

Learning Penetration Testing With Python

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Ethical Hacking and Penetration Testing Guide - Rafay Baloch 2017-09-29

Requiring no prior hacking experience, *Ethical Hacking and Penetration Testing Guide* supplies a complete introduction to the steps required to complete a penetration test, or ethical hack, from beginning to end. You will learn how to properly utilize and interpret the results of modern-day hacking tools, which are required to complete a penetration test. The book covers a wide range of tools, including Backtrack Linux, Google reconnaissance, MetaGooFil, dig, Nmap, Nessus, Metasploit, Fast Track Autopwn, Netcat, and Hacker Defender rootkit. Supplying a simple and clean explanation of how to effectively utilize these tools, it details a four-step methodology for conducting an effective penetration test or hack. Providing an accessible introduction to penetration testing and hacking, the book supplies you with a fundamental understanding of offensive security. After completing the book you will be prepared to take on in-depth and advanced topics in hacking and penetration testing. The book walks you through each of the steps and tools in a structured, orderly manner allowing you to understand how the output from each tool can be fully utilized in the subsequent phases of the penetration test. This process will allow you to clearly see how the various tools and phases relate to each other. An ideal

resource for those who want to learn about ethical hacking but dont know where to start, this book will help take your hacking skills to the next level. The topics described in this book comply with international standards and with what is being taught in international certifications.

Mastering Python Penetration Testing - Rejah Rehim 2016-06-27
Pen test your system like a pro and overcome vulnerabilities by leveraging Python scripts, libraries, and tools
About This Book*Learn to utilize your Python scripting skills to pentest a computer system, network, and web-application*Master the art of assessing vulnerabilities by conducting effective penetration testing*This ultimate guide that teaches you how to use Python to protect your systems against sophisticated cyber attacks Who This Book Is For This book is ideal for those who are comfortable with Python or a similar language and need no help with basic programming concepts, but want to understand the basics of penetration testing and the problems pentesters face. What You Will Learn*Write Scapy scripts to investigate network traffic*Get to know application fingerprinting techniques with Python*Understand the attack scripting techniques*Write fuzzing tools with pentesting requirements*Learn basic attack scripting methods*Utilize cryptographic toolkits in Python*Automate Python tools and libraries In Detail Penetration testing is a

practice of testing a computer system, network, or web application to find weaknesses in security that an attacker can exploit. Mastering Python Penetration Testing will help you utilize your Python scripting skills to safeguard your networks from cyberattacks. We will begin by providing you with an overview of Python scripting and penetration testing. You will learn to analyze network traffic by writing Scapy scripts and will see how to fingerprint web applications with Python libraries such as ProxMon and Spynner. Moving on, you will find out how to write basic attack scripts, and will develop debugging and reverse engineering skills with Python libraries. Toward the end of the book, you will discover how to utilize cryptography toolkits in Python and how to automate Python tools and libraries.

Learn Penetration Testing with Python 3.x - Yehia Elghaly 2021

This book starts with an understanding of penetration testing and red teaming methodologies and teaches Python 3.x from scratch for those who are not familiar with programming. The book gives the skills of how to create scripts for cracking, and brute force attacks. --

Effective Python Penetration Testing - Rejah Rehim 2016-06-29

Pen test your system like a pro and overcome vulnerabilities by leveraging Python scripts, libraries, and tools About This Book Learn to utilize your Python scripting skills to pentest a computer system, network, and web-application Get proficient at the art of assessing vulnerabilities by conducting effective penetration testing This is the ultimate guide that teaches you how to use Python to protect your systems against sophisticated cyber attacks Who This Book Is For This book is ideal for those who are comfortable with Python or a similar language and need no help with basic programming concepts, but want to understand the basics of penetration testing and the problems pentesters face. What You Will Learn Write Scapy scripts to investigate network traffic Get to know application fingerprinting techniques with Python Understand the attack scripting techniques Write fuzzing

tools with pentesting requirements Learn basic attack scripting methods Utilize cryptographic toolkits in Python Automate pentesting with Python tools and libraries In Detail Penetration testing is a practice of testing a computer system, network, or web application to find weaknesses in security that an attacker can exploit. Effective Python Penetration Testing will help you utilize your Python scripting skills to safeguard your networks from cyberattacks. We will begin by providing you with an overview of Python scripting and penetration testing. You will learn to analyze network traffic by writing Scapy scripts and will see how to fingerprint web applications with Python libraries such as ProxMon and Spynner. Moving on, you will find out how to write basic attack scripts, and will develop debugging and reverse engineering skills with Python libraries. Toward the end of the book, you will discover how to utilize cryptography toolkits in Python and how to automate Python tools and libraries. Style and approach This is an expert's guide to Python with a practical based approach, where each chapter will help you improve your penetration testing skills using Python to become a master pen tester.

Python - Christopher Duffy 2016

Unleash the power of Python scripting to execute effective and efficient penetration tests About This Book Sharpen your pentesting skills with Python Develop your fluency with Python to write sharper scripts for rigorous security testing Get stuck into some of the most powerful tools in the security world Who This Book Is For If you are a Python programmer or a security researcher who has basic knowledge of Python programming and wants to learn about penetration testing with the help of Python, this course is ideal for you. Even if you are new to the field of ethical hacking, this course can help you find the vulnerabilities in your system so that you are ready to tackle any kind of attack or intrusion. What You Will Learn Familiarize yourself with the generation of Metasploit resource files and use the Metasploit

Remote Procedure Call to automate exploit generation and execution Exploit the Remote File Inclusion to gain administrative access to systems with Python and other scripting languages Crack an organization's Internet perimeter and chain exploits to gain deeper access to an organization's resources Explore wireless traffic with the help of various programs and perform wireless attacks with Python programs Gather passive information from a website using automated scripts and perform XSS, SQL injection, and parameter tampering attacks Develop complicated header-based attacks through Python In Detail Cybercriminals are always one step ahead, when it comes to tools and techniques. This means you need to use the same tools and adopt the same mindset to properly secure your software. This course shows you how to do just that, demonstrating how effective Python can be for powerful pentesting that keeps your software safe. Comprising of three key modules, follow each one to push your Python and security skills to the next level. In the first module, we'll show you how to get to grips with the fundamentals. This means you'll quickly find out how to tackle some of the common challenges facing pentesters using custom Python tools designed specifically for your needs. You'll also learn what tools to use and when, giving you complete confidence when deploying your pentester tools to combat any potential threat. In the next module you'll begin hacking into the application layer. Covering everything from parameter tampering, DDoS, XSS and SQL injection, it will build on the knowledge and skills you learned in the first module to make you an even mor...

