Advanced Windows Exploitation Techniques

Contrary to popular belief, there has never been any shortage of Macintosh-related security issues. OS9 had issues that warranted attention. However, due to both ignorance and a lack of research, many of these issues never saw the light of day. No solid techniques were published for executing arbitrary code on OS9, and there are no notable legacy Macintosh exploits. Due to the combined lack of obvious vulnerabilities and accompanying exploits, Macintosh appeared to be a solid platform. Threats to Macintosh's OS X operating system are increasing in sophistication and number. Whether it is the exploitation of an increasing number of holes, use of rootkits for post-compromise concealment or disturbed denial of service, knowing why the system is vulnerable and understanding how to defend it is critical to computer security. Macintosh OS X Boot Process and Forensic Software All the power, all the tools, and all the geekery of Linux is present in Mac OS X. Shell scripts, X11 apps, processes, kernel extensions...it's a UNIX platform....Now, you can master the boot process, and Macintosh forensic software Look Back Before the Flood and Forward Through the 21st Century Threatscape Back in the day, a misunderstanding of Macintosh security was more or less industry-wide. Neither the administrators nor the attackers knew much about the platform. Learn from Kevin Finisterre how and why that has all changed! Malicious Macs: Malware and the Mac As OS X moves further from desktops, laptops, and servers into the world of consumer technology (iPhones, iPods, and so on), what are the implications for the further spread of malware and other security breaches? Find out from David Harley Malware Detection and the Mac Understand why the continuing insistence of vociferous Mac zealots that it "can't happen here" is likely to aid OS X exploitationg Mac OS X for Pen Testers With its BSD roots, super-slick graphical interface, and near-bulletproof reliability, Apple's Mac OS X provides a great platform for pen testing WarDriving and Wireless Penetration Testing with OS X Configure and utilize the KisMAC WLAN discovery tool to WarDrive. Next, use the information obtained during a WarDrive, to successfully penetrate a customer's wireless network Leopard and Tiger Evasion Follow Larry Hernandez through exploitation techniques, tricks, and features of both OS X Tiger and Leopard, using real-world scenarios for explaining and demonstrating the concepts behind them Encryption Technologies and OS X Apple has come a long way from the bleak days of OS9. THere is now a wide array of encryption choices within Mac OS X. Let Gareth Poreus show you what they are. Cuts through the hype with a serious discussion of the security vulnerabilities of the Mac OS X operating system Reveals techniques by which OS X can be "owned" Details procedures to defeat these techniques Offers a sober look at emerging threats and trends

Malware analysis is big business, and attacks can cost a company dearly. When malware breaches your defenses, you need to act quickly to cure current infections and prevent future ones from occurring. For those who want to stay ahead of the latest malware, Practical Malware Analysis will teach you the tools and techniques used by professional analysts. With this book as your guide, you'll be able to safely analyze, debug, and disassemble any malicious software that comes your way. You'll learn how to: –Set up a safe virtual environment to analyze malware –Quickly extract network signatures and host-based indicators –Use key analysis tools like IDA Pro, OllyDbg, and WinDbg –Overcome malware tricks like obfuscation, anti-disassembly, anti-debugging, and anti-virtual machine techniques –Use your newfound knowledge of Windows internals for malware analysis –Develop a methodology for unpacking malware and get practical experience with five of the most popular packers –Analyze special cases of malware with shellcode, C++, and 64-bit code Hands-on labs throughout the book challenge you to practice and synthesize your skills as you dissect real malware samples, and pages of detailed dissections offer an over-the-shoulder look at how the pros do it. You'll learn how to crack open malware to see how it really works, determine what damage it has done, thoroughly clean your network, and ensure that the malware never comes back. Malware analysis is a cat-and-mouse game with rules that are constantly changing, so make sure you have the fundamentals. Whether you're tasked with securing one network or a thousand networks, or you're making a living as a malware analyst, you'll find what you need to succeed in Practical Malware Analysis.

Penetration testers simulate cyber attacks to find security weaknesses in networks, operating systems, and applications. Information security experts worldwide use penetration techniques to evaluate enterprise defenses. In Penetration Testing, security expert, researcher, and trainer Georgia Weidman introduces you to the core skills and techniques that every pentester needs. Using a virtual machine–based lab that includes Kali Linux and vulnerable operating systems, you'll run through a series of practical lessons with tools like Wireshark, Nmap, and Burp Suite. As you follow along with the labs and launch attacks, you'll experience the key stages of an actual assessment—including information gathering, finding exploitable vulnerabilities, gaining access to systems, post exploitation, and more. Learn how to: –Crack passwords and wireless network keys with brute-forcing and wordlists –Test web applications for vulnerabilities –Use the Metasploit Framework to launch exploits and write your own Metasploit modules –Automate social-engineering attacks –Bypass antivirus software –Turn access to one machine into total control of the enterprise in the post exploitation phase You'll even explore writing your own exploits. Then it's on to mobile hacking—Weidman's particular area of research—with her tool, the Smartphone Pentest Framework. With its collection of hands-on lessons that cover key tools and strategies, Penetration Testing is the introduction that every aspiring hacker needs.

Cutting-edge techniques for finding and fixing critical security flaws Fortify your network and avert digital catastrophe with proven strategies from a team of security experts. Completely updated and featuring 13 new chapters, Gray Hat Hacking, The Ethical Hacker's Handbook, Fifth Edition explains the enemy's current weapons, skills, and tactics and offers field-tested remedies, case studies, and ready-to-try testing labs. Find out how hackers gain access, overtake network devices, script and inject malicious code, and plunder Web applications and browsers. Android-based exploits, reverse engineering techniques, and cyber law are thoroughly covered in this state-of-the-art resource. And the new topic of exploiting the Internet of things is introduced in this edition. •Build and launch spoofing exploits with Ettercap •Induce error conditions and crash software using fuzzers •Use advanced reverse engineering to exploit Windows and Linux software •Bypass Windows Access Control and memory protection schemes •Exploit web applications with Padding Oracle Attacks •Learn the use-after-free technique used in recent zero days •Hijack web browsers with advanced XSS attacks •Understand ransomware and how it takes control of your desktop •Dissect Android malware with JEB and DAD decompilers •Find one-day vulnerabilities with binary diffing •Exploit wireless systems with Software Defined Radios (SDR) •Exploit Internet of things devices •Dissect and exploit embedded devices •Understand bug bounty programs •Deploy next-generation honeypots •Dissect ATM malware and analyze common ATM attacks •Learn the business side of ethical hacking

