Crafting The Infosec Playbook Security Monitoring And Incident Response Master Plan

Get hands-on experience on concepts of Bug Bounty Hunting Key Features Get well-versed with the fundamentals of Bug Bounty Hunting Hands-on experience on using different tools for bug hunting Learn to write a bug bounty report according to the different vulnerabilities and its analysis Book Description Bug bounty programs are the deals offered by prominent companies where-in any white-hat hacker can find bugs in the applications and they will have a recognition for the same. The number of prominent organizations having this program has increased gradually leading to a lot of opportunity for Ethical Hackers. This book will initially start with introducing you to the concept of Bug Bounty hunting. Then we will dig deeper into concepts of vulnerabilities and analysis such as HTML injection, CRLF injection and so on. Towards the end of the book, we will get hands-on experience working with different tools used for bug hunting and various blogs and communities to be followed. This book will get you started with bug bounty hunting and its fundamentals. What you will learn Learn the basics of bug bounty hunting Hunt bugs in web applications Hunt bugs in Android applications Analyze the top 300 bug reports Discover bug bounty hunting research methodologies Explore different tools used for Bug Hunting Who this book is for This book is targeted towards white-hat hackers, or anyone who wants to understand the concept behind bug bounty hunting and understand this brilliant way of penetration testing. This book does not require any knowledge on bug bounty hunting.

Build a better defense against motivated, organized, professional attacks Advanced Penetration Testing: Hacking the World's Most Secure Networks takes hacking far beyond Kali linux and Metasploit to provide a more complex attack simulation. Featuring techniques not taught in any certification prep or covered by common defensive scanners, this book integrates social engineering, programming, and vulnerability exploits into a multidisciplinary approach for targeting and compromising high security environments. From discovering and creating attack vectors, and moving unseen through a target enterprise, to establishing command and exfiltrating data—even from organizations without a direct Internet connection—this guide contains the crucial techniques that provide a more accurate picture of your system's defense. Custom coding examples use VBA, Windows Scripting Host, C, Java, JavaScript, Flash, and more, with coverage of standard library applications and the use of scanning tools to bypass common defensive measures. Typical penetration testing consists of low-level hackers attacking a system with a list of known vulnerabilities, and defenders preventing those hacks using an equally well-known list of defensive scans. The professional hackers and nation states on the forefront of today's threats operate at a much more complex level—and this book shows you how to defend your high security network. Use targeted social engineering pretexts to create the initial compromise Leave a command and control structure in place for long-term access Escalate privilege and breach networks, operating systems, and trust structures Infiltrate further using harvested credentials while expanding control Today's threats are organized, professionally-run, and very much for-profit. Financial institutions, health care organizations, law enforcement, government agencies, and other high-value targets need to harden their IT infrastructure and human capital against targeted advanced attacks from motivated professionals. Advanced Penetration Testing goes beyond Kali linux and Metasploit and to provide you advanced pen testing for high security networks.

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.

Traditional intrusion detection and logfile analysis are no longer enough to protect today's complex networks. In the updated second edition of this practical guide, security researcher Michael Collins shows InfoSec personnel the latest techniques and tools for collecting and analyzing network traffic datasets. You’ll understand how your network is used, and what actions are necessary to harden and defend the systems within it. In three sections, this book examines the process of collecting and organizing data, various tools for analysis, and several different analytic scenarios and techniques. New chapters focus on active monitoring and traffic manipulation, insider threat detection, data mining, regression and machine learning, and other topics. You’ll learn how to: Use sensors to collect network, service, host, and active domain data Work with the SiLK toolset, Python, and other tools and techniques for manipulating data you collect Detect unusual phenomena through exploratory data analysis (EDA), using visualization and mathematical techniques Analyze text data, traffic behavior, and communications mistakes Identify significant structures in your network with graph analysis Examine insider threat data and acquire threat intelligence Map your network and identify significant hosts within it Work with operations to develop defenses and analysis techniques To facilitate scalability and resilience, many organizations now run applications in cloud native environments using containers and orchestration. But how do you know if the deployment is secure? This practical book examines key underlying technologies to help developers, operators, and security professionals assess security risks and determine appropriate solutions. Author Liz Rice, Chief Open Source Officer at Isovalent, looks at how the building blocks commonly used in container-based systems are constructed in Linux. You'll understand what's happening when you deploy containers and learn how to assess potential security risks that could affect your deployments. If you run container applications with kubectl or docker and use Linux command-line tools such as ps and grep, you're ready to get started. Explore attack vectors that affect container deployments Dive into the Linux constructs that underpin containers Examine measures for hardening containers Understand how misconfigurations can compromise container isolation Learn best practices for building container images Identify container images that have known software vulnerabilities Leverage secure connections between containers Use security tooling to prevent attacks on your deployment