Mastering Python - Rick van Hattem 2016-04-29

Master the art of writing beautiful and powerful Python by using all of the features that Python 3.5 offers About This Book Become familiar with the most important and advanced parts of the Python code style Learn the trickier aspects of Python and put it in a structured context for deeper understanding of the language Offers an expert's-eye overview of how these advanced tasks fit

together in Python as a whole along with practical examples Who This Book Is For Almost anyone can learn to write working script and create high quality code but they might lack a structured understanding of what it means to be 'Pythonic'. If you are a Python programmer who wants to code efficiently by getting the syntax and usage of a few intricate Python techniques exactly right, this book is for you. What You Will Learn Create a virtualenv and start a new project Understand how and when to use the functional programming paradigm Get familiar with the different ways the decorators can be written in Understand the power of generators and coroutines without digressing into lambda calculus Create metaclasses and how it makes working with Python far easier Generate HTML documentation out of documents and code using Sphinx Learn how to track and optimize application performance, both memory and cpu Use the multiprocessing library, not just locally but also across multiple machines Get a basic understanding of packaging and creating your own libraries/applications In Detail Python is a dynamic programming language. It is known for its high readability and hence it is often the first language learned by new programmers. Python being multi-paradigm, it can be used to achieve the same thing in different ways and it is compatible across different platforms. Even if you find writing Python code easy, writing code that is efficient, easy to maintain, and reuse is not so straightforward. This book is an authoritative guide that will help you learn new advanced methods in a clear and contextualised way. It starts off by creating a project-specific environment using venv, introducing you to different Pythonic syntax and common pitfalls before moving on to cover the functional features in Python. It covers how to create different decorators, generators, and metaclasses. It also introduces you to functools.wraps and coroutines and how they work. Later on you will learn to use asyncio module for asynchronous clients and servers. You will also get familiar with different testing systems such as py.test,

doctest, and unittest, and debugging tools such as Python debugger and faulthandler. You will learn to optimize application performance so that it works efficiently across multiple machines and Python versions. Finally, it will teach you how to access C functions with a simple Python call. By the end of the book, you will be able to write more advanced scripts and take on bigger challenges. Style and Approach This book is a comprehensive guide that covers advanced features of the Python language, and communicate them with an authoritative understanding of the underlying rationale for how, when, and why to use them.

Linux Basics for Hackers - OccupyTheWeb 2018-12-04

This practical, tutorial-style book uses the Kali Linux distribution to teach Linux basics with a focus on how hackers would use them. Topics include Linux command line basics, filesystems, networking, BASH basics, package management, logging, and the Linux kernel and drivers. If you're getting started along the exciting path of hacking, cybersecurity, and pentesting, Linux Basics for Hackers is an excellent first step. Using Kali Linux, an advanced penetration testing distribution of Linux, you'll learn the basics of using the Linux operating system and acquire the tools and techniques you'll need to take control of a Linux environment. First, you'll learn how to install Kali on a virtual machine and get an introduction to basic Linux concepts. Next, you'll tackle broader Linux topics like manipulating text, controlling file and directory permissions, and managing user environment variables. You'll then focus in on foundational hacking concepts like security and anonymity and learn scripting skills with bash and Python. Practical tutorials and exercises throughout will reinforce and test your skills as you learn how to:

- Cover your tracks by changing your network information and manipulating the rsyslog logging utility
- Write a tool to scan for network connections, and connect and listen to wireless networks
- Keep your internet activity stealthy using Tor, proxy servers, VPNs, and encrypted email
- Write a bash script to scan open

ports for potential targets - Use and abuse services like MySQL, Apache web server, and OpenSSH - Build your own hacking tools, such as a remote video spy camera and a password cracker Hacking is complex, and there is no single way in. Why not start at the beginning with Linux Basics for Hackers?

Learning Kali Linux - Ric Messier 2018-07-17

With more than 600 security tools in its arsenal, the Kali Linux distribution can be overwhelming. Experienced and aspiring security professionals alike may find it challenging to select the most appropriate tool for conducting a given test. This practical book covers Kali's expansive security capabilities and helps you identify the tools you need to conduct a wide range of security tests and penetration tests. You'll also explore the vulnerabilities that make those tests necessary. Author Ric Messier takes you through the foundations of Kali Linux and explains methods for conducting tests on networks, web applications, wireless security, password vulnerability, and more. You'll discover different techniques for extending Kali tools and creating your own toolset. Learn tools for stress testing network stacks and applications Perform network reconnaissance to determine what's available to attackers Execute penetration tests using automated exploit tools such as Metasploit Use cracking tools to see if passwords meet complexity requirements Test wireless capabilities by injecting frames and cracking passwords Assess web application vulnerabilities with automated or proxy-based tools Create advanced attack techniques by extending Kali tools or developing your own Use Kali Linux to generate reports once testing is complete

Learning Python Web Penetration Testing - Christian Martorella 2018-06-27

Leverage the simplicity of Python and available libraries to build web security testing tools for your application Key Features Understand the web application penetration testing methodology and toolkit using Python Write a web crawler/spider with the

Scrapy library Detect and exploit SQL injection vulnerabilities by creating a script all by yourself

Book Description Web penetration testing is the use of tools and code to attack a website or web app in order to assess its vulnerability to external threats. While there are an increasing number of sophisticated, ready-made tools to scan systems for vulnerabilities, the use of Python allows you to write system-specific scripts, or alter and extend existing testing tools to find, exploit, and record as many security weaknesses as possible. Learning Python Web Penetration Testing will walk you through the web application penetration testing methodology, showing you how to write your own tools with Python for each activity throughout the process. The book begins by emphasizing the importance of knowing how to write your own tools with Python for web application penetration testing. You will then learn to interact with a web application using Python, understand the anatomy of an HTTP request, URL, headers and message body, and later create a script to perform a request, and interpret the response and its headers. As you make your way through the book, you will write a web crawler using Python and the Scrapy library. The book will also help you to develop a tool to perform brute force attacks in different parts of the web application. You will then discover more on detecting and exploiting SQL injection vulnerabilities. By the end of this book, you will have successfully created an HTTP proxy based on the mitmproxy tool. What you will learn

Interact with a web application using the Python and Requests libraries
Create a basic web application crawler and make it recursive
Develop a brute force tool to discover and enumerate resources such as files and directories
Explore different authentication methods commonly used in web applications
Enumerate table names from a database using SQL injection
Understand the web application penetration testing methodology and toolkit

Who this book is for Learning Python Web Penetration Testing is for web developers who want to step into the world of web application security testing. Basic

knowledge of Python is necessary.

Python for Cybersecurity - Howard E. Poston, III 2022-02-01
Discover an up-to-date and authoritative exploration of Python cybersecurity strategies

Python For Cybersecurity: Using Python for Cyber Offense and Defense delivers an intuitive and hands-on explanation of using Python for cybersecurity. It relies on the MITRE ATT&CK framework to structure its exploration of cyberattack techniques, attack defenses, and the key cybersecurity challenges facing network administrators and other stakeholders today. Offering downloadable sample code, the book is written to help you discover how to use Python in a wide variety of cybersecurity situations, including: Reconnaissance, resource development, initial access, and execution Persistence, privilege escalation, defense evasion, and credential access Discovery, lateral movement, collection, and command and control Exfiltration and impact

Each chapter includes discussions of several techniques and sub-techniques that could be used to achieve an attacker's objectives in any of these use cases. The ideal resource for anyone with a professional or personal interest in cybersecurity, Python For Cybersecurity offers in-depth information about a wide variety of attacks and effective, Python-based defenses against them.

