The Basics Of Digital Forensics Second Edition The Primer For Getting Started In Digital Forensics

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Digital Forensics with Kali Linux Shiva V. N. Parasram 2020-04-17 Take your forensic abilities and investigation skills to the next level using powerful tools that cater to all aspects of digital forensic investigations, right from hashing to reporting Key Features Perform evidence acquisition, preservation, and analysis using a variety of Kali Linux tools Use PcapXray to perform timeline analysis of malware and network activity Implement the concept of cryptographic hashing and imaging using Kali Linux Book Description Kali Linux is a Linux-based distribution that's widely used for penetration testing and digital forensics. It has a wide range of tools to help for digital forensics investigations and incident response mechanisms. This updated second edition of Digital Forensics with Kali Linux covers the latest version of Kali Linux and The Sleuth Kit. You'll get to grips with modern techniques for analysis, extraction, and reporting using advanced tools such as FTK Imager, hex editor, and Axiom. Updated to cover digital forensics basics and advancements in the world of modern forensics, this book will also delve into the domain of operating systems. Progressing through the chapters, you'll explore various formats for file storage, including secret hiding places unseen by the end user or even the operating system. The book will also show you how to create forensic images of data and maintain integrity using hashing tools. Finally, you'll cover advanced topics such as autopsies and acquiring investigation data from networks, operating system memory, and quantum cryptography. By the end of this book, you'll have gained hands-on experience of implementing all the pillars of digital forensics: acquisition, extraction, analysis, and presentation, all using Kali Linux tools. What you will learn Get up and running with powerful Kali Linux tools for digital investigation and analysis Perform internet and memory forensics with Volatility and Xplico Understand filesystems, storage, and data fundamentals Become well-versed with incident response procedures and best practices Perform ransomware analysis using labs involving actual ransomware Carry out network forensics and analysis using NetworkMiner and other tools Who this book is for This Kali Linux book is for forensics and digital investigators, security analysts, or anyone interested in learning digital forensics using

Kali Linux. Basic knowledge of Kali Linux will be helpful to gain a better understanding of the concepts covered.

Electronically Stored Information David R. Matthews 2017-12-19 Although we live in an era in which we are surrounded by an ever-deepening fog of data, few of us truly understand how the data are created, where data are stored, or how to retrieve or destroy data—if that is indeed possible. This book is for all of you, whatever your need or interest. Electronically Stored Information: The Complete Guide to Management, Understanding, Acquisition, Storage, Search, and Retrieval, Second Edition explains the reasons you need to know about electronic data. It also gets into great detail about the how, what, when, and where of what is known in legal circles as electronically stored information (ESI). With easy-to-understand explanations and guidelines, this book provides the practical understanding you need to effectively manage the complex world of ESI. Whether you are an attorney, judge, paralegal, business manager or owner, or just one of the ever-growing population of computer users, you will benefit from the information presented in this book.

Specialised Anti-Corruption Institutions Review of Models: Second Edition OECD 2013-03-14 This report provides a comparative overview of common standards and key features of specialised anti-corruption institutions and comprehensive descriptions of 19 anti-corruption institutions operating in different parts of the world, presented in a comparable framework.

Proceedings of the Sixth International Workshop on Digital Forensics and Incident Analysis (WDFIA 2011) 2011

Implementing Digital Forensic Readiness Jason Sachowski 2019-06-07 Implementing Digital Forensic Readiness: From Reactive to Proactive Process, Second Edition presents the optimal way for digital forensic and IT security professionals to implement a proactive approach to digital forensics. The book details how digital forensic processes can align strategically with business operations and an already existing information and data security program. Detailing proper collection, preservation, storage, and presentation of digital evidence, the procedures outlined illustrate how digital evidence can be an essential tool in mitigating risk and redusing the impact of both internal and external, digital incidents, disputes, and crimes. By utilizing a digital forensic readiness approach and stances, a company's preparedness and ability to take action quickly and respond as needed. In addition, this approach enhances the ability to gather evidence, as well as the relevance, reliability, and credibility of any such evidence. New chapters to this edition include Chapter 4 on Code of Ethics and Standards, Chapter 5 on Digital Forensics as a Business, and Chapter 10 on Establishing Legal Admissibility. This book offers best practices to professionals on enhancing their digital forensic program, or how to start and develop one the right way for effective forensic readiness in any corporate or enterprise setting.