Windows Exploitation Course

A Hands-On Introduction to Hacking

The Hands-On Guide to Dissecting Malicious Software

Second Edition

Learn Penetration Testing

Hands-On Red Team Tactics

The Penetration Tester's Guide

Evade antiviruses and bypass firewalls with the most widely used penetration testing frameworks Key Features Gain insights into the latest antivirus evasion techniques Set up a complete pentesting environment using Metasploit and virtual machines Discover a variety of tools and techniques that can be used with Kali Linux Book Description Penetration testing or ethical hacking is a legal and foolproof way to identify vulnerabilities in your system. With thorough penetration testing, you can secure your system against the majority of threats. This Learning Path starts with an in-depth explanation of what hacking and penetration testing is. You'll gain a deep understanding of classical SQL and command injection flaws, and discover ways to exploit these flaws to secure your system. You'll also learn how to create and customize payloads to evade antivirus software and bypass an organization's defenses. Whether it's exploiting server vulnerabilities and attacking client systems, or compromising mobile phones and installing backdoors, this Learning Path will guide you through all this and more to improve your defense against online attacks. By the end of this Learning Path, you'll have the knowledge and skills you need to invade a system and identify all its vulnerabilities. This Learning Path includes content from the following Packt products: Web Penetration Testing with Kali Linux - Third Edition by Juned Ahmed Ansari and Gilberto Najera-Gutierrez Metasploit Penetration Testing Cookbook - Third Edition by Abhinav Singh , Monika Agarwal, et al What you will learn Build and analyze Metasploit modules in Ruby Integrate Metasploit with other penetration testing tools Use server-side attacks to detect vulnerabilities in web servers and their applications Explore automated attacks such as fuzzing web applications Identify the difference between hacking a web application and network hacking Deploy Metasploit with the Penetration Testing Execution Standard (PTES) Use MSFvenom to generate payloads and backdoor files, and create shellcode Who this book is for This Learning Path is designed for security professionals, web programmers, and pentesters who want to learn vulnerability exploitation and make the most of the Metasploit framework. Some understanding of penetration testing and Metasploit is required, but basic system administration skills and the ability to read code are a must.

This book constitutes the proceedings of the 15th International Symposium on Research in Attacks, Intrusions and Defenses, former Recent Advances in Intrusion Detection, RAID 2012, held in Amsterdam, The Netherlands in September 2012. The 18 full and 12 poster papers presented were carefully reviewed and selected from 84 submissions. The papers address all current topics in virtualization, attacks and defenses, host and network security, fraud detection and underground economy, web security, intrusion detection.

Coding for Penetration Testers: Building Better Tools, Second Edition provides readers with an understanding of the scripting languages that are commonly used when developing tools for penetration testing, also guiding users through specific examples of custom tool development and the situations where such tools might be used. While developing a better understanding of each language, the book presents real-world scenarios and tool development that can be incorporated into a tester's toolkit. This completely updated edition focuses on an expanded discussion on the use of Powershell, and includes practical updates to all tools and coverage. Discusses the use of various scripting languages in penetration testing Presents step-by-step instructions on how to build customized penetration testing tools using Perl, Ruby, Python, and other languages Provides a primer on scripting, including, but not limited to, web scripting, scanner scripting, and exploitation scripting Includes all-new coverage of Powershell

Employ the most advanced pentesting techniques and tools to build highly-secured systems and environments About This Book Learn how to build your own pentesting lab environment to practice advanced techniques Customize your own scripts, and learn methods to exploit 32-bit and 64-bit programs Explore a vast variety of stealth techniques to bypass a number of protections when penetration testing Who This Book Is For This book is for anyone who wants to improve their skills in penetration testing. As it follows a step-by-step approach, anyone from a novice to an experienced security tester can learn effective techniques to deal with highly secured environments. Whether you are brand new or a seasoned expert, this book will provide you with the skills you need to successfully create, customize, and plan an advanced penetration test. What You Will Learn A step-by-step methodology to identify and penetrate secured environments Get to know the process to test network services across enterprise architecture when defences are in place Grasp different web application testing methods and how to identify web application protections that are deployed Understand a variety of concepts to exploit software Gain proven post-exploitation techniques to exfiltrate data from the target Get to grips with various stealth techniques to remain undetected and defeat the latest defences Be the first to find out the latest methods to bypass firewalls Follow proven approaches to record and save the data from tests for analysis In Detail The defences continue to improve and become more and more common, but this book will provide you with a number or proven techniques to defeat the latest defences on the networks. The methods and techniques contained will provide you with a powerful arsenal of best practices to increase your penetration testing successes. The processes and methodology will provide you techniques that will enable you to be successful, and the step by step instructions of information gathering and intelligence will allow you to gather the required information on the targets you are testing. The exploitation and post-exploitation sections will supply you with the tools you would need to go as far as the scope of work will allow you. The challenges at the end of each chapter are designed to challenge you and provide real-world situations that will hone and perfect your penetration testing skills. You will start with a review of several well respected penetration testing methodologies, and following this you will learn a step-by-step methodology of professional security testing, including stealth, methods of evasion, and obfuscation to perform your tests and not be detected! The final challenge will allow you to create your own complex layered architecture with defences and protections in place, and provide the ultimate testing range for you to practice the methods shown throughout the book. The challenge is as close to an actual penetration test assignment as you can get! Style and approach The book follows the standard penetration testing stages from start to finish with step-by-step examples. The book thoroughly covers penetration test expectations, proper scoping and planning, as well as enumeration and foot printing

Stack and Heap Overflows

OS X Exploits and Defense

Common Windows, Linux and Web Server Systems Hacking Techniques

Reversing

Advanced Windows Debugging

Learn the art of exploiting Windows and Linux systems

Kali Linux Penetration Testing Bible

This text introduces the spirit and theory of hacking as well as the science behind it all; it also provides some core techniques and tricks of hacking so you can think like a hacker, write your own hacks or thwart potential system attacks.

