN KUBERNETES 10 Microservice APIs in Kubernetes 11 Securing service-to-service APIs PART 5 - APIs FOR THE INTERNET OF THINGS 12 Securing IoT communications 13 Securing IoT APIs

This book constitutes the refereed proceedings of the Second International Conference on Advanced Machine Learning Technologies and Applications, AMLTA 2014, held in Cairo, Egypt, in November 2014. The 49 full papers presented were carefully reviewed and selected from 101 initial submissions. The papers are organized in topical sections on machine learning in Arabic text recognition and assistive technology; recommendation systems for cloud services; machine learning in watermarking/authentication and virtual machines; features extraction and classification; rough/fuzzy sets and applications; fuzzy multi-criteria decision making; Web-based application and case-based reasoning construction; social networks and big data sets.

Advanced Computing, Networking and Informatics are three distinct and mutually

exclusive disciplines of knowledge with no apparent sharing/overlap among them. However, their convergence is observed in many real world applications, including cyber-security, internet banking, healthcare, sensor networks, cognitive radio, pervasive computing amidst many others. This two volume proceedings explore the combined use of Advanced Computing and Informatics in the next generation wireless networks and security, signal and image processing, ontology and human-computer interfaces (HCI). The two volumes together include 132 scholarly articles, which have been accepted for presentation from over 550 submissions in the Third International Conference on Advanced Computing, Networking and Informatics, 2015, held in Bhubaneswar, India during June 23–25, 2015.

Being highly flexible in building dynamic, database-driven web applications makes the PHP programming language one of the most popular web development tools in use today. It also works beautifully with other open source tools, such as the MySQL database and the Apache web server. However, as more web sites are developed in PHP, they become targets for malicious attackers, and developers need to prepare for the attacks. Security is an issue that demands attention, given the growing frequency of attacks on web sites. Essential PHP Security explains the most common types of attacks and how to

write code that isn't susceptible to them. By examining specific attacks and the techniques used to protect against them, you will have a deeper understanding and appreciation of the safeguards you are about to learn in this book. In the much-needed (and highly-requested) Essential PHP Security, each chapter covers an aspect of a web application (such as form processing, database programming, session management, and authentication). Chapters describe potential attacks with examples and then explain techniques to help you prevent those attacks. Topics covered include: Preventing cross-site scripting (XSS) vulnerabilities Protecting against SQL injection attacks Complicating session hijacking attempts You are in good hands with author Chris Shiflett, an internationally-recognized expert in the field of PHP security. Shiflett is also the founder and President of Brain Bulb, a PHP consultancy that offers a variety of services to clients around the world.

Seven Deadliest Microsoft Attacks explores some of the deadliest attacks made against Microsoft software and networks and how these attacks can impact the confidentiality, integrity, and availability of the most closely guarded company secrets. If you need to keep up with the latest hacks, attacks, and exploits effecting Microsoft products, this book is for you. It pinpoints the most dangerous hacks and exploits specific to Microsoft applications, laying out the anatomy of

these attacks including how to make your system more secure. You will discover the best ways to defend against these vicious hacks with step-by-step instruction and learn techniques to make your computer and network impenetrable. The book consists of seven chapters that cover the seven deadliest attacks against Microsoft software and networks: attacks against Windows passwords; escalation attacks; stored procedure attacks; mail service attacks; client-side ActiveX and macro attacks; Web service attacks; and multi-tier attacks. Each chapter provides an overview of a single Microsoft software product, how it is used, and some of the core functionality behind the software. Furthermore, each chapter explores the anatomy of attacks against the software, the dangers of an attack, and possible defenses to help prevent the attacks described in the scenarios. This book will be a valuable resource for those responsible for oversight of network security for either small or large organizations. It will also benefit those interested in learning the details behind attacks against Microsoft infrastructure, products, and services; and how to defend against them. Network administrators and integrators will find value in learning how attacks can be executed, and transfer knowledge gained from this book into improving existing deployment and integration practices. Windows Operating System-Password Attacks Active Directory-Escalation of Privilege SQL Server-Stored Procedure Attacks