Any good attacker will tell you that expensive security monitoring and prevention tools aren’t enough to keep you secure. This practical book demonstrates a data-centric approach to distilling complex security monitoring, incident response, and threat analysis ideas into their most basic elements. You’ll learn how to develop your own threat intelligence and incident detection strategy, rather than depend on security tools alone. Written by members of Cisco’s Computer Security Incident Response Team, this book shows IT and information security professionals how to create an InfoSec playbook by developing strategy, technique, and architecture. Learn incident response fundamentals—and the importance of getting back to basics Understand threats you face and what you should be protecting Collect, mine, organize, and analyze as many relevant data sources as possible Build your own playbook of repeatable methods for security monitoring and response Learn how to put your plan into action and keep it running smoothly Select the right monitoring and detection tools for your environment Develop queries to help you sort through data and create valuable reports Know what actions to take during the incident response phase

How well does your enterprise stand up against today's sophisticated security threats? In this book, security experts from Cisco Systems demonstrate how to detect damaging security incidents on your global network--first by teaching you which assets you need to monitor closely, and then by helping you develop targeted strategies and pragmatic techniques to protect them. Security Monitoring is based on the authors' years of experience conducting incident response to keep Cisco's global network secure. It offers six steps to improve network monitoring. These steps will help you: Develop Policies: define rules, regulations, and monitoring criteria Know Your Network: build knowledge of your infrastructure with network telemetry Select Your Targets: define the subset of infrastructure to be monitored Choose Event Sources: identify event types needed to discover policy violations Feed and Tune: collect data, generate alerts, and tune systems using contextual information Maintain Dependable Event Sources: prevent critical gaps in collecting and monitoring events Security Monitoring illustrates these steps with detailed examples that will help you learn to select and deploy the best techniques for monitoring your own enterprise network.

Security Operations Center Building, Operating, and Maintaining Your SOC The complete, practical guide to planning, building, and operating an effective Security Operations Center (SOC) Security Operations Center is the complete guide to building, operating, and managing Security Operations Centers in any environment. Drawing on experience with hundreds of customers ranging from Fortune 500 enterprises to large military organizations, three leading experts thoroughly review each SOC model, including virtual SOCs. You’ll learn how to select the right strategic option for your organization, and then plan and execute the strategy you’ve chosen. Security Operations Center walks you through every phase required to establish and run an effective SOC, including all significant people, process, and technology capabilities. The authors assess SOC technologies, strategy, infrastructure, governance, planning, implementation, and more. They take a holistic approach considering various commercial and open-source tools found in modern SOCs. This best-practice guide is written for anybody interested in learning how to develop, manage, or improve a SOC. A background in network security, management, and operations will be helpful but is not required. It is also an indispensable resource for anyone preparing for the Cisco SCYBER exam. · Review high-level issues, such as vulnerability and risk management, threat intelligence, digital investigation, and data collection/analysis · Understand the technical components of a modern SOC · Assess the current state of your SOC and identify areas of improvement · Plan SOC strategy, mission, functions, and services · Design and build out SOC infrastructure, from facilities and networks to systems, storage, and physical security · Collect and successfully analyze security data · Establish an effective vulnerability management practice · Organize incident response teams and measure their performance · Define an optimal governance and staffing model · Develop a practical SOC handbook that people can actually use · Prepare SOC to go live, with comprehensive transition plans · React quickly and collaboratively to security incidents · Implement best practice security operations, including continuous enhancement and improvement

Summary Elasticsearch in Action teaches you how to build scalable search applications using Elasticsearch. You'll ramp up fast, with an informative overview and an engaging introductory example. Within the first few chapters, you'll pick up the core concepts you need to implement basic searches and efficient indexing. With the fundamentals well in hand, you'll go on to gain an organized view of how to optimize your design. Perfect for developers and administrators building and managing search-oriented applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Modern search seems like magic—you type a few words and the search engine appears to know what you want. With the Elasticsearch real-time search and analytics engine, you can give your users this magical experience without having to do complex low-level programming or understand advanced data science algorithms. You just install it, tweak it, and get on with your work. About the Book Elasticsearch in Action teaches you how to write applications that deliver professional quality search. As you read, you'll learn to add basic search features to any application, enhance search results with predictive analysis and relevancy ranking, and use saved data from prior searches to give users a custom experience. This practical book focuses on Elasticsearch's REST API via HTTP. Code snippets are written mostly in bash using cURL, so they're easily translatable to other languages. What's Inside What is a great search application? Building scalable search solutions Using Elasticsearch with any language Configuration and tuning About the Reader For developers and administrators building and managing search-oriented applications. About the Authors Radu Gheorghe is a search consultant and software engineer. Matthew Lee Hinman develops highly available, cloud-based systems. Roy Russo is a specialist in predictive analytics. Table of Contents PART 1 CORE ELASTICSEARCH FUNCTIONALITY Introducing Elasticsearch Diving into the functionality Indexing, updating, and deleting data Searching your data Analyzing your data Searching with relevancy Exploring your data with aggregations Relations among documents PART 2 ADVANCED ELASTICSEARCH FUNCTIONALITY Scaling out Improving performance Administering your cluster