Learn Penetration Testing - Rishalin Pillay 2019-05-31

Get up to speed with various penetration testing techniques and resolve security threats of varying complexity

Key Features Enhance your penetration testing skills to tackle security threats
Learn to gather information, find vulnerabilities, and exploit enterprise defenses
Navigate 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 learn

- Perform entry-level penetration tests by learning various concepts and techniques
- Understand both common and not-so-common vulnerabilities from an attacker's perspective
- Get familiar with intermediate attack methods that can be used in real-world scenarios
- Understand how vulnerabilities are created by developers and how to fix some of them at source code level
- Become well versed with basic tools for ethical hacking purposes
- Exploit known vulnerable services with tools such as Metasploit

Who 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.

Penetration Testing - Georgia Weidman 2014-06-14

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.

Python: Penetration Testing for Developers - Christopher Duffy 2016-10-21

Unleash the power of Python scripting to execute effective and efficient penetration tests

About This Book

Sharpen your pentesting skills with Python

Develop your fluency with Python to write sharper scripts for rigorous security testing

Get stuck into some of the most powerful tools in the security world

Who This Book Is For

If you are a Python programmer or a security researcher who has basic knowledge of Python programming and wants to learn about penetration testing with the help of Python, this course is ideal for you. Even if you are new to the field of ethical hacking, this course can help you find the vulnerabilities in your system so that you are ready to tackle any kind of attack

or intrusion. What You Will Learn Familiarize yourself with the generation of Metasploit resource files and use the Metasploit Remote Procedure Call to automate exploit generation and execution Exploit the Remote File Inclusion to gain administrative access to systems with Python and other scripting languages Crack an organization's Internet perimeter and chain exploits to gain deeper access to an organization's resources Explore wireless traffic with the help of various programs and perform wireless attacks with Python programs Gather passive information from a website using automated scripts and perform XSS, SQL injection, and parameter tampering attacks Develop complicated header-based attacks through Python In Detail Cybercriminals are always one step ahead, when it comes to tools and techniques. This means you need to use the same tools and adopt the same mindset to properly secure your software. This course shows you how to do just that, demonstrating how effective Python can be for powerful pentesting that keeps your software safe. Comprising of three key modules, follow each one to push your Python and security skills to the next level. In the first module, we'll show you how to get to grips with the fundamentals. This means you'll quickly find out how to tackle some of the common challenges facing pentesters using custom Python tools designed specifically for your needs. You'll also learn what tools to use and when, giving you complete confidence when deploying your pentester tools to combat any potential threat. In the next module you'll begin hacking into the application layer. Covering everything from parameter tampering, DDoS, XSS and SQL injection, it will build on the knowledge and skills you learned in the first module to make you an even more fluent security expert. Finally in the third module, you'll find more than 60 Python pentesting recipes. We think this will soon become your trusted resource for any pentesting situation. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following

Packt products: Learning Penetration Testing with Python by Christopher Duffy Python Penetration Testing Essentials by Mohit Python Web Penetration Testing Cookbook by Cameron Buchanan, Terry Ip, Andrew Mabbitt, Benjamin May and Dave Mound Style and approach This course provides a quick access to powerful, modern tools, and customizable scripts to kick-start the creation of your own Python web penetration testing toolbox. *Python Penetration Testing Essentials* - Mohit Raj 2018-05-30 This book gives you the skills you need to use Python for penetration testing, with the help of detailed code examples. This book has been updated for Python 3.6.3 and Kali Linux 2018.1. Key Features Detect and avoid various attack types that put the privacy of a system at risk Leverage Python to build efficient code and eventually build a robust environment Learn about securing wireless applications and information gathering on a web server Book Description This book gives you the skills you need to use Python for penetration testing (pentesting), with the help of detailed code examples. We start by exploring the basics of networking with Python and then proceed to network hacking. Then, you will delve into exploring Python libraries to perform various types of pentesting and ethical hacking techniques. Next, we delve into hacking the application layer, where we start by gathering information from a website. We then move on to concepts related to website hacking—such as parameter tampering, DDoS, XSS, and SQL injection. By reading this book, you will learn different techniques and methodologies that will familiarize you with Python pentesting techniques, how to protect yourself, and how to create automated programs to find the admin console, SQL injection, and XSS attacks. What you will learn The basics of network pentesting including network scanning and sniffing Wireless, wired attacks, and building traps for attack and torrent detection Web server footprinting and web application attacks, including the XSS and SQL injection attack Wireless frames and how to obtain information such as SSID,

BSSID, and the channel number from a wireless frame using a Python script The importance of web server signatures, email gathering, and why knowing the server signature is the first step in hacking Who this book is for If you are a Python programmer, a security researcher, or an ethical hacker and are interested in penetration testing with the help of Python, then this book is for you. Even if you are new to the field of ethical hacking, this book can help you find the vulnerabilities in your system so that you are ready to tackle any kind of attack or intrusion.

Learning Penetration Testing with Python - Christopher Duffy
2015-09-30

Utilize Python scripting to execute effective and efficient penetration tests About This Book Understand how and where Python scripts meet the need for penetration testing Familiarise yourself with the process of highlighting a specific methodology to exploit an environment to fetch critical data Develop your Python and penetration testing skills with real-world examples Who This Book Is For If you are a security professional or researcher, with knowledge of different operating systems and a conceptual idea of penetration testing, and you would like to grow your knowledge in Python, then this book is ideal for you. What You Will Learn Familiarise yourself with the generation of Metasploit resource files Use the Metasploit Remote Procedure Call (MSFRPC) to automate exploit generation and execution Use Python's Scapy, network, socket, office, Nmap libraries, and custom modules Parse Microsoft Office spreadsheets and eXtensible Markup Language (XML) data files Write buffer overflows and reverse Metasploit modules to expand capabilities Exploit Remote File Inclusion (RFI) to gain administrative access to systems with Python and other scripting languages Crack an organization's Internet perimeter Chain exploits to gain deeper access to an organization's resources Interact with web services with Python In Detail Python is a powerful new-age scripting platform that allows you to build exploits, evaluate services,

automate, and link solutions with ease. Python is a multi-paradigm programming language well suited to both object-oriented application development as well as functional design patterns. Because of the power and flexibility offered by it, Python has become one of the most popular languages used for penetration testing. This book highlights how you can evaluate an organization methodically and realistically. Specific tradecraft and techniques are covered that show you exactly when and where industry tools can and should be used and when Python fits a need that proprietary and open source solutions do not. Initial methodology, and Python fundamentals are established and then built on. Specific examples are created with vulnerable system images, which are available to the community to test scripts, techniques, and exploits. This book walks you through real-world penetration testing challenges and how Python can help. From start to finish, the book takes you through how to create Python scripts that meet relative needs that can be adapted to particular situations. As chapters progress, the script examples explain new concepts to enhance your foundational knowledge, culminating with you being able to build multi-threaded security tools, link security tools together, automate reports, create custom exploits, and expand Metasploit modules. Style and approach This book is a practical guide that will help you become better penetration testers and/or Python security tool developers. Each chapter builds on concepts and tradecraft using detailed examples in test environments that you can simulate.