Exchange Server-Mail Service Attacks Office-Macros and ActiveX Internet Information Serives(IIS)-Web Serive Attacks SharePoint-Multi-tier Attacks

This book concentrates on a wide range of advances related to IT cybersecurity management. The topics covered in this book include, among others, management techniques in security, IT risk management, the impact of technologies and techniques on security management, regulatory techniques and issues, surveillance technologies, security policies, security for protocol management, location management, GOS management, resource management, channel management, and mobility management. The authors also discuss digital contents copyright protection, system security management, network security management, security management in network equipment, storage area networks (SAN) management, information security management, government security policy, web penetration testing, security operations, and vulnerabilities management. The authors introduce the concepts, techniques, methods, approaches and trends needed by cybersecurity management specialists and educators for keeping current their cybersecurity management knowledge. Further, they provide a glimpse of future directions where cybersecurity management techniques, policies, applications, and theories are headed. The book is a rich collection of carefully selected and reviewed manuscripts written by diverse cybersecurity management experts in the listed fields and edited by prominent cybersecurity management researchers and specialists. Provides a professional development resource for educators and practitioners on the state-of-the-art cybersecurity management materials; Contributes towards the enhancement of the community outreach and engagement component of cybersecurity management; Introduces various

techniques, methods, and approaches adopted by cybersecurity management experts. Technology provides numerous opportunities for positive developments in modern society; however, these venues inevitably increase vulnerability to threats in online environments. Addressing issues of security in the cyber realm is increasingly relevant and critical to society. Threat Mitigation and Detection of Cyber Warfare and Terrorism Activities is a comprehensive reference source for the latest scholarly perspectives on countermeasures and related methods to enhance security and protection against criminal activities online. Highlighting a range of topics relevant to secure computing, such as parameter tampering, surveillance and control, and digital protests, this book is ideally designed for academics, researchers, graduate students, professionals, and practitioners actively involved in the expanding field of cyber security.

Since the spread of COVID-19, conferences have been canceled, schools have closed, and libraries around the world are facing difficult decisions on which services to offer and how, ranging from minimal restrictions to full closures. Depending on the country, state, or city, a government may have a different approach, sometimes ordering the closure of all institutions, others indicating that it's business as usual, and others simply leaving decisions up to library directors. All libraries worldwide have been affected, from university libraries to public library systems and national libraries. Throughout these closures, libraries continue to provide services to their communities, which has led to an emerging area of research on library services, new emerging technologies, and the advancements made to libraries during this global health crisis. The Handbook of Research on Library Response to the COVID-19 Pandemic consists of chapters that contain essential library services and emerging research

and technology that evolved and/or has continued during the COVID-19 pandemic, as well as the challenges and opportunities that have been undertaken as a result. The chapters provide in-depth research, surveys, and information on areas such as remote working, machine learning, data management, and the role of information during COVID-19. This book is a valuable reference tool for practitioners, stakeholders, researchers, academicians, and students who are interested in the current state of libraries during a pandemic and the future outlook.

This book constitutes the refereed proceedings of the 11th International Conference on Information Systems Security, ICISS 2015, held in Kolkata, India, in December 2015. The 24 revised full papers and 8 short papers presented together with 4 invited papers were carefully reviewed and selected from 133 submissions. The papers address the following topics: access control; attacks and mitigation; cloud security; crypto systems and protocols; information flow control; sensor networks and cognitive radio; and watermarking and steganography.

Website security made easy. This book covers the most common ways websites get hacked and how web developers can defend themselves. The world has changed. Today, every time you make a site live, you're opening it up to attack. A first-time developer can easily be discouraged by the difficulties involved with properly securing a website. But have hope: an army of security researchers is out there discovering, documenting, and fixing security flaws. Thankfully, the tools you'll need to secure your site are freely available and generally easy to use. Web Security for Developers will teach you how your websites are vulnerable to attack and how to protect them. Each chapter breaks down a major security vulnerability and explores a real-world attack, coupled with plenty of code to show you both the vulnerability and the fix.