Implement a robust SIEM system Effectively manage the security information and events produced by your network with help from this authoritative guide. Written by IT security experts, Security Information and Event Management (SIEM) Implementation shows you how to deploy SIEM technologies to monitor, identify, document, and respond to security threats and reduce false-positive alerts. The book explains how to implement SIEM products from different vendors, and discusses the strengths, weaknesses, and advanced tuning of these systems. You'll also learn how to use SIEM capabilities for business intelligence. Real-world case studies are included in this comprehensive resource. Assess your organization's business models, threat models, and regulatory compliance requirements Determine the necessary SIEM components for small- and medium-size businesses Understand SIEM anatomy—source device, log collection, parsing/normalization of logs, rule engine, log storage, and event monitoring Develop an effective incident response program Use the inherent capabilities of your SIEM system for business intelligence Develop filters and correlated event rules to reduce false-positive alerts Implement AlienVault's Open Source Security Information Management (OSSIM) Deploy the Cisco Monitoring Analysis and Response System

(MARS) Configure and use the Q1 Labs QRadar SIEM system Implement ArcSight Enterprise Security Management (ESM) v4.5 Develop your SIEM security analyst skills Enhance your organization’s secure posture by improving your attack and defense strategies Key Features Gain a clear understanding of the attack methods, and patterns to recognize abnormal behavior within your organization with Blue Team tactics. Learn to unique techniques to gather exploitation intelligence, identify risk and demonstrate impact with Red Team and Blue Team strategies. A practical guide that will give you hands-on experience to mitigate risks and prevent attackers from infiltrating your system. Book Description The book will start talking about the security posture before moving to Red Team tactics, where you will learn the basic syntax for the Windows and Linux tools that are commonly used to perform the necessary operations. You will also gain hands-on experience of using new Red Team techniques with powerful tools such as python and PowerShell, which will enable you to discover vulnerabilities in your system and how to exploit them. Moving on, you will learn how a system is usually compromised by adversaries, and how they hack user's identity, and the various tools used by the Red Team to find vulnerabilities in a system. In the next section, you will learn about the defense strategies followed by the Blue Team to enhance the overall security of a system. You will also learn about an in-depth strategy to ensure that there are security controls in each network layer, and how you can carry out the recovery process of a compromised system. Finally, you will learn how to create a vulnerability management strategy and the different techniques for manual log analysis. By the end of this book, you will be well-versed with Red Team and Blue Team techniques and will have learned the techniques used nowadays to attack and defend systems. What you will learn Learn the importance of having a solid foundation for your security posture Understand the attack strategy using cyber security kill chain Learn how to enhance your defense strategy by improving your security policies, hardening your network, implementing active sensors, and leveraging threat intelligence Learn how to perform an incident investigation Get an in-depth understanding of the recovery process Understand continuous security monitoring and how to implement a vulnerability management strategy Learn how to perform log analysis to identify suspicious activities Who this book is for This book aims at IT professional who want to venture the IT security domain. IT pentester, Security consultants, and ethical hackers will also find this course useful. Prior knowledge of penetration testing would be beneficial.

Despite the increase of high-profile hacks, record-breaking data leaks, and ransomware attacks, many organizations don’t have the budget to establish or outsource an information security (InfoSec) program, forcing them to learn on the job. For companies obliged to improvise, this pragmatic guide provides a security-101 handbook with steps, tools, processes, and ideas to help you drive maximum-security improvement at little or no cost. Each chapter in this book provides step-by-step instructions for dealing with a specific issue, including breaches and disasters, compliance, network infrastructure and password management, vulnerability scanning, and penetration testing, among others. Network engineers, system administrators, and security professionals will learn tools and techniques to help improve security in sensible, manageable chunks. Learn fundamentals of starting or redesigning an InfoSec program Create a base set of policies, standards, and procedures Plan and design incident response, disaster recovery, compliance, and physical security Bolster Microsoft and Unix systems, network infrastructure, and password management Use segmentation practices and designs to compartmentalize your network Explore automated process and tools for vulnerability management Securely develop code to reduce exploitable errors Understand basic penetration testing concepts through purple teaming Delve into IDS, IPS, SOC, logging, and monitoring

Network security is not simply about building impenetrable walls—determined attackers will eventually overcome traditional defenses. The most effective computer security strategies integrate network security monitoring (NSM): the collection and analysis of data to help you detect and respond to intrusions. In The Practice of Network Security Monitoring, Mandiant CSO Richard Bejtlich shows you how to use NSM to add a robust layer of protection around your networks—no prior experience required. To help you avoid costly and inflexible solutions, he teaches you how to deploy, build, and run an NSM operation using open source software and vendor-neutral tools. You'll learn how to: –Determine where to deploy NSM platforms, and size them for the monitored networks –Deploy stand-alone or distributed NSM installations –Use command line and graphical packet analysis tools, and NSM consoles –Interpret network evidence from server-side and client-side intrusions –Integrate threat intelligence into NSM software to identify sophisticated adversaries There's no foolproof way to keep attackers out of your network. But when they get in, you'll be prepared. The Practice of Network Security Monitoring will show you how to build a security net to detect, contain, and control them. Attacks are inevitable, but losing sensitive data shouldn't be.