Learn Penetration Testing with Python 3.x - Yehia Elghaly
2021-10-07

Identify vulnerabilities across applications, network and systems using simplified cybersecurity scripting KEY FEATURES ● Exciting coverage on red teaming methodologies and penetration testing techniques. ● Explore the exploitation development environment and process of creating exploit scripts. ● Includes powerful Python libraries to analyze the web and helps

identifying critical vulnerabilities. ● Conduct wireless attacks and identify potential threats using Python. DESCRIPTION This book starts with an understanding of penetration testing and red teaming methodologies and teaches Python 3.x from scratch for those who are not familiar with programming. The book gives the skills of how to create scripts for cracking, and brute force attacks. The second part of this book focuses on the network and wireless level. The book teaches you the skills of how to create an offensive tool using Python 3.x to identify different services and ports using different Python network modules and conducting network attacks. In the network monitoring section, you will be able to monitor layers 3 and 4. And finally, you will be able to conduct different attacks on wireless. The last part of this book focuses on web applications and exploitation developments. It focuses on how to create scripts to extract web information such as links, images, documents, etc. It also focuses on how to create scripts to identify and exploit web vulnerabilities and how to bypass WAF. The last chapter of this book focuses on exploitation development starting with how to play with the stack and then moving on to how to use Python in fuzzing and creating exploitation scripts. WHAT YOU WILL LEARN ● Learn to code Python scripts from scratch to identify web vulnerabilities. ● Conduct network attacks, create offensive tools, and identify vulnerable services and ports. ● Perform deep monitoring of network up to layers 3 and 4. ● Execute web scraping scripts to extract images, documents, and links. WHO THIS BOOK IS FOR This book is for Penetration Testers, Security Researchers, Red Teams, Security Auditors and IT Administrators who want to start with an action plan in protecting their IT systems. All you need is some basic understanding of programming concepts and working of IT systems. Hands-on experience with python will be more beneficial but not required. TABLE OF CONTENTS 1. Start with Penetration Testing and Basic Python 2. Cracking with Python 3. Service and Applications Brute Forcing with Python 4. Python

Services Identifications - Ports and Banner 5. Python Network Modules and Nmap 6. Network Monitoring with Python 7. Attacking Wireless with Python 8. Analyze Web Applications with Python 9. Attack Web Application with Python 10. Exploitation Development with Python

Learn Ethical Hacking from Scratch - Zaid Sabih 2018-07-31
Learn how to hack systems like black hat hackers and secure them like security experts Key Features Understand how computer systems work and their vulnerabilities Exploit weaknesses and hack into machines to test their security Learn how to secure systems from hackers Book Description This book starts with the basics of ethical hacking, how to practice hacking safely and legally, and how to install and interact with Kali Linux and the Linux terminal. You will explore network hacking, where you will see how to test the security of wired and wireless networks. You'll also learn how to crack the password for any Wi-Fi network (whether it uses WEP, WPA, or WPA2) and spy on the connected devices. Moving on, you will discover how to gain access to remote computer systems using client-side and server-side attacks. You will also get the hang of post-exploitation techniques, including remotely controlling and interacting with the systems that you compromised. Towards the end of the book, you will be able to pick up web application hacking techniques. You'll see how to discover, exploit, and prevent a number of website vulnerabilities, such as XSS and SQL injections. The attacks covered are practical techniques that work against real systems and are purely for educational purposes. At the end of each section, you will learn how to detect, prevent, and secure systems from these attacks. What you will learn Understand ethical hacking and the different fields and types of hackers Set up a penetration testing lab to practice safe and legal hacking Explore Linux basics, commands, and how to interact with the terminal Access password-protected networks and spy on connected clients Use server and client-side attacks to hack and

control remote computers Control a hacked system remotely and use it to hack other systems Discover, exploit, and prevent a number of web application vulnerabilities such as XSS and SQL injections Who this book is for Learning Ethical Hacking from Scratch is for anyone interested in learning how to hack and test the security of systems like professional hackers and security experts.

Black Hat Python, 2nd Edition - Justin Seitz 2021-04-13 Fully-updated for Python 3, the second edition of this worldwide bestseller (over 100,000 copies sold) explores the stealthier side of programming and brings you all new strategies for your hacking projects. When it comes to creating powerful and effective hacking tools, Python is the language of choice for most security analysts. In Black Hat Python, 2nd Edition, you'll explore the darker side of Python's capabilities—writing network sniffers, stealing email credentials, brute forcing directories, crafting mutation fuzzers, infecting virtual machines, creating stealthy trojans, and more. The second edition of this bestselling hacking book contains code updated for the latest version of Python 3, as well as new techniques that reflect current industry best practices. You'll also find expanded explanations of Python libraries such as ctypes, struct, lxml, and BeautifulSoup, and dig deeper into strategies, from splitting bytes to leveraging computer-vision libraries, that you can apply to future hacking projects. You'll learn how to:

- Create a trojan command-and-control using GitHub
- Detect sandboxing and automate common malware tasks, like keylogging and screenshotting
- Escalate Windows privileges with creative process control
- Use offensive memory forensics tricks to retrieve password hashes and inject shellcode into a virtual machine
- Extend the popular Burp Suite web-hacking tool
- Abuse Windows COM automation to perform a man-in-the-browser attack
- Exfiltrate data from a network most sneakily

When it comes to offensive security, your ability to create powerful tools on the fly is indispensable. Learn how with

the second edition of Black Hat Python. New to this edition: All Python code has been updated to cover Python 3 and includes updated libraries used in current Python applications. Additionally, there are more in-depth explanations of the code and the programming techniques have been updated to current, common tactics. Examples of new material that you'll learn include how to sniff network traffic, evade anti-virus software, brute-force web applications, and set up a command-and-control (C2) system using GitHub.

Practical Web Penetration Testing - Gus Khawaja 2018-06-22 Learn how to execute web application penetration testing end-to-end Key Features Build an end-to-end threat model landscape for web application security Learn both web application vulnerabilities and web intrusion testing Associate network vulnerabilities with a web application infrastructure Book Description Companies all over the world want to hire professionals dedicated to application security. Practical Web Penetration Testing focuses on this very trend, teaching you how to conduct application security testing using real-life scenarios. To start with, you'll set up an environment to perform web application penetration testing. You will then explore different penetration testing concepts such as threat modeling, intrusion test, infrastructure security threat, and more, in combination with advanced concepts such as Python scripting for automation. Once you are done learning the basics, you will discover end-to-end implementation of tools such as Metasploit, Burp Suite, and Kali Linux. Many companies deliver projects into production by using either Agile or Waterfall methodology. This book shows you how to assist any company with their SDLC approach and helps you on your journey to becoming an application security specialist. By the end of this book, you will have hands-on knowledge of using different tools for penetration testing. What you will learn Learn how to use Burp Suite effectively Use Nmap, Metasploit, and more tools for network infrastructure tests Practice using all web

application hacking tools for intrusion tests using Kali Linux
Learn how to analyze a web application using application threat modeling
Know how to conduct web intrusion tests
Understand how to execute network infrastructure tests
Master automation of penetration testing functions for maximum efficiency using Python
Who this book is for
Practical Web Penetration Testing is for you if you are a security professional, penetration tester, or stakeholder who wants to execute penetration testing using the latest and most popular tools. Basic knowledge of ethical hacking would be an added advantage.