You'll learn how to: • Protect against SQL injection attacks, malicious JavaScript, and cross-site request forgery • Add authentication and shape access control to protect accounts • Lock down user accounts to prevent attacks that rely on guessing passwords, stealing sessions, • or escalating privileges • Implement encryption • Manage vulnerabilities in legacy code • Prevent information leaks that disclose vulnerabilities • Mitigate advanced attacks like malvertising and denial-of-service As you get stronger at identifying and fixing vulnerabilities, you'll learn to deploy disciplined, secure code and become a better programmer along the way.

Presents information on how to analyze risks to your networks and the steps needed to select and deploy the appropriate countermeasures to reduce your exposure to physical and network threats. Also imparts the skills and knowledge needed to identify and counter some fundamental security risks and requirements, including Internet security threats and measures (audit trails IP sniffing/spoofing etc.) and how to implement security policies and procedures. In addition, this book covers security and network design with respect to particular vulnerabilities and threats. It also covers risk assessment and mitigation and auditing and testing of security systems as well as application standards and technologies required to build secure VPNs, configure client software and server operating systems, IPsec-enabled routers, firewalls and SSL clients. This comprehensive book will provide essential knowledge and skills needed to select, design and deploy a public key infrastructure (PKI) to secure existing and future applications. * Chapters contributed by leaders in the field cover theory and practice of computer security technology, allowing the reader to develop a new level of technical expertise * Comprehensive and up-to-date coverage of security issues facilitates learning and 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

This book constitutes the refereed proceedings of the 19th International Conference on Verification, Model Checking, and Abstract Interpretation, VMCAI 2018, held in Los Angeles, CA, USA, in January 2018.The 24 full papers presented together with the abstracts of 3 invited keynotes and 1 invited tutorial were carefully reviewed and selected from 43 submissions. VMCAI provides topics including: program verification, model checking, abstract interpretation, program synthesis, static analysis, type systems, deductive methods, program certification, decision procedures, theorem proving, program certification, debugging techniques, program transformation, optimization, and hybrid and cyber-physical systems.

This volume contains 73 papers presented at CSI 2014: Emerging ICT for Bridging the Future: Proceedings of the 49th Annual Convention of Computer Society of India. The convention was held during 12-14, December, 2014 at Hyderabad, Telangana, India. This volume contains papers mainly focused on Fuzzy Systems, Image Processing, Software Engineering, Cyber Security and Digital Forensic, E-Commerce, Big Data, Cloud Computing and ICT applications.

Vulnerability analysis, also known as vulnerability assessment, is a process that defines, identifies, and classifies the security holes, or vulnerabilities, in a computer, network, or application. In addition, vulnerability analysis can forecast the effectiveness of proposed countermeasures and evaluate their actual effectiveness after they are put into use. Vulnerability Analysis and Defense for the Internet provides packet captures, flow charts and pseudo code, which enable a user to identify if an application/protocol is vulnerable. This edited volume also includes case studies that discuss the latest exploits.

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The 4-volume set LNCS 11632 until LNCS 11635 constitutes the refereed proceedings of the 5th International Conference on Artificial Intelligence and Security, ICAIS 2019, which was held in New York, USA, in July 2019. The conference was formerly called “International Conference on Cloud Computing and Security” with the acronym ICCCS. The total of 230 full papers presented in this 4-volume proceedings was carefully reviewed and selected from 1529 submissions. The papers were organized in topical sections as follows: Part I: cloud computing; Part II: artificial intelligence; big data; and cloud computing and security; Part III: cloud computing and security; information hiding; IoT security; multimedia forensics; and encryption and cybersecurity; Part IV: encryption and cybersecurity.

What is SQL injection? -- Testing for SQL injection -- Reviewing code for SQL injection -- Exploiting SQL injection -- Blind SQL injection exploitation -- Exploiting the operating system -- Advanced topics -- Code-level defenses -- Platform level defenses -- Confirming and recovering from SQL injection attacks -- References.