A Guide to Kernel Exploitation: Attacking the Core discusses the theoretical techniques and approaches needed to develop reliable and effective kernel-level exploits, and applies them to different operating systems, namely, UNIX derivatives, Mac OS X, and Windows. Concepts and tactics are presented categorically so that even when a specifically detailed vulnerability has been patched, the foundational information provided will help hackers in writing a newer, better attack; or help pen testers, auditors, and the like develop a more concrete design and defensive structure. The book is organized into four parts. Part I introduces the kernel and sets out the theoretical basis on which to build the rest of the book. Part II focuses on different operating systems and describes exploits for them that target various bug classes. Part III on remote kernel exploitation analyzes the effects of the remote scenario and presents new techniques to target remote issues. It includes a step-by-step analysis of the development of a reliable, one-shot, remote exploit for a real vulnerabilitya bug affecting the SCTP subsystem found in the Linux kernel. Finally, Part IV wraps up the analysis on kernel exploitation and looks at what the future may hold. Covers a range of operating system families — UNIX derivatives, Mac OS X, Windows Details common scenarios such as generic memory corruption (stack overflow, heap overflow, etc.) issues, logical bugs and race conditions Delivers the reader from user-land exploitation to the world of kernel-land (OS) exploits/attacks, with a particular focus on the steps that lead to the creation of successful techniques, in order to give to the reader something more than just a set of tricks

The definitive guide–fully updated for Windows 10 and Windows Server 2016 Delve inside Windows architecture and internals, and see how core components work behind the scenes. Led by a team of internals experts, this classic guide has been fully updated for Windows 10 and Windows Server 2016. Whether you are a developer or an IT professional, you'll get critical, insider perspectives on how Windows operates. And through hands-on experiments, you'll experience its internal behavior firsthand–knowledge you can apply to improve application design, debugging, system performance, and support. This book will help you: · Understand the Window system architecture and its most important entities, such as processes and threads · Examine how processes manage resources and threads scheduled for execution inside processes · Observe how Windows manages virtual and physical memory · Dig into the Windows I/O system and see how device drivers work and integrate with the rest of the system · Go inside the Windows security model to see how it manages access, auditing, and authorization, and learn about the new mechanisms in Windows 10 and Server 2016

Discover the next level of network defense and penetration testing with the Metasploit 5.0 framework Key FeaturesMake your network robust and resilient with this updated edition covering the latest pentesting techniquesExplore a variety of entry points to compromise a system while remaining undetectedEnhance your ethical hacking skills by performing penetration tests in highly secure environmentsBook Description Updated for the latest version of Metasploit, this book will prepare you to face everyday cyberattacks by simulating real-world scenarios. Complete with step-by-step explanations of essential concepts and practical examples, Mastering Metasploit will help you gain insights into programming Metasploit modules and carrying out exploitation, as well as building and porting various kinds of exploits in Metasploit. Giving you the ability to perform tests on different services, including databases, IoT, and mobile, this Metasploit book will help you get to grips with real-world, sophisticated scenarios where performing penetration tests is a challenge. You'll then learn a variety of methods and techniques to evade security controls deployed at a target's endpoint. As you advance, you'll script automated attacks using CORTANA and Armitage to aid penetration testing by developing virtual bots and discover how you can add custom functionalities in Armitage. Following real-world case studies, this book will take you on a journey through client-side attacks using Metasploit and various scripts built on the Metasploit 5.0 framework. By the end of the book, you'll have developed the skills you need to work confidently with efficient exploitation techniques What you will learnDevelop advanced and sophisticated auxiliary, exploitation, and post-exploitation modulesLearn to script automated attacks using CORTANATest services such as databases, SCADA, VoIP, and mobile devicesAttack the client side with highly advanced pentesting techniquesBypass modern protection mechanisms, such as antivirus, IDS, and firewallsImport public exploits to the Metasploit FrameworkLeverage C and Python programming to effectively evade endpoint protectionWho this book is for If you are a professional penetration tester, security engineer, or law enforcement analyst with basic knowledge of Metasploit, this book will help you to master the Metasploit framework and guide you in developing your exploit and module development skills. Researchers looking to add their custom functionalities to Metasploit will find this book useful. As Mastering Metasploit covers Ruby programming and attack scripting using Cortana, practical knowledge of Ruby and Cortana is required.

Mastering Metasploit

Tribal Knowledge from the Best in Offensive Cybersecurity

Research in Attacks, Intrusions and Defenses

Windows Internals, Part 1

Hands on Hacking

The Shellcoder's Handbook

Discovering and Exploiting Security Holes

"This book discusses non-distributed operating systems that benefit researchers, academicians, and practitioners"--Provided by publisher.

A comprehensive and detailed, step by step tutorial guide that takes you through important aspects of the Metasploit framework. If you are a penetration tester, security engineer, or someone who is looking to extend their penetration testing skills with Metasploit, then this book is ideal for you. The readers ofthis book must have a basic knowledge of using Metasploit. They are also expected to have knowledge of exploitation and an indepth understanding of object-oriented programming languages.

A highly detailed guide to performing powerful attack vectors in many hands-on scenarios and defending significant security flaws in your company's infrastructure Key Features Advanced exploitation techniques to breach modern operating systems and complex network devices Learn about Docker breakouts, Active Directory delegation, and CRON jobs Practical use cases to deliver an intelligent endpoint-protected system Book Description It has always been difficult to gain hands-on experience and a comprehensive understanding of advanced penetration testing techniques and vulnerability assessment and management. This book will be your one-stop solution to compromising complex network devices and modern operating systems. This book provides you with advanced penetration testing techniques that will help you exploit databases, web and application servers, switches or routers, Docker, VLAN, VoIP, and VPN. With this book, you will explore exploitation abilities such as offensive PowerShell tools and techniques, CI servers, database exploitation, Active Directory delegation, kernel exploits, cron jobs, VLAN hopping, and Docker breakouts. Moving on, this book will not only walk you through managing vulnerabilities, but will also teach you how to ensure endpoint protection. Toward the end of this book, you will also discover post-exploitation tips, tools, and methodologies to help your organization build an intelligent security system. By the end of this book, you will have mastered the skills and methodologies needed to breach infrastructures and provide complete endpoint protection for your system. What you will learn Exposure to advanced infrastructure penetration testing techniques and methodologies Gain hands-on experience of penetration testing in Linux system vulnerabilities and memory exploitation Understand what it takes to break into enterprise networks Learn to secure the configuration management environment and continuous delivery pipeline Gain an understanding of how to exploit networks and IoT devices Discover real-world, post-exploitation techniques and countermeasures Who this book is for If you are a system administrator, SOC analyst, penetration tester, or a network engineer and want to take your penetration testing skills and security knowledge to the next level, then this book is for you. Some prior experience with penetration testing tools and knowledge of Linux and Windows command-line syntax is beneficial.