The infrastructure-as-code revolution in IT is also affecting database administration. With this practical book, developers, system administrators, and junior to mid-level DBAs will learn how the modern practice of site reliability engineering applies to the craft of database architecture and operations. Authors Laine Campbell and Charity Majors provide a framework for professionals looking to join the ranks of today's database reliability engineers (DBRE). You'll begin by exploring core operational concepts that DBREs need to master. Then you'll examine a wide range of database persistence options, including how to implement key technologies to provide resilient, scalable, and performant data storage and retrieval. With a firm foundation in database reliability engineering, you'll be ready to dive into the architecture and operations of any modern database. This book covers: Service-level requirements and risk management Building and evolving an architecture for operational visibility Infrastructure engineering and infrastructure management How to facilitate the release management process Data storage, indexing, and replication Identifying datastore characteristics and best use cases Datastore architectural components and data-driven architectures

Summary Gnuplot in Action, Second Edition is a major revision of this popular and authoritative guide for developers, engineers, and scientists who want to learn and use gnuplot effectively. Fully updated for gnuplot version 5, the book includes four pages of color illustrations and four bonus appendixes available in the eBook. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Gnuplot is an open-source graphics program that helps you analyze, interpret, and present numerical data. Available for Unix, Mac, and Windows, it is well-maintained, mature, and totally free. About the Book Gnuplot in Action, Second Edition is a major revision of this authoritative guide for developers, engineers, and scientists. The book starts with a tutorial introduction, followed by a systematic overview of gnuplot's core features and full coverage of gnuplot's advanced capabilities. Experienced readers will appreciate the discussion of gnuplot 5's features, including new plot types, improved text and color handling, and support for interactive, web-based display formats. The book concludes with chapters on graphical effects and general techniques for understanding data with graphs. It includes four pages of color illustrations. 3D graphics, false-color plots, heatmaps, and multivariate visualizations are covered in chapter-length appendixes available in the eBook. What's Inside

Creating different types of graphs in detail Animations, scripting, batch operations Extensive discussion of terminals Updated to cover gnuplot version 5 About the Reader No prior experience with gnuplot is required. This book concentrates on practical applications of gnuplot relevant to users of all levels. About the Author Philipp K. Janert, PhD, is a programmer and scientist. He is the author of several books on data analysis and applied math and has been a gnuplot power user and developer for over 20 years. Table of Contents PART 1 GETTING STARTED Prelude: understanding data with gnuplot Tutorial: essential gnuplot The heart of the matter: the plot command PART 2 CREATING GRAPHS Managing data sets and files Practical matters: strings, loops, and history A catalog of styles Decorations: labels, arrows, and explanations All about axes PART 3 MASTERING TECHNICALITIES Color, style, and appearance Terminals and output formats Automation, scripting, and animation Beyond the defaults: workflow and styles PART 4 UNDERSTANDING DATA Basic techniques of graphical analysis Topics in graphical analysis Coda: understanding data with graphs

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

Dig deep into the Windows auditing subsystem to monitor for malicious activities and enhance Windows system security Written by a former Microsoft security program manager, DEFCON "Forensics CTF" village author and organizer, and CISSP, this book digs deep into the Windows security auditing subsystem to help you understand the operating system?s event logging patterns for operations and changes performed within the system. Expert guidance brings you up to speed on Windows auditing, logging, and event systems to help you exploit the full capabilities of these powerful components. Scenario–based instruction provides clear illustration of how these events unfold in the real world. From security monitoring and event patterns to deep technical details about the Windows auditing subsystem and components, this book provides detailed information on security events generated by the operating system for many common operations such as user account authentication, Active Directory object modifications, local security policy changes, and other activities. This book is based on the author?s experience and the results of his research into Microsoft Windows security monitoring and anomaly detection. It presents the most common scenarios people should be aware of to check for any potentially suspicious activity. Learn to: Implement the Security Logging and Monitoring policy Dig into the Windows security auditing subsystem Understand the most common monitoring event patterns related to operations and changes in the Microsoft Windows operating system About the Author Andrei Miroshnikov is a former security program manager with Microsoft. He is an organizer and author for the DEFCON security conference "Forensics CTF" village and has been a speaker at Microsoft?s Bluehat security conference. In addition, Andrei is an author of the "Windows 10 and Windows Server 2016 Security Auditing and Monitoring Reference" and multiple internal Microsoft security training documents. Among his many professional qualifications, he has earned the (ISC)2 CISSP and Microsoft MCSE: Security certifications.

Crafting the InfoSec PlaybookSecurity Monitoring and Incident Response Master Plan"O'Reilly Media, Inc."