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This Short Cut introduces you to how SQL injection vulnerabilities work, what makes applications vulnerable, and how to protect them. It helps you find your vulnerabilities with analysis and testing tools and describes simple approaches for fixing them in the most popular web-programming languages. This Short Cut also helps you protect your live applications by describing how to monitor for and block attacks before your data is stolen. Hacking is an increasingly criminal enterprise, and web applications are an attractive path to identity theft. If

the applications you build, manage, or guard are a path to sensitive data, you must protect your applications and their users from this growing threat.

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Master the art of detecting and averting advanced network security attacks and techniques About This Book Deep dive into the advanced network security attacks and techniques by leveraging tools such as Kali Linux 2, MetaSploit, Nmap, and Wireshark Become an expert in cracking WiFi passwords, penetrating anti-virus networks, sniffing the network, and USB hacks This step-by-step guide shows you how to confidently and quickly detect vulnerabilities for your network before the hacker does Who This Book Is For This book is for network security professionals, cyber security professionals, and Pentesters who are well versed with fundamentals of network security and now want to master it. So whether you're a cyber security professional, hobbyist, business manager, or student aspiring to becoming an ethical hacker or just want to learn more about the cyber security aspect of the IT industry, then this book is definitely for you. What You Will Learn Use SET to clone webpages including the login page Understand the concept of Wi-Fi cracking and use PCAP file to obtain passwords Attack using a USB as payload injector Familiarize yourself with the process of trojan attacks Use Shodan to identify honeypots, rogue access points, vulnerable webcams, and other exploits found in the database Explore various tools for wireless penetration testing and auditing Create an evil twin to intercept network traffic Identify human patterns in networks attacks In Detail Computer networks are increasing at an exponential rate and the most challenging factor organisations are currently facing is network security. Breaching a network is not considered

an ingenious effort anymore, so it is very important to gain expertise in securing your network. The book begins by showing you how to identify malicious network behaviour and improve your wireless security. We will teach you what network sniffing is, the various tools associated with it, and how to scan for vulnerable wireless networks. Then we'll show you how attackers hide the payloads and bypass the victim's antivirus. Furthermore, we'll teach you how to spoof IP / MAC address and perform an SQL injection attack and prevent it on your website. We will create an evil twin and demonstrate how to intercept network traffic. Later, you will get familiar with Shodan and Intrusion Detection and will explore the features and tools associated with it. Toward the end, we cover tools such as Yardstick, Ubertooth, Wifi Pineapple, and Alfa used for wireless penetration testing and auditing. This book will show the tools and platform to ethically hack your own network whether it is for your business or for your personal home Wi-Fi. Style and approach This mastering-level guide is for all the security professionals who are eagerly waiting to master network security skills and protecting their organization with ease. It contains practical scenarios on various network security attacks and will teach you how to avert these attacks.

Programmers: protect and defend your Web apps against attack! You may know ASP.NET, but if you don't understand how to secure your applications, you need this book. This vital guide explores the often-overlooked topic of teaching programmers how to design ASP.NET Web applications so as to prevent online thefts and security breaches. You'll start with a thorough look at ASP.NET 3.5 basics and see happens when you don't implement security, including some amazing examples. The book then delves into the development of a Web application, walking you through the vulnerable points at every phase. Learn to factor security in from the

ground up, discover a wealth of tips and industry best practices, and explore code libraries and more resources provided by Microsoft and others. Shows you step by step how to implement the very latest security techniques Reveals the secrets of secret-keeping—encryption, hashing, and not leaking information to begin with Delves into authentication, authorizing, and securing sessions Explains how to secure Web servers and Web services, including WCF and ASMX Walks you through threat modeling, so you can anticipate problems Offers best practices, techniques, and industry trends you can put to use right away Defend and secure your ASP.NET 3.5 framework Web sites with this must-have guide.