Your ultimate guide to pentesting with Kali Linux Kali is a popular and powerful Linux distribution used by cybersecurity professionals around the world. Penetration testers must master Kali's varied library of tools to be effective at their work. The Kali Linux Penetration Testing Bible is the hands-on and methodology guide for pentesting with Kali. You'll discover everything you need to know about the tools and techniques hackers use to gain access to systems like yours so you can erect reliable defenses for your virtual assets. Whether you're new to the field or an established pentester, you'll find what you need in this comprehensive guide. Build a modern dockerized environment Discover the fundamentals of the bash language in Linux Use a variety of effective techniques to find vulnerabilities (OSINT, Network Scan, and more) Analyze your findings and identify false positives and uncover advanced subjects, like buffer overflow, lateral movement, and privilege escalation Apply practical and efficient pentesting workflows Learn about Modern Web Application Security Secure SDLC Automate your penetration testing with Python

Coding for Penetration Testers

Metasploit Penetration Testing Cookbook

Improving your Penetration Testing Skills

A practical guide to mastering Red Team operations

15th International Symposium, RAID 2012, Amsterdam, The Netherlands, September 12-14, 2012, Proceedings

Advanced Penetration Testing for Highly-Secured Environments

The complete guide to today's hard-to-defend chained attacks: performing them and preventing them Nowadays, it's rare for malicious hackers to rely on just one exploit or tool; instead, they use "chained" exploits that integrate multiple forms of attack to achieve their goals. Chained exploits are far more complex and far more difficult to defend. Few security or hacking books cover them well and most don't cover them at all. Now there's a book that brings together start-to-finish information about today's most widespread chained exploits—both how to perform them and how to prevent them. Chained Exploits demonstrates this advanced hacking attack technique through detailed examples that reflect real-world attack strategies, use today's most common attack tools, and focus on actual high-value targets, including credit card and healthcare data. Relentlessly thorough and realistic, this book covers the full spectrum of attack avenues, from wireless networks to physical access and social engineering. Writing for security, network, and other IT professionals, the authors take you through each attack, one step at a time, and then introduce today's most effective countermeasures– both technical and human. Coverage includes: Constructing convincing new phishing attacks Discovering which sites other Web users are visiting Wreaking havoc on IT security via wireless networks Disrupting competitors' Web sites Performing—and preventing—corporate espionage Destroying secure files Gaining access to private healthcare records Attacking the viewers of social networking pages Creating entirely new exploits and more Andrew Whitaker, Director of Enterprise InfoSec and Networking for Training Camp, has been featured in The Wall Street Journal and BusinessWeek. He coauthored Penetration Testing and Network Defense. Andrew was a winner of EC Council's Instructor of Excellence Award. Keatron Evans is President and Chief Security Consultant of Blink Digital Security, LLC, a trainer for Training Camp, and winner of EC Council's Instructor of Excellence Award. Jack B. Voth specializes in penetration testing, vulnerability assessment, and perimeter security. He co-owns The Client Server, Inc., and teaches for Training Camp throughout the United States and abroad. informit.com/aw Cover photograph © Corbis / Jupiter Images

A Trojan horse or Trojan is a type of malware that is often disguised as legitimate software. Trojans can be employed by cyber-thieves and hackers trying to gain access to users' systems. Users are typically tricked by some form of social engineering into loading and executing Trojans on their systems. Once activated, Trojans can enable cyber-criminals to spy on you, steal your sensitive data, and gain backdoor access to your system. A computer virus is a type of computer program that, when executed, replicates itself by modifying other computer programs and inserting its own code. If this replication succeeds, the affected areas are then said to be "infected" with a computer virus. Computer viruses generally require a host program. System hacking is defined as the compromise of computer systems and software to access the target computer and steal or misuse their sensitive information. Here the malicious hacker exploits the weaknesses in a computer system or network to gain unauthorized access to its data or take illegal advantage. Web content is generated in real time by a software application running at server-side. So hackers attack on the web server to steal credential information, passwords, and business information by using DoS (DDos) attacks, SYN flood, ping flood, port scan, sniffing attacks, and social engineering attacks. This report covers the common techniques and tools used for System, Windows, Linux and Web Server Hacking. The report contains from the following sections: · Part A: Setup Lab: · Part B: Trojens and Backdoors and Viruses · Part C: System Hacking · Part D: Hacking Web Servers · Part E: Windows and Linux Hacking

Master the art of identifying and exploiting vulnerabilities with Metasploit, Empire, PowerShell, and Python, turning Kali Linux into your fighter cockpit Key Features Map your client's attack surface with Kali Linux Discover the craft of shellcode injection and managing multiple compromises in the environment Understand both the attacker and the defender mindset Book Description Let's be honest—security testing can get repetitive. If you're ready to break out of the routine and embrace the art of penetration testing, this book will help you to distinguish yourself to your clients. This pen testing book is your guide to learning advanced techniques to attack Windows and Linux environments from the indispensable platform, Kali Linux. You'll work through core network hacking concepts and advanced exploitation techniques that leverage both technical and human factors to maximize success. You'll also explore how to leverage public resources to learn more about your target, discover potential targets, analyze them, and gain a foothold using a variety of exploitation techniques while dodging defenses like antivirus and firewalls. The book focuses on leveraging target resources, such as PowerShell, to execute powerful and difficult-to-detect attacks. Along the way, you'll enjoy reading about how these methods work so that you walk away with the necessary knowledge to explain your findings to clients from all backgrounds. Wrapping up with post-exploitation strategies, you'll be able to go deeper and keep your access. By the end of this book, you'll be well-versed in identifying vulnerabilities within your clients' environments and providing the necessary insight for proper remediation. What you will learn Get to know advanced pen testing techniques with Kali Linux Gain an understanding of Kali Linux tools and methods from behind the scenes Get to grips with the exploitation of Windows and Linux clients and servers Understand advanced Windows concepts and protection and bypass them with Kali and living-off-the-land methods Get the hang of sophisticated attack frameworks such as Metasploit and Empire Become adept in generating and analyzing shellcode Build and tweak attack scripts and modules Who this book is for This book is for penetration testers, information technology professionals, cybersecurity professionals and students, and individuals breaking into a pentesting role after demonstrating advanced skills in boot camps. Prior experience with Windows, Linux, and networking is necessary.