This book describes the essential components of the SCION secure Internet architecture, the first architecture designed foremost for strong security and high availability. Among its core features, SCION also provides route control, explicit trust information, multipath communication, scalable quality-of-service guarantees, and efficient forwarding. The book includes functional specifications of the network elements, communication protocols among these elements, data structures, and configuration files. In particular, the book offers a specification of a working prototype. The authors provide a comprehensive description of the main design features for achieving a secure Internet architecture. They facilitate the reader throughout, structuring the book so that the technical detail gradually increases, and supporting the text with a glossary, an index, a list of abbreviations, answers to frequently asked questions, and special highlighting for examples and for sections that explain important research, engineering, and deployment features. The book is suitable for researchers, practitioners, and graduate students who are interested in network security.

Welcome to the all-new second edition of Navigating the Digital Age. This edition brings together more than 50 leaders and visionaries from business, science, technology, government, aca¬demia, cybersecurity, and law enforce¬ment. Each has contributed an exclusive chapter designed to make us think in depth about the ramifications of this digi-tal world we are creating. Our purpose is to shed light on the vast possibilities that digital technologies present for us, with an emphasis on solving the existential challenge of cybersecurity. An important focus of the book is centered on doing business in the Digital Age-par¬ticularly around the need to foster a mu¬tual understanding between technical and non-technical executives when it comes to the existential issues surrounding cybersecurity. This book has come together in three parts. In Part 1, we focus on the future of threat and risks. Part 2 emphasizes lessons from today's world, and Part 3 is designed to help you ensure you are covered today. Each part has its own flavor and personal¬ity, reflective of its goals and purpose. Part 1 is a bit more futuristic, Part 2 a bit more experiential, and Part 3 a bit more practical.

How we work together, learn from our mistakes, deliver a secure and safe digital future-those are the elements that make up the core thinking behind this book. We cannot afford to be complacent. Whether you are a leader in business, government, or education, you should be knowledgeable, diligent, and action-oriented. It is our sincerest hope that this book provides answers, ideas, and inspiration.If we fail on the cybersecurity front, we put all of our hopes and aspirations at risk. So we start this book with a simple proposition: When it comes to cybersecurity, we must succeed.

Using a well-conceived incident response plan in the aftermath of an online security breach enables your team to identify attackers and learn how they operate. But, only when you approach incident response with a cyber threat intelligence mindset will you truly understand the value of that information. With this practical guide, you’ll learn the fundamentals of intelligence analysis, as well as the best ways to incorporate these techniques into your incident response process. Each method reinforces the other: threat intelligence supports and augments incident response, while incident response generates useful threat intelligence. This book helps incident managers, malware analysts, reverse engineers, digital forensics specialists, and intelligence analysts understand, implement, and benefit from this relationship. In three parts, this in-depth book includes: The fundamentals: get an introduction to cyber threat intelligence, the intelligence process, the incident-response process, and how they all work together Practical application: walk through the intelligence-driven incident response (IDIR) process using the F3EAD process—Find, Fix Finish, Exploit, Analyze, and Disseminate The way forward: explore big-picture aspects of IDIR that go beyond individual incident-response investigations, including intelligence team building

The definitive guide to incident response--updated for the first time in a decade! Thoroughly revised to cover the latest and most effective tools and techniques, Incident Response & Computer Forensics, Third Edition arms you with the information you need to get your organization out of trouble when data breaches occur. This practical resource covers the entire lifecycle of incident response, including preparation, data collection, data analysis, and remediation. Real-world case studies reveal the methods behind--and remediation strategies for--today's most insidious attacks. Architect an infrastructure that allows for methodical investigation and remediation Develop leads, identify indicators of compromise, and determine incident scope Collect and preserve live data Perform forensic duplication Analyze data from networks, enterprise services, and applications Investigate Windows and Mac OS X systems Perform malware triage Write detailed incident response reports Create and implement comprehensive remediation plans

By definition, information security exists to protect your organization's valuable information resources. But too often information security efforts are viewed as thwarting business objectives. An effective information security program preserves your information assets and helps you meet business objectives. Information Security

Policies, Procedure

The Definitive Guide to Quantifying, Classifying, and Measuring Enterprise IT Security Operations Security Metrics is the first comprehensive best-practice guide to defining, creating, and utilizing security metrics in the enterprise. Using sample charts, graphics, case studies, and war stories, Yankee Group Security Expert Andrew Jaquith demonstrates exactly how to establish effective metrics based on your organization’s unique requirements. You’ll discover how to quantify hard-to-measure security activities, compile and analyze all relevant data, identify strengths and weaknesses, set cost-effective priorities for improvement, and craft compelling messages for senior management. Security Metrics successfully bridges management’s quantitative viewpoint with the nuts-and-bolts approach typically taken by security professionals. It brings together expert solutions drawn from Jaquith’s extensive consulting work in the software, aerospace, and financial services industries, including new metrics presented nowhere else. You’ll learn how to: • Replace nonstop crisis response with a systematic approach to security improvement • Understand the differences between “good” and “bad” metrics • Measure coverage and control, vulnerability management, password quality, patch latency, benchmark scoring, and business-adjusted risk • Quantify the effectiveness of security acquisition, implementation, and other program activities • Organize, aggregate, and analyze your data to bring out key insights • Use visualization to understand and communicate security issues more clearly • Capture valuable data from firewalls and antivirus logs, third-party auditor reports, and other resources • Implement balanced scorecards that present compact, holistic views of organizational security effectiveness