System Forensics, Investigation and Response Easttom 2013-08-16 PART OF THE NEW JONES & BARTLETT LEARNING INFORMATION SYSTEMS SECURITY & ASSURANCE SERIES Completely revised and rewritten to keep pace with the fast-paced field of Computer Forensics! Computer crimes call for forensics specialists, people who know how to find and follow the evidence. System Forensics, Investigation, and Response, Second Edition begins by examining the fundamentals of system forensics, such as what forensics is, the role of computer forensics specialists, computer forensic evidence, and application of forensic analysis skills. It also gives an overview of computer crimes, forensic methods, and laboratories. It then addresses the tools, techniques, and methods used to perform computer forensics and investigation. Finally, it explores emerging technologies as well as future directions of this interesting and cutting-edge field. New and Key Features of the Second Edition: Examines the

fundamentals of system forensics Discusses computer crimes and forensic methods Written in an accessible and engaging style Incorporates real-world examples and engaging cases Instructor Materials for System Forensics, Investigation, and Response include: PowerPoint Lecture Slides Exam Questions Case Scenarios/Handouts Instructor's Manual

Practical Crime Scene Processing and Investigation, Second Edition Ross M. Gardner 2016-04-19 All too often, the weakest link in the chain of criminal justice is the crime scene investigation. Improper collection of evidence blocks the finding of truth. Now in its second edition, Practical Crime Scene Processing and Investigation presents practical, proven methods to be used at any crime scene to ensure that evidence is admissible and persuasive. Accompanied by more than 300 color photographs, topics discussed include: Understanding the nature of physical evidence, including fingerprint, biological, trace, hair and fiber, and other forms of evidence Actions of the responding officer, from documenting and securing the initial information to providing emergency care Assessing the scene, including search considerations and dealing with chemical and bioterror hazards Crime scene photography, sketching, mapping, and notes and reports Light technology and preserving fingerprint and impression evidence Shooting scene documentation and reconstruction Bloodstain pattern analysis and the body as a crime scene Special scene considerations, including fire, buried bodies, and entomological evidence The role of crime scene analysis and reconstruction, with step-by-step procedures Two appendices provide additional information on crime scene equipment and risk management, and each chapter is enhanced by a succinct summary, suggested readings, and a series of questions to test assimilation of the material. Using this book in your investigations will help you find out what happened and who is responsible.

Encyclopedia of Information Science and Technology, Fourth Edition Khosrow-Pour, D.B.A., Mehdi 2017-06-20 In recent years, our world has experienced a profound shift and progression in available computing and knowledge sharing innovations. These emerging advancements have developed at a rapid pace, disseminating into and affecting numerous aspects of contemporary society. This has created a pivotal need for an innovative compendium encompassing the latest trends, concepts, and issues surrounding this relevant discipline area. During the past 15 years, the Encyclopedia of Information Science and Technology has become recognized as one of the landmark sources of the latest knowledge and discoveries in this discipline. The Encyclopedia of Information Science and Technology, Fourth Edition is a 10-volume set which includes 705 original and previously unpublished research articles covering a full range of perspectives, applications, and techniques contributed by thousands of experts and researchers from around the globe. This authoritative encyclopedia is an all-encompassing, well-established reference source that is ideally designed to disseminate the most forward-thinking and diverse research findings. With critical perspectives on the impact of information science management and new technologies in modern settings, including but not limited to computer science, education, healthcare, government, engineering, business, and natural and physical sciences, it is a pivotal and relevant source of knowledge that will benefit every professional within the field of information science and technology and is an invaluable addition to every academic and corporate library.

Cybercrime and Digital Forensics Thomas J. Holt 2022-05-31 This book offers a comprehensive and integrative introduction to cybercrime. It provides an authoritative synthesis of the disparate literature on the various types of cybercrime, the global investigation and detection of cybercrime and the role of digital information, and the wider role of technology as a facilitator for social relationships between deviants and criminals. It includes

coverage of: • key theoretical and methodological perspectives; • computer hacking and malicious software; • digital piracy and intellectual theft; • economic crime and online fraud; • pornography and online sex crime; • cyber-bullying and cyber-stalking; • cyber-terrorism and extremism; • the rise of the Dark Web; • digital forensic investigation and its legal context around the world; • the law enforcement response to cybercrime transnationally; • cybercrime policy and legislation across the globe. The new edition has been revised and updated, featuring two new chapters; the first offering an expanded discussion of cyberwarfare and information operations online, and the second discussing illicit market operations for all sorts of products on both the Open and Dark Web. This book includes lively and engaging features, such as discussion questions, boxed examples of unique events and key figures in offending, quotes from interviews with active offenders, and a full glossary of terms. It is supplemented by a companion website that includes further exercises for students and instructor resources. This text is essential reading for courses on cybercrime, cyber-deviancy, digital forensics, cybercrime investigation, and the sociology of technology.