Explore the latest ethical hacking tools and techniques to perform penetration testing from scratch Key FeaturesLearn to compromise enterprise networks with Kali LinuxGain comprehensive insights into security concepts using advanced real-life hacker techniquesUse Kali Linux in the same way ethical hackers and penetration testers do to gain control of your environmentBook Description Kali Linux is the most popular and advanced penetration testing Linux distribution within the cybersecurity industry. Using Kali Linux, a cybersecurity professional will be able to discover and exploit various vulnerabilities and perform advanced penetration testing on both enterprise wired and wireless networks. This book is a comprehensive guide for those who are new to Kali Linux and penetration testing that will have you up to speed in no time. Using real-world scenarios, you'll understand how to set up a lab and explore core penetration testing concepts. Throughout this book, you'll focus on information gathering and even discover different vulnerability assessment tools bundled in Kali Linux. You'll learn to discover target systems on a network, identify security flaws on devices, exploit security weaknesses and gain access to networks, set up Command and Control (C2) operations, and perform web application penetration testing. In this updated second edition, you'll be able to compromise Active Directory and exploit enterprise networks. Finally, this book covers best practices for performing complex web penetration testing techniques in a highly secured environment. By the end of this Kali Linux book, you'll have gained the skills to perform advanced penetration testing on enterprise networks using Kali Linux. What you will learnExplore the fundamentals of ethical hackingUnderstand how to install and configure Kali LinuxPerform asset and network discovery techniquesFocus on how to perform vulnerability assessmentsExploit the trust in Active Directory domain servicesPerform advanced exploitation with Command and Control (C2) techniquesImplement advanced wireless hacking techniquesBecome well-versed with exploiting vulnerable web applicationsWho this book is for This pentesting book is for students, trainers, cybersecurity professionals, cyber enthusiasts, network security professionals, ethical hackers, penetration testers, and security engineers. If you do not have any prior knowledge and are looking to become an expert in penetration testing using the Kali Linux operating system (OS), then this book is for you.

Building Better Tools

Windows and Linux Penetration Testing from Scratch

A Guide to Kernel Exploitation

Building a Pentesting Lab for Wireless Networks

Advanced Infrastructure Penetration Testing

Practical Malware Analysis

Hands-On Penetration Testing on Windows

Your one-stop guide to learning and implementing Red Team tactics effectively Key FeaturesTarget a complex enterprise environment in a Red Team activityDetect threats and respond to them with a real-world cyber-attack simulationExplore advanced penetration testing tools and techniquesBook Description Red Teaming is used to enhance security by performing simulated attacks on an organization in order to detect network and system vulnerabilities. Hands-On Red Team Tactics starts with an overview of pentesting and Red Teaming, before giving you an introduction to few of the latest pentesting tools. We will then move on to exploring Metasploit and getting to grips with Armitage. Once you have studied the fundamentals, you will learn how to use Cobalt Strike and how to set up its team server. The book introduces some common lesser known techniques for pivoting and how to pivot over SSH, before using Cobalt Strike to pivot. This comprehensive guide demonstrates advanced methods of post-exploitation using Cobalt Strike and introduces you to Command and Control (C2) servers and redirectors. All this will help you achieve persistence using beacons and data exfiltration, and will also give you the chance to run through the methodology to use Red Team activity tools such as Empire during a Red Team activity on Active Directory and Domain Controller. In addition to this, you will explore maintaining persistent access, staying untraceable, and getting reverse connections over different C2 covert channels. By the end of this book, you will have learned about advanced penetration testing tools, techniques to get reverse shells over encrypted channels, and processes for post-exploitation. What you will learnGet started with red team engagements using lesser-known methodsExplore intermediate and advanced levels of post-exploitation techniquesGet acquainted with all the tools and frameworks included in the Metasploit frameworkDiscover the art of getting stealthy access to systems via Red TeamingUnderstand the concept of redirectors to add further anonymity to your C2Get to grips with different uncommon techniques for data exfiltrationWho this book is for Hands-On Red Team Tactics is for you if you are an IT professional, pentester, security consultant, or ethical hacker interested in the IT security domain and wants to go beyond Penetration Testing. Prior knowledge of penetration testing is beneficial.

The First In-Depth, Real-World, Insider's Guide to Powerful Windows Debugging For Windows developers, few tasks are more challenging than debugging--or more crucial. Reliable and realistic information about Windows debugging has always been scarce. Now, with over 15 years of experience two of Microsoft's system-level developers present a thorough and practical guide to Windows debugging ever written. Mario Hewardt and Daniel Pravat cover debugging throughout the entire application lifecycle and show how to make the most of the tools currently available--including Microsoft's powerful native debuggers and third-party solutions. To help you find real solutions fast, this book is organized around real-world debugging scenarios. Hewardt and Pravat use detailed code examples to illuminate the complex debugging challenges professional developers actually face. From core Windows operating system concepts to security, Windows® Vista™ and 64-bit debugging, they address emerging topics head-on–and nothing is ever oversimplified or glossed over!