Hands-On Penetration Testing with Python - Furqan Khan

2019-01-31

Implement defensive techniques in your ecosystem successfully with Python
Key Features
Identify and expose vulnerabilities in your infrastructure with Python
Learn custom exploit development
Make robust and powerful cybersecurity tools with Python
Book Description
With the current technological and infrastructural shift, penetration testing is no longer a process-oriented activity. Modern-day penetration testing demands lots of automation and innovation; the only language that dominates all its peers is Python. Given the huge number of tools written in Python, and its popularity in the penetration testing space, this language has always been the first choice for penetration testers. Hands-On Penetration Testing with Python walks you through advanced Python programming constructs. Once you are familiar with the core concepts, you'll explore the advanced uses of Python in the domain of penetration testing and optimization. You'll then move on to understanding how Python, data science, and the cybersecurity ecosystem communicate with one another. In the concluding chapters, you'll study exploit development, reverse engineering, and cybersecurity use cases that can be automated with Python. By the end of this book, you'll have acquired adequate skills to leverage Python as a helpful tool to pentest and secure infrastructure, while also creating your own custom

exploits. What you will learn
Get to grips with Custom vulnerability scanner development
Familiarize yourself with web application scanning automation and exploit development
Walk through day-to-day cybersecurity scenarios that can be automated with Python
Discover enterprise-or organization-specific use cases and threat-hunting automation
Understand reverse engineering, fuzzing, buffer overflows , key-logger development, and exploit development for buffer overflows.
Understand web scraping in Python and use it for processing web responses
Explore Security Operations Centre (SOC) use cases
Get to understand Data Science, Python, and cybersecurity all under one hood
Who this book is for
If you are a security consultant , developer or a cyber security enthusiast with little or no knowledge of Python and want in-depth insight into how the pen-testing ecosystem and python combine to create offensive tools , exploits , automate cyber security use-cases and much more then this book is for you. Hands-On Penetration Testing with Python guides you through the advanced uses of Python for cybersecurity and pen-testing, helping you to better understand security loopholes within your infrastructure .

Machine Learning for Cybersecurity Cookbook - Emmanuel Tsukerman 2019-11-25

Learn how to apply modern AI to create powerful cybersecurity solutions for malware, pentesting, social engineering, data privacy, and intrusion detection
Key Features
Manage data of varying complexity to protect your system using the Python ecosystem
Apply ML to pentesting, malware, data privacy, intrusion detection system(IDS) and social engineering
Automate your daily workflow by addressing various security challenges using the recipes covered in the book
Book Description
Organizations today face a major threat in terms of cybersecurity, from malicious URLs to credential reuse, and having robust security systems can make all the difference. With this book, you'll learn how to use Python libraries such as TensorFlow and

scikit-learn to implement the latest artificial intelligence (AI) techniques and handle challenges faced by cybersecurity researchers. You'll begin by exploring various machine learning (ML) techniques and tips for setting up a secure lab environment. Next, you'll implement key ML algorithms such as clustering, gradient boosting, random forest, and XGBoost. The book will guide you through constructing classifiers and features for malware, which you'll train and test on real samples. As you progress, you'll build self-learning, reliant systems to handle cybersecurity tasks such as identifying malicious URLs, spam email detection, intrusion detection, network protection, and tracking user and process behavior. Later, you'll apply generative adversarial networks (GANs) and autoencoders to advanced security tasks. Finally, you'll delve into secure and private AI to protect the privacy rights of consumers using your ML models. By the end of this book, you'll have the skills you need to tackle real-world problems faced in the cybersecurity domain using a recipe-based approach. What you will learn

- Learn how to build malware classifiers to detect suspicious activities
- Apply ML to generate custom malware to pentest your security
- Use ML algorithms with complex datasets to implement cybersecurity concepts
- Create neural networks to identify fake videos and images
- Secure your organization from one of the most popular threats - insider threats
- Defend against zero-day threats by constructing an anomaly detection system
- Detect web vulnerabilities effectively by combining Metasploit and ML
- Understand how to train a model without exposing the training data

Who this book is for This book is for cybersecurity professionals and security researchers who are looking to implement the latest machine learning techniques to boost computer security, and gain insights into securing an organization using red and blue team ML. This recipe-based book will also be useful for data scientists and machine learning developers who want to experiment with smart techniques in the cybersecurity domain. Working knowledge of Python

programming and familiarity with cybersecurity fundamentals will help you get the most out of this book.

Backtrack 5 Wireless Penetration Testing - Vivek Ramachandran 2011

Written in Packt's Beginner's Guide format, you can easily grasp the concepts and understand the techniques to perform wireless attacks in your lab. Every new attack is described in the form of a lab exercise with rich illustrations of all the steps associated. You will practically implement various attacks as you go along. If you are an IT security professional or a security consultant who wants to get started with wireless testing with Backtrack, or just plain inquisitive about wireless security and hacking, then this book is for you. The book assumes that you have familiarity with Backtrack and basic wireless concepts.

Hands-on Penetration Testing for Web Applications - Richa Gupta 2021-03-27

Learn how to build an end-to-end Web application security testing framework

KEY FEATURES

- Exciting coverage on vulnerabilities and security loopholes in modern web applications.
- Practical exercises and case scenarios on performing pentesting and identifying security breaches.
- Cutting-edge offerings on implementation of tools including nmap, burp suite and wireshark.

DESCRIPTION Hands-on Penetration Testing for Web Applications offers readers with knowledge and skillset to identify, exploit and control the security vulnerabilities present in commercial web applications including online banking, mobile payments and e-commerce applications. We begin with exposure to modern application vulnerabilities present in web applications. You will learn and gradually practice the core concepts of penetration testing and OWASP Top Ten vulnerabilities including injection, broken authentication and access control, security misconfigurations and cross-site scripting (XSS). You will then gain advanced skillset by exploring the methodology of security testing and how to work around security testing as a true security

professional. This book also brings cutting-edge coverage on exploiting and detecting vulnerabilities such as authentication flaws, session flaws, access control flaws, input validation flaws etc. You will discover an end-to-end implementation of tools such as nmap, burp suite, and wireshark. You will then learn to practice how to execute web application intrusion testing in automated testing tools and also to analyze vulnerabilities and threats present in the source codes. By the end of this book, you will gain in-depth knowledge of web application testing framework and strong proficiency in exploring and building high secured web applications. WHAT YOU WILL LEARN ● Complete overview of concepts of web penetration testing. ● Learn to secure against OWASP TOP 10 web vulnerabilities. ● Practice different techniques and signatures for identifying vulnerabilities in the source code of the web application. ● Discover security flaws in your web application using most popular tools like nmap and wireshark. ● Learn to respond modern automated cyber attacks with the help of expert-led tips and tricks. ● Exposure to analysis of vulnerability codes, security automation tools and common security flaws. WHO THIS BOOK IS FOR This book is for Penetration Testers, ethical hackers, and web application developers. People who are new to security testing will also find this book useful. Basic knowledge of HTML, JavaScript would be an added advantage. TABLE OF CONTENTS 1. Why Application Security? 2. Modern application Vulnerabilities 3. Web Pentesting Methodology 4. Testing Authentication 5. Testing Session Management 6. Testing Secure Channels 7. Testing Secure Access Control 8. Sensitive Data and Information disclosure 9. Testing Secure Data validation 10. Attacking Application Users: Other Techniques 11. Attacking Application Users: Other Techniques 12. Automating Custom Attacks 13. Pentesting Tools 14. Static Code Analysis 15. Mitigations and Core Defense Mechanisms