Computer Forensics For Dummies Carol Pollard 2008-10-13 Uncover a digital trail of e-evidence by using the helpful, easy-to-understand information in Computer Forensics For Dummies! Professional and armchair investigators alike can learn the basics of computer forensics, from digging out electronic evidence to solving the case. You won't need a computer science degree to master e-discovery. Find and filter data in mobile devices, e-mail, and other Web-based technologies. You'll learn all about e-mail and Web-based forensics, mobile forensics, passwords and encryption, and other e-evidence found through VoIP, voicemail, legacy mainframes, and databases. You'll discover how to use the latest forensic software, tools, and equipment to find the answers that you're looking for in record time. When you understand how data is stored, encrypted, and recovered, you'll be able to protect your personal privacy as well. By the time you finish reading this book, you'll know how to: Prepare for and conduct computer forensics investigations Find and filter data Protect personal privacy Transfer evidence without contaminating it Anticipate legal loopholes and opponents' methods Handle passwords and encrypted data Work with the courts and win the case Plus, Computer Forensics for Dummies includes lists of things that everyone interested in computer forensics should know, do, and build. Discover how to get qualified for a career in computer forensics, what to do to be a great investigator and expert witness, and how to build a forensics lab or toolkit. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

The Basics of Digital Forensics John Sammons 2014-12-09 The Basics of Digital Forensics provides a foundation for people new to the digital forensics field. This book teaches you how to conduct examinations by discussing what digital forensics is, the methodologies used, key tactical concepts, and the tools needed to perform examinations. Details on digital forensics for computers, networks, cell phones, GPS, the cloud and the Internet are discussed. Also, learn how to collect evidence, document the scene, and how deleted data can be recovered. The new Second Edition of this book provides you with completely up-to-date real-world examples and all the key technologies used in digital forensics, as well as new coverage of network intrusion response, how hard drives are organized, and electronic discovery. You'll also learn how to incorporate quality assurance into an investigation, how to prioritize evidence items to examine (triage), case processing, and what goes into making an expert witness. The Second Edition also features expanded resources and references, including online resources that keep you current, sample legal documents, and suggested further reading. Learn what Digital Forensics entails Build a toolkit and prepare an investigative plan

Understand the common artifacts to look for in an exam Second Edition features all-new coverage of hard drives, triage, network intrusion response, and electronic discovery; as well as updated case studies, expert interviews, and expanded resources and references

16th International Conference on Information Technology-New Generations (ITNG 2019) Shahram Latifi 2019-05-22 This 16th International Conference on Information Technology - New Generations (ITNG), continues an annual event focusing on state of the art technologies pertaining to digital information and communications. The applications of advanced information technology to such domains as astronomy, biology, education, geosciences, security and health care are among topics of relevance to ITNG. Visionary ideas, theoretical and experimental results, as well as prototypes, designs, and tools that help the information readily flow to the user are of special interest. Machine Learning, Robotics, High Performance Computing, and Innovative Methods of Computing are examples of related topics. The conference features keynote speakers, the best student award, poster award, service award, a technical open panel, and workshops/exhibits from industry, government and academia.

EnCase Computer Forensics -- The Official EnCE Steve Bunting 2012-09-14 The official, Guidance Software-approved book on the newest EnCE exam! The EnCE exam tests that computer forensic analysts and examiners have thoroughly mastered computer investigation methodologies, as well as the use of Guidance Software's EnCase Forensic 7. The only official Guidance-endorsed study guide on the topic, this book prepares you for the exam with extensive coverage of all exam topics, real-world scenarios, hands-on exercises, up-to-date legal information, and sample evidence files, flashcards, and more. Guides readers through preparation for the newest EnCase Certified Examiner (EnCE) exam Prepares candidates for both Phase 1 and Phase 2 of the exam, as well as for practical use of the certification Covers identifying and searching hardware and files systems, handling evidence on the scene, and acquiring digital evidence using EnCase Forensic 7 Includes hands-on exercises, practice questions, and up-to-date legal information Sample evidence files, Sybex Test Engine, electronic flashcards, and more If you're preparing for the new EnCE exam, this is the study guide you need.

Cyber Security and IT Infrastructure Protection John R. Vacca 2013-08-22 This book serves as a security practitioner's guide to today's most crucial issues in cyber security and IT infrastructure. It offers in-depth coverage of theory, technology, and practice as they relate to established technologies as well as recent advancements. It explores practical solutions to a wide range of cyber-physical and IT infrastructure protection issues. Composed of 11 chapters contributed by leading experts in their fields, this highly useful book covers disaster recovery, biometrics, homeland security, cyber warfare, cyber security, national infrastructure security, access controls, vulnerability assessments and audits, cryptography, and operational and organizational security, as well as an extensive glossary of security terms and acronyms. Written with instructors and students in mind, this book includes methods of analysis and problem-solving techniques through hands-on exercises and worked examples as well as questions and answers and the ability to implement practical solutions through real-life case studies. For example, the new format includes the following pedagogical elements: • Checklists throughout each chapter to gauge understanding • Chapter Review Questions/Exercises and Case Studies • Ancillaries: Solutions Manual; slide package; figure files This format will be attractive to universities and career schools as well as federal and state agencies, corporate security training programs, ASIS certification, etc. Chapters by leaders in the field on theory and practice of cyber security and IT infrastructure protection, allowing the reader to

develop a new level of technical expertise Comprehensive and up-to-date coverage of cyber security issues allows the reader to remain current and fully informed from multiple viewpoints Presents methods of analysis and problem-solving techniques, enhancing the reader's grasp of the material and ability to implement practical solutions