Advance your career as an information security professional by turning theory into robust solutions to secure your organization Key Features Convert the theory of your security certifications into actionable changes to secure your organization Discover how to structure policies and procedures in order to operationalize your organization's information security strategy Learn how to achieve security goals in your organization and reduce software risk Book Description Information security and risk management best practices enable professionals to plan, implement, measure, and test their organization's systems and ensure that they're adequately protected against threats. The book starts by helping you to understand the core principles of information security, why risk management is important, and how you can drive information security governance. You'll then explore methods for implementing security controls to achieve the organization's information security goals. As you make progress, you'll get to grips with design principles that can be utilized along with methods to assess and mitigate architectural vulnerabilities. The book will also help you to discover best practices for designing secure network architectures and controlling and managing third-party identity services. Finally, you will learn about designing and managing security testing processes, along with ways in which you can improve software security. By the end of this infosec book, you'll have learned how to make your organization less vulnerable to threats and reduce the likelihood and impact of exploitation. As a result, you will be able to make an impactful change in your organization toward a higher level of information security. What you will learn Understand and operationalize risk management concepts and important security operations activities Discover how to identify, classify, and maintain information and assets Assess and mitigate vulnerabilities in information systems Determine how security control testing will be undertaken Incorporate security into the SDLC (software development life cycle) Improve the security of developed software and mitigate the risks of using unsafe software Who this book is for If you are looking to begin your career in an information security role, then this book is for you. Anyone who is studying to achieve industry-standard certification such as the CISSP or CISM, but looking for a way to convert concepts (and the seemingly endless number of acronyms) from theory into practice and start making a difference in your day-to-day work will find this book useful.

You may regard cloud computing as an ideal way for your company to control IT costs, but do you know how private and secure this service really is? Not many people do. With Cloud Security and Privacy, you'll learn what's at stake when you trust your data to the cloud, and what you can do to keep your virtual infrastructure and web applications secure. Ideal for IT staffers, information security and privacy practitioners, business managers, service providers, and investors alike, this book offers you sound advice from three well-known authorities in the tech security world. You'll learn detailed information on cloud computing security that-until now-has been sorely lacking. Review the current state of data security and storage in the cloud, including confidentiality, integrity, and availability Learn about the identity and access management (IAM) practice for authentication, authorization, and auditing of the users accessing cloud services Discover which security management frameworks and standards are relevant for the cloud Understand the privacy aspects you need to consider in the cloud, including how they compare with traditional computing models Learn the importance of audit and compliance functions within the cloud, and the various standards and frameworks to consider Examine security delivered as a service-a different facet of cloud security

A practical guide to deploying digital forensic techniques in response to cyber security incidents About This Book Learn incident response fundamentals and create an effective incident response framework Master forensics investigation utilizing digital investigative techniques Contains real-life scenarios that effectively use threat intelligence and modeling techniques Who This Book Is For This book is targeted at Information Security professionals, forensics practitioners, and students with knowledge and experience in the use of software applications and basic command-line experience. It will also help professionals who are new to the incident response/digital forensics role within their organization. What You Will Learn Create and deploy incident response capabilities within your organization Build a solid foundation for acquiring and handling suitable evidence for later analysis Analyze collected evidence and determine the root cause of a security incident Learn to integrate digital forensic techniques and procedures into the overall incident response process Integrate threat intelligence in digital evidence analysis Prepare written documentation for use internally or with external parties such as regulators or law enforcement agencies In Detail Digital Forensics and Incident Response will guide you through the entire spectrum of tasks associated with incident response, starting with preparatory activities associated with creating an incident response plan and creating a digital forensics capability within your own organization. You will then begin a detailed examination of digital forensic techniques including acquiring evidence, examining volatile memory, hard drive assessment, and network-based evidence. You will also explore the role that threat intelligence plays in the incident response process. Finally, a detailed section on preparing reports will help you prepare a written report for use either internally or in a courtroom. By the end of the book, you will have mastered forensic techniques and incident response and you will have a solid foundation on which to increase your ability to investigate such incidents in your organization. Style and approach The book covers practical scenarios and examples in an enterprise setting to give you an understanding of how digital forensics integrates with the overall response to cyber security incidents. You will also learn the proper use of tools and techniques to investigate common cyber security incidents such as malware infestation, memory analysis, disk analysis, and network analysis.