Build your own secure enterprise or home penetration testing lab to dig into the various hacking techniques About This Book Design and build an extendable penetration testing lab with wireless access suitable for home and enterprise use Fill the lab with various components and customize them according to your own needs and skill level Secure your lab from unauthorized access and external attacks Who This Book Is For If you are a beginner or a security professional who wishes to learn to build a home or enterprise lab environment where you can safely practice penetration testing techniques and improve your hacking skills, then this book is for you. No prior penetration testing experience is required, as the lab environment is suitable for various skill levels and is used for a wide range of techniques from basic to advance. Whether you are brand new to online learning or you are a seasoned expert, you will be able to set up your own hacking playground depending on your tasks. What You Will Learn Determine your needs and choose the appropriate lab components for them Build a virtual or hardware lab network Imitate an enterprise network and prepare intentionally vulnerable software and services Secure wired and wireless access to your lab Choose a penetration testing framework according to your needs Arm your own wireless hacking platform Get to know the methods to create a strong defense mechanism for your system In Detail Starting with the basics of wireless networking and its associated risks, we will guide you through the stages of creating a penetration testing lab with wireless access and preparing your wireless penetration testing machine. This book will guide you through configuring hardware and virtual network devices, filling the lab network with applications and security solutions, and making it look and work like a real enterprise network. The resulting lab protected with WPA-Enterprise will let you practice most of the attack techniques used in penetration testing projects. Along with a review of penetration testing frameworks, this book is also a detailed manual on preparing a platform for wireless penetration testing. By the end of this book, you will be at the point when you can practice, and research without worrying about your lab environment for every task. Style and approach This is an easy-to-follow guide full of hands-on examples and recipes. Each topic is explained thoroughly and supplies you with the necessary configuration settings. You can pick the recipes you want to follow depending on the task you need to perform.

This course gives intrinsic details of exploiting stack and heap overflows in Windows software applications. It walks the students through all the steps that are necessary for bug hunting from reverse engineering to fuzzing to actually writing exploits in Windows software applications. It also teaches how a student should actually go about exploiting these vulnerabilities and bypassing the various Windows protection mechanisms. Overall, this is a course worth the money. It is one of the best tutorial for beginners as well as people who are inclined to understand the inner details of Windows protection mechanisms and bypass them.

Advanced Operating Systems and Kernel Applications: Techniques and Technologies

Advanced Hacking Attacks from Start to Finish
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Mastering Windows Security and Hardening
Harness the power of pen testing with Kali Linux for unbeatable hard-hitting results
Burp Suite Essentials
Gray Hat Hacking: The Ethical Hacker's Handbook, Fifth Edition

If you are interested in learning how to test web applications and the web part of mobile applications using Burp, then this is the book for you. It is specifically designed to meet your needs if you have basic experience in using Burp and are now aiming to become a professional Burp user.

Hands-On Penetration Testing on WindowsUnleash Kali Linux, PowerShell, and Windows debugging tools for security testing and analysisPackt Publishing Ltd

Get up to speed with various penetration testing techniques and resolve security threats of varying complexity Key FeaturesEnhance your penetration testing skills to tackle security threatsLearn to gather information, find vulnerabilities, and exploit enterprise defensesNavigate secured systems with the most up-to-date version of Kali Linux (2019.1) and Metasploit (5.0.0)Book Description Sending information via the internet is not entirely private, as evidenced by the rise in hacking, malware attacks, and security threats. With the help of this book, you'll learn crucial penetration testing techniques to help you evaluate enterprise defenses. You'll start by understanding each stage of pentesting and deploying target virtual machines, including Linux and Windows. Next, the book will guide you through performing intermediate penetration testing in a controlled environment. With the help of practical use cases, you'll also be able to implement your learning in real-world scenarios. By studying everything from setting up your lab, information gathering and password attacks, through to social engineering and post exploitation, you'll be able to successfully overcome security threats. The book will even help you leverage the best tools, such as Kali Linux, Metasploit, Burp Suite, and other open source pentesting tools to perform these techniques. Toward the later chapters, you'll focus on best practices to quickly resolve security threats. By the end of this book, you'll be well versed with various penetration testing techniques so as to be able to tackle security threats effectively What you will learnPerform entry-level penetration tests by learning various concepts and techniquesUnderstand both common and not-so-common vulnerabilities from an attacker's perspectiveGet familiar with intermediate attack methods that can be used in real-world scenariosUnderstand how vulnerabilities are created by developers and how to fix some of them at source code levelBecome well versed with basic tools for ethical hacking purposesExploit known vulnerable services with tools such as MetasploitWho this book is for If you're just getting started with penetration testing and want to explore various security domains, this book is for you. Security professionals, network engineers, and amateur ethical hackers will also find this book useful. Prior knowledge of penetration testing and ethical hacking is not necessary.

Want Red Team offensive advice from the biggest cybersecurity names in the industry? Join our tribe. The Tribe of Hackers team is back with a new guide packed with insights from dozens of the world's leading Red Team security specialists. With their deep knowledge of system vulnerabilities and innovative solutions for correcting security flaws, Red Team hackers are in high demand. Tribe of Hackers Red Team: Tribal Knowledge from the Best in Offensive Cybersecurity takes the valuable lessons and popular interview format from the original Tribe of Hackers and dives deeper into the world of Red Team security with expert perspectives on issues like penetration testing and ethical hacking. This unique guide includes inspiring interviews from influential security specialists, including David Kennedy, Rob Fuller, Jayson E. Street, and Georgia Weidman, who share their real-world learnings on everything from Red Team tools and tactics to careers and communication, presentation strategies, legal concerns, and more Learn what it takes to secure a Red Team job and to stand out from other candidates Discover how to hone your hacking skills while staying on the right side of the law Get tips for collaborating on documentation and reporting Explore ways to garner support from leadership on your security proposals Identify the most important control to prevent compromising your network Uncover the latest tools for Red Team offensive security Whether you're new to Red Team security, an experienced practitioner, or ready to lead your own team, Tribe of Hackers Red Team has the real-world advice and practical guidance you need to advance your information security career and ready yourself for the Red Team offensive.