[Kali Linux Wireless Penetration Testing: Beginner's Guide](#) - Vivek

Ramachandran 2015-03-30

If you are a security professional, pentester, or anyone interested in getting to grips with wireless penetration testing, this is the book for you. Some familiarity with Kali Linux and wireless concepts is beneficial.

Violent Python - TJ O'Connor 2012-12-28

Violent Python shows you how to move from a theoretical understanding of offensive computing concepts to a practical implementation. Instead of relying on another attacker's tools, this book will teach you to forge your own weapons using the Python programming language. This book demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts. It also shows how to write code to intercept and analyze network traffic using Python, craft and spoof wireless frames to attack wireless and Bluetooth devices, and how to data-mine popular social media websites and evade modern anti-virus. Demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts Write code to intercept and analyze network traffic using Python. Craft and spoof wireless frames to attack wireless and Bluetooth devices Data-mine popular social media websites and evade modern anti-virus

Beginning Ethical Hacking with Python - Sanjib Sinha

2016-12-25

Learn the basics of ethical hacking and gain insights into the logic, algorithms, and syntax of Python. This book will set you up with a foundation that will help you understand the advanced concepts of hacking in the future. Learn Ethical Hacking with Python 3 touches the core issues of cyber security: in the modern world of interconnected computers and the Internet, security is increasingly becoming one of the most important features of programming. Ethical hacking is closely related to Python. For this reason this book is organized in three parts. The first part

deals with the basics of ethical hacking; the second part deals with Python 3; and the third part deals with more advanced features of ethical hacking. What You Will Learn Discover the legal constraints of ethical hacking Work with virtual machines and virtualization Develop skills in Python 3 See the importance of networking in ethical hacking Gain knowledge of the dark web, hidden Wikipedia, proxy chains, virtual private networks, MAC addresses, and more Who This Book Is For Beginners wanting to learn ethical hacking alongside a modular object oriented programming language.

The Basics of Hacking and Penetration Testing - Patrick Engebretson 2013-06-24

The Basics of Hacking and Penetration Testing, Second Edition, serves as an introduction to the steps required to complete a penetration test or perform an ethical hack from beginning to end. The book teaches students how to properly utilize and interpret the results of the modern-day hacking tools required to complete a penetration test. It provides a simple and clean explanation of how to effectively utilize these tools, along with a four-step methodology for conducting a penetration test or hack, thus equipping students with the know-how required to jump start their careers and gain a better understanding of offensive security. Each chapter contains hands-on examples and exercises that are designed to teach learners how to interpret results and utilize those results in later phases. Tool coverage includes: Backtrack Linux, Google reconnaissance, MetaGooFil, dig, Nmap, Nessus, Metasploit, Fast Track Autopwn, Netcat, and Hacker Defender rootkit. This is complemented by PowerPoint slides for use in class. This book is an ideal resource for security consultants, beginning InfoSec professionals, and students. Each chapter contains hands-on examples and exercises that are designed to teach you how to interpret the results and utilize those results in later phases. Written by an author who works in the field as a Penetration Tester and who teaches Offensive

Security, Penetration Testing, and Ethical Hacking, and Exploitation classes at Dakota State University. Utilizes the Kali Linux distribution and focuses on the seminal tools required to complete a penetration test.

Hacking With Python - Evan Lane 2017-03-15

Hacking and Python Made Easy The world of hacking is an interesting study. It allows you the opportunity to learn more about your computer system, work with different programs, and even protects your computer and your network against black hat hackers. There are many different attacks that a hacker can use against your network, but you can use the countermeasures and even some of the same kinds of hacks to find the vulnerabilities in your system and keep things safe. The basics of hacking Some of the things that you need to know how to do before hacking Picking out the best hacking tools How to get through passwords on a computer How to do spoofing and man in the middle attacks How to hack through a network or wireless connection How to protect your system and keep it safe Working in hacking can be a great way to expand your knowledge of programming and computers and can even be used as a way to keep others who don't belong out of your system. When you are ready to learn how to do an attack with the help of Python, make sure to check out this guidebook and learn how to do some of your own hacking today! Click the Buy button on this page today!

Penetration Testing Fundamentals - William (Chuck) Easttom II 2018-03-06

The perfect introduction to pen testing for all IT professionals and students · Clearly explains key concepts, terminology, challenges, tools, and skills · Covers the latest penetration testing standards from NSA, PCI, and NIST Welcome to today's most useful and practical introduction to penetration testing. Chuck Easttom brings together up-to-the-minute coverage of all the concepts, terminology, challenges, and skills you'll need to be effective. Drawing on decades of experience in cybersecurity and related IT

fields, Easttom integrates theory and practice, covering the entire penetration testing life cycle from planning to reporting. You'll gain practical experience through a start-to-finish sample project relying on free open source tools. Throughout, quizzes, projects, and review sections deepen your understanding and help you apply what you've learned. Including essential pen testing standards from NSA, PCI, and NIST, Penetration Testing Fundamentals will help you protect your assets—and expand your career options. LEARN HOW TO · Understand what pen testing is and how it's used · Meet modern standards for comprehensive and effective testing · Review cryptography essentials every pen tester must know · Perform reconnaissance with Nmap, Google searches, and ShodanHq · Use malware as part of your pen testing toolkit · Test for vulnerabilities in Windows shares, scripts, WMI, and the Registry · Pen test websites and web communication · Recognize SQL injection and cross-site scripting attacks · Scan for vulnerabilities with OWASP ZAP, Vega, Nessus, and MBSA · Identify Linux vulnerabilities and password cracks · Use Kali Linux for advanced pen testing · Apply general hacking technique ssuch as fake Wi-Fi hotspots and social engineering · Systematically test your environment with Metasploit · Write or customize sophisticated Metasploit exploits