There are hundreds--if not thousands--of techniques used to compromise both Windows and Unix-based systems. Malicious code and new exploit scripts are released on a daily basis, and each evolution becomes more and more sophisticated. Keeping up with the myriad of systems used by hackers in the wild is a formidable task, and scrambling to patch each potential vulnerability or address each new attack one-by-one is a bit like emptying the Atlantic with paper cup.If you're a network administrator, the pressure is on you to defend your systems from attack. But short of devoting your life to becoming a security expert, what can you do to ensure the safety of your mission critical systems? Where do you start?Using the steps laid out by professional security analysts and consultants to identify and assess risks, Network Security Assessment offers an efficient testing model that an administrator can adopt, refine, and reuse to create proactive defensive strategies to protect their systems from the threats that are out there, as well as those still being developed.This thorough and insightful guide covers offensive technologies by grouping and analyzing them at a higher level--from both an offensive and defensive standpoint--helping administrators design and deploy networks that are immune to offensive exploits, tools, and scripts. Network administrators who need to develop and implement a security assessment program will find everything they're looking for--a proven, expert-tested methodology on which to base their own comprehensive program--in this time-saving new book.

This book, gathering the Proceedings of the 2018 Computing Conference, offers a remarkable collection of chapters covering a wide range of topics in intelligent systems, computing and their real-world applications. The Conference attracted a total of 568 submissions from pioneering researchers, scientists, industrial engineers, and students from all around the world. These submissions underwent a double-blind peer review process. Of those 568 submissions, 192 submissions (including 14 poster papers) were selected for inclusion in these proceedings. Despite computer science's comparatively brief history as a formal academic discipline, it has made a number of fundamental contributions to science and society—in fact, along with electronics, it is a founding science of the current epoch of human history ('the Information Age') and a main driver of the Information Revolution. The goal of this conference is to provide a platform for researchers to present fundamental contributions, and to be a premier venue for academic and industry practitioners to share new ideas and development experiences. This book collects state of the art chapters on all aspects of Computer Science, from classical to intelligent. It covers both the theory and applications of the latest computer technologies and methodologies. Providing the state of the art in intelligent methods and techniques for solving real-world problems, along with a vision of future research, the book will be interesting and valuable for a broad readership.

The popularity of REST in recent years has led to tremendous growth in almost-RESTful APIs that don't include many of the architecture's benefits. With this practical guide, you'll learn what it takes to design usable REST APIs that evolve over time. By focusing on solutions that cross a variety of domains, this book shows you how to create powerful and secure applications, using the tools designed for the world’s most successful distributed computing system: the World Wide Web. You’ll explore the concepts behind REST, learn different strategies for creating hypermedia-based APIs, and then put everything together with a step-by-step guide to designing a RESTful Web API. Examine API design strategies, including the collection pattern and pure hypermedia Understand how hypermedia ties representations together into a coherent API Discover how XMDP and ALPS profile formats can help you meet the Web API "semantic challenge" Learn close to two-dozen standardized hypermedia data formats Apply best practices for using HTTP in API implementations Create Web APIs with the JSON-LD standard and other the Linked Data approaches Understand the CoAP protocol for using REST in embedded systems

Do you know what weapons are used to protect against cyber warfare and what tools to use to minimize their impact? How can you gather intelligence that will allow you to configure your system to ward off attacks? Online security and privacy issues are becoming more and more significant every day, with many instances of companies and governments mishandling (or deliberately misusing) personal and financial data. Organizations need to be committed to defending their own assets and their customers’ information. Designing and Building a Security Operations Center will show you how to develop the organization, infrastructure, and capabilities to protect your company and your customers effectively, efficiently, and discreetly. Written by a subject expert who has consulted on SOC implementation in both the public and private sector, Designing and Building a Security Operations Center is the go-to blueprint for cyber-defense. Explains how to develop and build a Security Operations Center Shows how to gather invaluable intelligence to protect your organization Helps you evaluate the pros and cons behind each decision during the SOC-building process

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee

Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

"Incident Response is a complete guide for organizations of all sizes and types who are addressing their computer security issues."--Jacket.

The frontlines of cybersecurity operations include many unfilled jobs and exciting career opportunities. A transition to a security operations center (SOC) analyst position could be the start of a new path for you. Learn to actively analyze threats, protect your enterprise from harm, and kick-start your road to cybersecurity success with this one-of-a-kind book. Authors Tyler Wall and Jarrett W. Rodrick carefully and expertly share real-world insights and practical tips in Jump-start Your SOC Analyst Career. The lessons revealed equip you for interview preparation, tackling day one on the job, and setting long-term development goals. This book highlights personal stories from five SOC professionals at various career levels with keen advice that is immediately applicable to your own journey. The gems of knowledge shared in this book provide you with a notable advantage for entering this dynamic field of work. The recent surplus in demand for SOC analysts makes Jump-start Your SOC Analyst Career a must-have for aspiring tech professionals and long-time veterans alike. Recent industry developments such as using the cloud and security automation are broken down in concise, understandable ways, to name a few. The rapidly changing world of cybersecurity requires innovation and fresh eyes, and this book is your roadmap to success. What You Will Learn Understand the demand for SOC analysts Know how to find a SOC analyst job fast Be aware of the people you will interact with as a SOC analyst Be clear on the prerequisite skills needed to be a SOC analyst and what to study Be familiar with the day-to-day life of a SOC analyst, including the tools and language used Discover the rapidly emerging areas of a SOC analyst job: the cloud and security automation Who This Book Is For Anyone interested in starting a career in cyber security: recent graduates, IT professionals transitioning into security, veterans, and those who are self taught