This book reports on the latest research and developments in the field of cybersecurity, placing special emphasis on personal security and new methods for reducing human error and increasing cyber awareness, as well as innovative solutions for increasing the security of advanced Information Technology (IT) infrastructures. It covers a broad range of topics, including methods for human training; novel Cyber-Physical and Process-Control Systems; social, economic, and behavioral aspects of cyberspace; issues concerning the cybersecurity index; security metrics for enterprises; risk evaluation, and many others. Based on the AHFE 2017 International Conference on Human Factors in Cybersecurity, held on July 17–21, 2017, in Los Angeles, California, USA, the book not only presents innovative cybersecurity technologies, but also discusses emerging threats, current gaps in the available systems, and future challenges that may be successfully overcome with the help of human factors research.

ASP.NET Web API is a key part of ASP.NET MVC 4 and the platform of choice for building RESTful services that can be accessed by a wide range of devices. Everything from JavaScript libraries to RIA plugins, RFID readers to smart phones can consume your services using

platform-agnostic HTTP. With such wide accessibility, securing your code effectively needs to be a top priority. You will quickly find that the WCF security protocols you're familiar with from .NET are less suitable than they once were in this new environment, proving themselves cumbersome and limited in terms of the standards they can work with. Fortunately, ASP.NET Web API provides a simple, robust security solution of its own that fits neatly within the ASP.NET MVC programming model and secures your code without the need for SOAP, meaning that there is no limit to the range of devices that it can work with – if it can understand HTTP, then it can be secured by Web API. These SOAP-less security techniques are the focus of this book.

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.
SQL Injection Attacks and DefenseElsevier
This book is an introduction and deep-dive into the many uses of dynamic SQL in Microsoft SQL Server. Dynamic SQL is key to large-scale searching based upon user-entered criteria. It's also useful in generating value-lists, in dynamic pivoting of data for business intelligence reporting, and for customizing database objects and querying their structure. Executing dynamic SQL is at the heart of applications such as business intelligence dashboards that need to be fluid and respond instantly to changing user needs as those users explore their data and view the results. Yet dynamic SQL is feared by many due to concerns over SQL injection attacks. Reading Dynamic SQL: Applications, Performance, and Security is your opportunity to learn and master an often misunderstood feature, including security and SQL injection. All aspects of security relevant to dynamic SQL are discussed in this book. You will learn many ways to save time and develop code more efficiently, and you will practice directly with security scenarios that threaten companies around the world every day. Dynamic SQL: Applications, Performance, and Security helps you bring the productivity and user-satisfaction of flexible and responsive applications to your organization safely and securely. Your organization's increased ability to respond to rapidly changing business scenarios will build competitive advantage in an increasingly crowded and competitive global marketplace. Discusses many applications of dynamic SQL, both simple and complex. Explains each example with demos that can be run at home and on your laptop. Helps you to identify when dynamic SQL can offer superior performance. Pays attention to security and best practices to ensure safety of your data. What You Will Learn Build flexible applications that respond fast to

changing business needs. Take advantage of unconventional but productive uses of dynamic SQL. Protect your data from attack through best-practices in your implementations. Know about SQL Injection and be confident in your defenses against it Run at high performance by optimizing dynamic SQL in your applications. Troubleshoot and debug dynamic SQL to ensure correct results. Who This Book is For Dynamic SQL: Applications, Performance, and Security is for developers and database administrators looking to hone and build their T-SQL coding skills. The book is ideal for advanced users wanting to plumb the depths of application flexibility and troubleshoot performance issues involving dynamic SQL. The book is also ideal for beginners wanting to learn what dynamic SQL is about and how it can help them deliver competitive advantage to their organizations.

Provides information on designing effective security mechanisms for e-commerce sites, covering such topics as cryptography, authentication, information classification, threats and attacks, and certification.

This book constitutes the refereed proceedings of the 30th IFIP WG 6.1 International Conference on Testing Software and Systems, ICTSS 2018, held in Cádiz, Spain, in October 2018. The 8 regular and 6 short papers presented were carefully reviewed and selected from 29 submissions. ICTSS is a series of international conferences addressing the conceptual, theoretic, and practical problems of testing software systems, including communication protocols, services, distributed platforms, middleware, embedded- and cyber-physical-systems, and security infrastructures.

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