Computer Programming and Cyber Security for Beginners - Zach Codings 2020-10-09

Do you feel that informatics is indispensable in today's increasingly digital world? Do you want to introduce yourself to the world of programming or cyber security but don't know where to get started? If the answer to these questions is yes, then keep reading... This book includes: PYTHON MACHINE LEARNING: A Beginner's Guide to Python Programming for Machine Learning and Deep Learning, Data Analysis, Algorithms and Data Science with Scikit Learn, TensorFlow, PyTorch and Keras Here's a sneak peek of what you'll learn with this book: - The Fundamentals of Python - Python for Machine Learning - Data Analysis in Python -

Comparing Deep Learning and Machine Learning - The Role of Machine Learning in the Internet of Things (IoT) And much more... SQL FOR BEGINNERS: A Step by Step Guide to Learn SQL Programming for Query Performance Tuning on SQL Database Throughout these pages, you will learn: - How to build databases and tables with the data you create. - How to sort through the data efficiently to find what you need. - The exact steps to clean your data and make it easier to analyze. - How to modify and delete tables and databases. And much more... LINUX FOR BEGINNERS: An Introduction to the Linux Operating System for Installation, Configuration and Command Line We will cover the following topics: - How to Install Linux - The Linux Console - Command line interface - Network administration And much more... HACKING WITH KALI LINUX: A Beginner's Guide to Learn Penetration Testing to Protect Your Family and Business from Cyber Attacks Building a Home Security System for Wireless Network Security You will learn: - The importance of cybersecurity - How malware and cyber-attacks operate - How to install Kali Linux on a virtual box - VPNs & Firewalls And much more... ETHICAL HACKING: A Beginner's Guide to Computer and Wireless Networks Defense Strategies, Penetration Testing and Information Security Risk Assessment Here's a sneak peek of what you'll learn with this book: - What is Ethical Hacking (roles and responsibilities of an Ethical Hacker) - Most common security tools - The three ways to scan your system - The seven proven penetration testing strategies ...and much more. This book won't make you an expert programmer, but it will give you an exciting first look at programming and a foundation of basic concepts with which you can start your journey learning computer programming, machine learning and cybersecurity Scroll up and click the BUY NOW BUTTON!

Python Web Penetration Testing Cookbook - Cameron Buchanan 2015-06-24

This book gives you an arsenal of Python scripts perfect to use or

to customize your needs for each stage of the testing process. Each chapter takes you step by step through the methods of designing and modifying scripts to attack web apps. You will learn how to collect both open and hidden information from websites to further your attacks, identify vulnerabilities, perform SQL Injections, exploit cookies, and enumerate poorly configured systems. You will also discover how to crack encryption, create payloads to mimic malware, and create tools to output your findings into presentable formats for reporting to your employers.

[The Art of Network Penetration Testing](#) - Royce Davis 2020-12-29

The Art of Network Penetration Testing is a guide to simulating an internal security breach. You'll take on the role of the attacker and work through every stage of a professional pentest, from information gathering to seizing control of a system and owning the network. Summary Penetration testing is about more than just getting through a perimeter firewall. The biggest security threats are inside the network, where attackers can rampage through sensitive data by exploiting weak access controls and poorly patched software. Designed for up-and-coming security professionals, The Art of Network Penetration Testing teaches you how to take over an enterprise network from the inside. It lays out every stage of an internal security assessment step-by-step, showing you how to identify weaknesses before a malicious invader can do real damage. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Penetration testers uncover security gaps by attacking networks exactly like malicious intruders do. To become a world-class pentester, you need to master offensive security concepts, leverage a proven methodology, and practice, practice, practice. This book delivers insights from security expert Royce Davis, along with a virtual testing environment you can use to hone your skills. About the book The Art of Network Penetration Testing is a guide to simulating an internal security breach. You'll take on the role of

the attacker and work through every stage of a professional pentest, from information gathering to seizing control of a system and owning the network. As you brute force passwords, exploit unpatched services, and elevate network level privileges, you'll learn where the weaknesses are—and how to take advantage of them. What's inside Set up a virtual pentest lab Exploit Windows and Linux network vulnerabilities Establish persistent re-entry to compromised targets Detail your findings in an engagement report About the reader For tech professionals. No security experience required. About the author Royce Davis has orchestrated hundreds of penetration tests, helping to secure many of the largest companies in the world. Table of Contents 1 Network Penetration Testing PHASE 1 - INFORMATION GATHERING 2 Discovering network hosts 3 Discovering network services 4 Discovering network vulnerabilities PHASE 2 - FOCUSED PENETRATION 5 Attacking vulnerable web services 6 Attacking vulnerable database services 7 Attacking unpatched services PHASE 3 - POST-EXPLOITATION AND PRIVILEGE ESCALATION 8 Windows post-exploitation 9 Linux or UNIX post-exploitation 10 Controlling the entire network PHASE 4 - DOCUMENTATION 11 Post-engagement cleanup 12 Writing a solid pentest deliverable

Kali Linux Penetration Testing Bible - Gus Khawaja 2021-04-26

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 SDLC Automate your penetration testing with Python

Black Hat Python - Justin Seitz 2014-12-21

When it comes to creating powerful and effective hacking tools, Python is the language of choice for most security analysts. But just how does the magic happen? In *Black Hat Python*, the latest from Justin Seitz (author of the best-selling *Gray Hat Python*), you'll explore the darker side of Python's capabilities—writing network sniffers, manipulating packets, infecting virtual machines, creating stealthy trojans, and more. You'll learn how to:

- Create a trojan command-and-control using GitHub
- Detect sandboxing and automate common malware tasks, like keylogging and screenshotting
- Escalate Windows privileges with creative process control
- Use offensive memory forensics tricks to retrieve password hashes and inject shellcode into a virtual machine
- Extend the popular Burp Suite web-hacking tool
- Abuse Windows COM automation to perform a man-in-the-browser attack
- Exfiltrate data from a network most sneakily

Insider techniques and creative challenges throughout show you how to extend the hacks and how to write your own exploits. When it comes to offensive security, your ability to create powerful tools on the fly is indispensable. Learn how in *Black Hat Python*. Uses Python 2

Python for Offensive PenTest - Hussam Khrais 2018-04-26

Your one-stop guide to using Python, creating your own hacking tools, and making the most out of resources available for this programming language Key Features Comprehensive information

on building a web application penetration testing framework using Python Master web application penetration testing using the multi-paradigm programming language Python Detect vulnerabilities in a system or application by writing your own Python scripts Book Description Python is an easy-to-learn and cross-platform programming language that has unlimited third-party libraries. Plenty of open source hacking tools are written in Python, which can be easily integrated within your script. This book is packed with step-by-step instructions and working examples to make you a skilled penetration tester. It is divided into clear bite-sized chunks, so you can learn at your own pace and focus on the areas of most interest to you. This book will teach you how to code a reverse shell and build an anonymous shell. You will also learn how to hack passwords and perform a privilege escalation on Windows with practical examples. You will set up your own virtual hacking environment in VirtualBox, which will help you run multiple operating systems for your testing environment. By the end of this book, you will have learned how to code your own scripts and mastered ethical hacking from scratch. What you will learn

- Code your own reverse shell (TCP and HTTP)
- Create your own anonymous shell by interacting with Twitter, Google Forms, and SourceForge
- Replicate Metasploit features and build an advanced shell
- Hack passwords using multiple techniques (API hooking, keyloggers, and clipboard hijacking)
- Exfiltrate data from your target
- Add encryption (AES, RSA, and XOR) to your shell to learn how cryptography is being abused by malware
- Discover privilege escalation on Windows with practical examples
- Countermeasures against most attacks

Who this book is for This book is for ethical hackers; penetration testers; students preparing for OSCP, OSCE, GPEN, GXPN, and CEH; information security professionals; cybersecurity consultants; system and network security administrators; and programmers who are keen on learning all about penetration testing.