Threat Modeling

Android Hacker's Handbook

Exploit systems, cover your tracks, and bypass security controls with the Metasploit 5.0 framework, 4th Edition

Tribe of Hackers Red Team

System architecture, processes, threads, memory management, and more

Strengthen your defense against web attacks with Kali Linux and Metasploit

Exploiting Software: How To Break Code

A fast, hands-on introduction to offensive hacking techniques Hands-On Hacking teaches readers to see through the eyes of their adversary and apply hacking techniques to better understand real-world risks to computer networks and data. Readers will benefit from the author's years of experience in the field hacking into computer networks and ultimately training others in the art of cyber-attacks. This book holds no punches and explains the tools, tactics and procedures used by ethical hackers and criminal crackers alike. We will take you on a journey through a hacker's perspective when focused on the computer infrastructure of a target company, exploring how to access the servers and data. Once the information gathering stage is complete, you'll look for flaws and their known exploits—including tools developed by real-world government financed state-actors. • An introduction to the same hacking techniques that malicious hackers will use against an organization • Written by infosec experts with proven history of publishing vulnerabilities and highlighting security flaws • Based on the tried and tested material used to train hackers all over the world in the art of breaching networks • Covers the fundamental basics of how computer networks are inherently vulnerable to attack, teaching the student how to apply hacking skills to uncover vulnerabilities We cover topics of breaching a company from the external network perimeter, hacking internal enterprise systems and web application vulnerabilities. Delving into the basics of exploitation with real-world practical examples, you won't find any hypothetical academic only attacks here. From start to finish this book will take the student through the steps necessary to breach an organization to improve its security. Written by world-renowned cybersecurity experts and educators, Hands-On Hacking teaches entry-level professionals seeking to learn ethical hacking techniques. If you are looking to understand penetration testing and ethical hacking, this book takes you from basic methods to advanced techniques in a structured learning format.

The Metasploit Framework makes discovering, exploiting, and sharing vulnerabilities quick and relatively painless. But while Metasploit is used by security professionals everywhere, the tool can be hard to grasp for first-time users. Metasploit: The Penetration Tester's Guide fills this gap by teaching you how to harness the Framework and interact with the vibrant community of Metasploit contributors. Once you've built your foundation for penetration testing, you'll learn the Framework's conventions, interfaces, and module system as you launch simulated attacks. You'll move on to advanced penetration testing techniques, including network reconnaissance and enumeration, client-side attacks, wireless attacks, and targeted social-engineering attacks. Learn how to: –Find and exploit unmaintained, misconfigured, and unpatched systems –Perform reconnaissance and find valuable information about your target –Bypass anti-virus technologies and circumvent security controls –Integrate Nmap, NeXpose, and Nessus with Metasploit to automate discovery –Use the Meterpreter shell to launch further attacks from inside the network –Harness standalone Metasploit utilities, third-party tools, and plug-ins –Learn how to write your own Meterpreter post exploitation modules and scripts You'll even touch on exploit discovery for zero-day research, write a fuzzer, port existing exploits into the Framework, and learn how to cover your tracks. Whether your goal is to secure your own networks or to put someone else's to the test, Metasploit: The Penetration Tester's Guide will take you there and beyond.

This book follows a Cookbook style with recipes explaining the steps for penetration testing with WLAN, VOIP, and even cloud computing. There is plenty of code and commands used to make your learning curve easy and quick.This book targets both professional penetration testers as well as new users of Metasploit, who wish to gain expertise over the framework and learn an additional skill of penetration testing, not limited to a particular OS. The book requires basic knowledge of scanning, exploitation, and the Ruby language.

Provides information on finding security holes in C-based software and how to fix and prevent new security holes from happening.

Understand the art of penetration testing and develop your white hat hacker skills

Designing for Security

Secure and protect your Windows environment from intruders, malware attacks, and other cyber threats

Hacking- The art Of Exploitation

Privilege Escalation Techniques

Penetration Testing

Defend your systems from methodized and proficient attackers

Enumerate and exploit Linux or Windows systems and escalate your privileges to the highest level Key Features Discover a range of techniques to escalate privileges on Windows and Linux systems Understand the key differences between Windows and Linux privilege escalation Explore unique exploitation challenges in each chapter provided in the form of pre-built VMs Book Description Privilege escalation is a crucial step in the exploitation life cycle of a penetration tester. It helps penetration testers to set up persistence and facilitates lateral movement. This book is one of a kind, covering a range of privilege escalation techniques and tools for both Windows and Linux systems. The book uses virtual environments that you can download to test and run tools and techniques. Each chapter will feature an exploitation challenge in the form of pre-built virtual machines (VMs). As you progress, you will learn how to enumerate and exploit a target Linux or Windows system. This privilege escalation book then demonstrates how you can escalate your privileges to the highest level. By the end of this book, you will have gained the skills you need to be able to perform local kernel exploits, escalate privileges through vulnerabilities in services, maintain persistence, and enumerate information from the target such as passwords and password hashes. What you will learn Understand the privilege escalation process and set up a pentesting lab Gain an initial foothold on the system Perform local enumeration on target systems Exploit kernel vulnerabilities on Windows and Linux systems Perform privilege escalation through password looting and finding stored credentials Get to grips with performing impersonation attacks Exploit Windows services such as the secondary logon handle service to escalate Windows privileges Escalate Linux privileges by exploiting scheduled tasks and SUID binaries Who this book is for This Windows and Linux privilege escalation book is for intermediate-level cybersecurity students and pentesters who are interested in learning how to perform various privilege escalation techniques on Windows and Linux systems, which includes exploiting bugs, design flaws, and more. An intermediate-level understanding of Windows and Linux systems along with fundamental cybersecurity knowledge is expected.

This much-anticipated revision, written by the ultimate group of top security experts in the world, features 40 percent new content on how to find security holes in any operating system or application New material addresses the many new exploitation techniques that have been discovered since the first edition, including attacking "unbreakable" software packages such as McAfee's Entercept, Mac OS X, XP, Office 2003, and Vista Also features the first-ever published information on exploiting Cisco's IOS, with content that has never before been explored The companion Web site features downloadable code files

Enhance Windows security and protect your systems and servers from various cyber attacks Key Features Protect your device using a zero-trust approach and advanced security techniques Implement efficient security measures using Microsoft Intune, Configuration Manager, and Azure solutions Understand how to create cyber-threat defense solutions effectively Book Description Are you looking for effective ways to protect Windows-based systems from being compromised by unauthorized users? Mastering Windows Security and Hardening is a detailed guide that helps you gain expertise when implementing efficient security measures and creating robust defense solutions. We will begin with an introduction to Windows security fundamentals, baselining, and the importance of building a baseline for an organization. As you advance, you will learn how to effectively secure and harden your Windows-based system, protect identities, and even manage access. In the concluding chapters, the book will take you through testing, monitoring, and security operations. In addition to this, you'll be equipped with the tools you need to ensure compliance and continuous monitoring through security operations. By the end of this book, you'll have developed a full understanding of the processes and tools involved in securing and hardening your Windows environment. What you will learn Understand baselining and learn the best practices for building a baseline Get to grips with identity management and access management on Windows-based systems Delve into the device administration and remote management of Windows-based systems Explore security tips to harden your Windows server and keep clients secure Audit, assess, and test to ensure controls are successfully applied and enforced Monitor and report activities to stay on top of vulnerabilities Who this book is for This book is for system administrators, cybersecurity and technology professionals, solutions architects, or anyone interested in learning how to secure their Windows-based systems. A basic understanding of Windows security concepts, Intune, Configuration Manager, Windows PowerShell, and Microsoft Azure will help you get the best out of this book.