Identify and safeguard your network against both internal and external threats, hackers, and malware attacks About This Book Lay your hands on physical and virtual evidence to understand the sort of crime committed by capturing and analyzing network traffic Connect the dots by understanding web proxies, firewalls, and routers to close in on your suspect A hands-on guide to help you solve your case with malware forensic methods and network behaviors Who This Book Is For If you are a network administrator, system administrator, information security, or forensics professional and wish to learn network forensic to track the intrusions through network-based evidence, then this book is for you. Basic knowledge of Linux and networking concepts is expected. What You Will Learn Understand Internetworking, sources of network-based evidence and other basic technical fundamentals, including the tools that will be used throughout the book Acquire evidence using traffic acquisition software and know how to manage and handle the evidence Perform packet analysis by capturing and collecting data, along with content analysis Locate wireless devices, as well as capturing and analyzing wireless traffic data packets Implement protocol analysis and content matching; acquire evidence from NIDS/NIPS Act upon the data and evidence gathered by being able to connect the dots and draw links between various events Apply logging and interfaces, along with analyzing web proxies and understanding encrypted web traffic Use IOCs (Indicators of Compromise) and build real-world forensic solutions, dealing with malware In Detail We live in a highly networked world. Every digital device—phone, tablet, or computer is connected to each other, in one way or another. In this new age of connected networks, there is network crime. Network forensics is the brave new frontier of digital investigation and information security professionals to extend their abilities to catch miscreants on the network. The book starts with an introduction to the world of network forensics and investigations. You will begin by getting an understanding of how to gather both physical and virtual evidence, intercepting and analyzing network data, wireless data packets, investigating intrusions, and so on. You will further explore the technology, tools, and investigating methods using malware forensics, network tunneling, and behaviors. By the end of the book, you will gain a complete understanding of how to successfully close a case. Style and approach An easy-to-follow book filled with real-world case studies and applications. Each topic is explained along with all the practical tools and software needed, allowing the reader to use a completely hands-on approach.

Information Security Policies and Procedures: A Practitioner‘s Reference, Second Edition illustrates how policies and procedures support the efficient running of an organization. This book is divided into two parts, an overview of security policies and procedures, and an information security reference guide. This volume points out how securi

Computer Incident Response and Forensics Team Management provides security professionals with a complete handbook of computer incident response from the perspective of forensics team management. This unique approach teaches readers the concepts and principles they need to conduct a successful incident response investigation, ensuring that proven policies and procedures are established and followed by all team members. Leighton R. Johnson III describes the processes within an incident response event and shows the crucial importance of skillful forensics team management, including when and where the transition to forensics investigation should occur during an incident response event. The book also provides discussions of key incident response components. Provides readers with a complete handbook on computer incident response from the perspective of forensics team management Identify the key steps to completing a successful computer incident response investigation Defines the qualities necessary to become a successful forensics investigation team member, as well as the interpersonal relationship skills necessary for successful incident response and forensics investigation teams

The perimeter defenses guarding your network perhaps are not as secure as you think. Hosts behind the firewall have no defenses of their own, so when a host in the "trusted" zone is breached, access to your data center is not far behind. That’s an all-too-familiar scenario today. With this practical book, you’ll learn the principles behind zero trust architecture, along with details necessary to implement it. The Zero Trust Model treats all hosts as if they’re internet-facing, and considers the entire network to be compromised and hostile. By taking this approach, you’ll focus on building strong authentication, authorization, and encryption throughout, while providing compartmentalized access and better operational agility. Understand how perimeter-based defenses have evolved to become the broken model we use today Explore two case studies of zero trust in production networks on the client side (Google) and on the server side (PagerDuty) Get example configuration for open source tools that you can use to build a zero trust network Learn how to migrate from a perimeter-based network to a zero trust network in production

This is the definitive, vendor-neutral guide to building, maintaining, and operating a modern Security Operations Center (SOC). Written by three leading security and networking experts, it brings together all the technical knowledge professionals need to deliver the right mix of security services to their organizations. The authors introduce the SOC as a service provider, and show how to use your SOC to integrate and transform existing security practices, making them far more effective. Writing for security and network professionals, managers, and other stakeholders, the authors cover: How SOCs have evolved, and today's key considerations in deploying them Key services SOCs can deliver, including organizational risk management, threat modeling, vulnerability assessment, incident response, investigation, forensics, and compliance People and process issues, including training, career development, job rotation, and hiring Centralizing and managing security data more effectively Threat intelligence and threat hunting Incident response, recovery, and vulnerability management Using data orchestration and playbooks to automate and control the response to any situation Advanced tools, including SIEM 2.0 The future of SOCs, including AI-Assisted SOCs, machine learning, and training models Note: This book's lead author, Joseph Muñiz, was also lead author of Security Operations Center: Building, Operating, and Maintaining your SOC (Cisco Press). The

Modern Security Operations Center is an entirely new and fully vendor-neutral book. 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.