Mastering Machine Learning for Penetration Testing - Chiheb Chebbi 2018-06-27

Become a master at penetration testing using machine learning with Python Key Features Identify ambiguities and breach intelligent security systems Perform unique cyber attacks to breach robust systems Learn to leverage machine learning algorithms Book Description Cyber security is crucial for both businesses and individuals. As systems are getting smarter, we now see machine learning interrupting computer security. With the adoption of machine learning in upcoming security products, it's important for pentesters and security researchers to understand how these systems work, and to breach them for testing purposes. This book begins with the basics of machine learning and the algorithms used to build robust systems. Once you've gained a fair understanding of how security products leverage machine learning, you'll dive into the core concepts of breaching such systems. Through practical use cases, you'll see how to find loopholes and surpass a self-learning security system. As you make your way through the chapters, you'll focus on topics such as network intrusion detection and AV and IDS evasion. We'll also cover the best practices when identifying ambiguities, and extensive techniques to breach an intelligent system. By the end of this book, you will be well-versed with identifying loopholes in a self-learning security system and will be able to efficiently breach a machine learning system. What you will learn Take an in-depth look at machine learning Get to know natural language processing (NLP) Understand malware feature engineering Build generative adversarial networks using Python libraries Work on threat hunting with machine learning and the ELK stack Explore the best practices for machine learning Who this book is for This book is for pen testers and security professionals who are interested in learning techniques to break an intelligent security system. Basic knowledge of Python is needed, but no prior knowledge of machine learning is necessary.

Coding for Penetration Testers - Jason Andress 2011-11-04
Coding for Penetration Testers discusses the use of various scripting languages in penetration testing. The book presents step-by-step instructions on how to build customized penetration testing tools using Perl, Ruby, Python, and other languages. It also provides a primer on scripting including, but not limited to, Web scripting, scanner scripting, and exploitation scripting. It guides the student through specific examples of custom tool development that can be incorporated into a tester's toolkit as well as real-world scenarios where such tools might be used. This book is divided into 10 chapters that explores topics such as command shell scripting; Python, Perl, and Ruby; Web scripting with PHP; manipulating Windows with PowerShell; scanner scripting; information gathering; exploitation scripting; and post-exploitation scripting. This book will appeal to penetration testers, information security practitioners, and network and system administrators. 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

Python Penetration Testing Cookbook - Rejah Rehim 2017-11-28

Over 50+ hands-on recipes to help you pen test networks using Python, discover vulnerabilities, and find a recovery path About This Book Learn to detect and avoid various types of attack that put system privacy at risk Enhance your knowledge of wireless application concepts and information gathering through practical recipes Learn a pragmatic way to penetration-test using Python, build efficient code, and save time Who This Book Is For If you are a developer with prior knowledge of using Python for penetration testing and if you want an overview of scripting tasks to consider while penetration testing, this book will give you a lot

of useful code for your toolkit. What You Will Learn Learn to configure Python in different environment setups. Find an IP address from a web page using BeautifulSoup and Scrapy Discover different types of packet sniffing script to sniff network packets Master layer-2 and TCP/ IP attacks Master techniques for exploit development for Windows and Linux Incorporate various network- and packet-sniffing techniques using Raw sockets and Scrapy In Detail Penetration testing is the use of tools and code to attack a system in order to assess its vulnerabilities to external threats. Python allows pen testers to create their own tools. Since Python is a highly valued pen-testing language, there are many native libraries and Python bindings available specifically for pen-testing tasks. Python Penetration Testing Cookbook begins by teaching you how to extract information from web pages. You will learn how to build an intrusion detection system using network sniffing techniques. Next, you will find out how to scan your networks to ensure performance and quality, and how to carry out wireless pen testing on your network to avoid cyber attacks. After that, we'll discuss the different kinds of network attack. Next, you'll get to grips with designing your own torrent detection program. We'll take you through common vulnerability scenarios and then cover buffer overflow exploitation so you can detect insecure coding. Finally, you'll master PE code injection methods to safeguard your network. Style and approach This book takes a recipe-based approach to solving real-world problems in pen testing. It is structured in stages from the initial assessment of a system through exploitation to post-exploitation tests, and provides scripts that can be used or modified for in-depth penetration testing.

Python Penetration Testing Essentials - Mohit 2015-01-28

If you are a Python programmer or a security researcher who has basic knowledge of Python programming and want to learn about penetration testing with the help of Python, this book is ideal for you. Even if you are new to the field of ethical hacking, this book

can help you find the vulnerabilities in your system so that you are ready to tackle any kind of attack or intrusion.

[Python Ethical Hacking from Scratch](#) - Fahad Ali Sarwar 2021-06-25

Explore the world of practical ethical hacking by developing custom network scanning and remote access tools that will help you test the system security of your organization Key FeaturesGet hands-on with ethical hacking and learn to think like a real-life hackerBuild practical ethical hacking tools from scratch with the help of real-world examplesLeverage Python 3 to develop malware and modify its complexitiesBook Description Penetration testing enables you to evaluate the security or strength of a computer system, network, or web application that an attacker can exploit. With this book, you'll understand why Python is one of the fastest-growing programming languages for penetration testing. You'll find out how to harness the power of Python and pentesting to enhance your system security. Developers working with Python will be able to put their knowledge and experience to work with this practical guide. Complete with step-by-step explanations of essential concepts and practical examples, this book takes a hands-on approach to help you build your own pentesting tools for testing the security level of systems and networks. You'll learn how to develop your own ethical hacking tools using Python and explore hacking techniques to exploit vulnerabilities in networks and systems. Finally, you'll be able to get remote access to target systems and networks using the tools you develop and modify as per your own requirements. By the end of this ethical hacking book, you'll have developed the skills needed for building cybersecurity tools and learned how to secure your systems by thinking like a hacker. What you will learnUnderstand the core concepts of ethical hackingDevelop custom hacking tools from scratch to be used for ethical hacking purposesDiscover ways to test the cybersecurity of an organization by bypassing protection schemesDevelop attack

vectors used in real cybersecurity tests
Test the system security of an organization or subject by identifying and exploiting its weaknesses
Gain and maintain remote access to target systems
Find ways to stay undetected on target systems and local networks
Who this book is for
If you want to learn ethical hacking

by developing your own tools instead of just using the prebuilt tools, this book is for you. A solid understanding of fundamental Python concepts is expected. Some complex Python concepts are explained in the book, but the goal is to teach ethical hacking, not Python.