Master the art of identifying vulnerabilities within the Windows OS and develop the desired solutions for it using Kali Linux. Key Features Identify the vulnerabilities in your system using Kali Linux 2018.02 Discover the art of exploiting Windows kernel drivers Get to know several bypassing techniques to gain control of your Windows environment Book Description Windows has always been the go-to platform for users around the globe to perform administration and ad hoc tasks, in settings that range from small offices to global enterprises, and this massive footprint makes securing Windows a unique challenge. This book will enable you to distinguish yourself to your clients. In this book, you'll learn advanced techniques to attack Windows environments from the indispensable toolkit that is Kali Linux. We'll work through core network hacking concepts and advanced Windows exploitation techniques, such as stack and heap overflows, precision heap spraying, and kernel exploitation, using coding principles that allow you to leverage powerful Python scripts and shellcode. We'll wrap up with post-exploitation strategies that enable you to go deeper and keep your access. Finally, we'll introduce kernel hacking fundamentals and fuzzing testing, so you can discover vulnerabilities and write custom exploits. By the end of this book, you'll be well-versed in identifying vulnerabilities within the Windows OS and developing the desired solutions for them. What you will learn Get to know advanced pen testing techniques with Kali Linux Gain an understanding of Kali Linux tools and methods from behind the scenes See how to use Kali Linux at an advanced level Understand the exploitation of Windows kernel drivers Understand advanced Windows concepts and protections, and how to bypass them using Kali Linux Discover Windows exploitation techniques, such as stack and heap overflows and kernel exploitation, through coding principles Who this book is for This book is for penetration testers, ethical hackers, and individuals breaking into the pentesting role after demonstrating an advanced skill in boot camps. Prior experience with Windows exploitation, Kali Linux, and some Windows debugging tools is necessary

Secrets of Reverse Engineering

Perform advanced penetration testing using Nmap, Metasploit, Aircrack-ng, and Empire

Attacking the Core

The Ultimate Kali Linux Book

Techniques and Technologies

Own it...Just Like Windows or Linux!

Unleash Kali Linux, PowerShell, and Windows debugging tools for security testing and analysis

The only security book to be chosen as a Dr. Dobbs Jolt Award Finalist since Bruce Schneier's Secrets and Lies and Applied Cryptography! Adam Shostack is responsible for security development lifecycle threat modeling at Microsoft and is one of a handful of threat modeling experts in the world. Now, he is sharing his considerable expertise into this unique book. With pages of specific actionable advice, he details how to build better security into the design of systems, software, or services from the outset. You'll explore various threat modeling approaches, find out how to test your designs against threats, and learn effective ways to address threats that have been validated at Microsoft and other top companies. Systems security managers, you'll find tools and a framework for structured thinking about what can go wrong. Software developers, you'll appreciate the jargon-free and accessible introduction to this essential skill. Security professionals, you'll learn to discern changing threats and discover the easiest ways to adopt a structured approach to threat modeling. Provides a unique how-to for security and software developers who need to design secure products and systems and test their designs Explains how to threat model and explores various threat modeling approaches, such as asset-centric, attacker-centric and software-centric Provides effective approaches and techniques that have been proven at Microsoft and elsewhere Offers actionable how-to advice not tied to any specific software, operating system, or programming language Authored by a Microsoft professional who is one of the most prominent threat modeling experts in the world As more software is delivered on the Internet or operates on Internet-connected devices, the design of secure software is absolutely critical. Make sure you're ready with Threat Modeling: Designing for Security.

The first comprehensive guide to discovering and preventingattacks on the Android OS As the Android operating system continues to increase its shareof the smartphone market, smartphone hacking remains a growingthreat. Written by experts who rank among the world's foremostAndroid security researchers, this book presents vulnerabilitydiscovery, analysis, and exploitation tools for the good guys.Following a detailed explanation of how the Android OS works andits overall security architecture, the authors examine howvulnerabilities can be discovered and exploits developed forvarious system components, preparing you to defend againstthem. If you are a mobile device administrator, security researcher,Android app developer, or consultant responsible for evaluatingAndroid security, you will find this guide is essential to yourtoolbox. A crack team of leading Android security researchers explainAndroid security risks, security design and architecture, rooting,fuzz testing, and vulnerability analysis Covers Android application building blocks and security as wellas debugging and auditing Android apps Prepares mobile device administrators, security researchers,Android app developers, and security consultants to defend Androidsystems against attack Android Hacker's Handbook is the first comprehensiveresource for IT professionals charged with smartphonesecurity.

Beginning with a basic primer on reverse engineering-including computer internals, operating systems, and assembly language-and then discussing the various applications of reverse engineering, this book provides readers with practical, in-depth techniques for software reverse engineering. The book is broken into two parts, the first deals with security-related reverse engineering and the second explores the more practical aspects of reverse engineering. In addition, the author explains how to reverse engineer a third-party software library to improve interfacing and how to reverse engineer a competitor's software to build a better product. * The first popular book to show how software reverse engineering can help defend against security threats, speed up development, and unlock the secrets of competitive products * Helps developers plug security holes by demonstrating how hackers exploit reverse engineering techniques to crack copy-protection schemes and identify software targets for viruses and other malware * Offers a primer on advanced reverse-engineering, delving into "disassembly"-code-level reverse engineering-and explaining how to decipher assembly language

Chained Exploits

Metasploit