Handbook of Digital Forensics of Multimedia Data and Devices, Enhanced E-Book Anthony T. S. Ho 2016-05-20 Digital forensics and multimedia forensics are rapidly growing disciplines whereby electronic information is extracted and interpreted for use in a court of law. These two fields are finding increasing importance in law enforcement and the investigation of cybercrime as the ubiquity of personal computing and the internet becomes ever-more apparent. Digital forensics involves investigating computer systems and digital artefacts in general, while multimedia forensics is a sub-topic of digital forensics focusing on evidence extracted from both normal computer systems and special multimedia devices, such as digital cameras. This book focuses on the interface between digital forensics and multimedia forensics, bringing two closely related fields of forensic expertise together to identify and understand the current state-of-the-art in digital forensic investigation. Both fields are expertly attended to by contributions from researchers and forensic practitioners specializing in diverse topics such as forensic authentication, forensic triage, forensic photogrammetry, biometric forensics, multimedia device identification, and image forgery detection among many others. Key features: Brings digital and multimedia forensics together with contributions from academia, law enforcement, and the digital forensics industry for extensive coverage of all the major aspects of digital forensics of multimedia data and devices Provides comprehensive and authoritative coverage of digital forensics of multimedia data and devices Offers not only explanations of techniques but also real-world and simulated case studies to illustrate how digital and multimedia forensics techniques work Includes a companion website hosting continually updated supplementary materials ranging from extended and updated coverage of standards to best practice guides, test datasets and more case studies

The Basics of Project Evaluation and Lessons Learned, Second Edition Willis H. Thomas 2014-08-22 For some organizations, Lessons Learned (LL) is an informal process of discussing and recording project experiences during the closure phase. For others, LL is a formal process that occurs at the end of each phase of a project. Regardless of when they are performed, if you are a project team member, chances are you will soon be required to present an evaluation of your project using Lessons Learned. Presenting new information that updates the award-winning first edition, The Basics of Project Evaluation and Lessons Learned, Second Edition supplies practical guidance on conducting project Lessons Learned. The first edition won the Project Management Institute's (PMI®) David I. Cleland Project Management Literature Award. Following in the footsteps of its popular predecessor, this second edition provides an easy-to-follow, systematic approach to conducting Lessons Learned on a project. Updated to align with the PMBOK® Guide, Fifth Edition Includes three new chapters—PRINCE2®, Agile Retrospectives, and Knowledge Transfer— in response to information requests from readers of the first edition from around the world Enhanced with valuable new resources in the Project Evaluation Resource Kit (PERK) found on the free CD included in the back of the book, including a fully functional MS Access Lessons Learned Database The research in this book is based on four years of doctoral dissertation research and is supported by renowned experts in the field of evaluation. The concepts covered are applicable to all types of organizations that implement projects and need to conduct Lessons Learned. Providing tools and techniques for active engagement, the text is founded on the principles of conducting project evaluations as recommended by the Project Management Institute (PMI), the

world's leading not-for-profit membership association for the project management profession, and PRINCE2® (Project in Controlled Environments version 2), a major governing body of project management. Simplifying and formalizing the methodology of conducting LL in projects, the contents of this book will help organizations, large and small, more effectively implement processes and systems to support effective LL. The text is supported by a Project Evaluation Resource Kit (PERK), which is found in CD format at the back of the book.

Meshfree Methods G.R. Liu 2009-10-06 Understand How to Use and Develop Meshfree Techniques An Update of a Groundbreaking Work Reflecting the significant advances made in the field since the publication of its predecessor, Meshfree Methods: Moving Beyond the Finite Element Method, Second Edition systematically covers the most widely used meshfree methods. With 70% new material, this edition addresses important new developments, especially on essential theoretical issues. New to the Second Edition Much more details on fundamental concepts and important theories for numerical methods Discussions on special properties of meshfree methods, including stability, convergence, accurate, efficiency, and bound property More detailed discussion on error estimation and adaptive analysis using meshfree methods Developments on combined meshfree/finite element method (FEM) models Comparison studies using meshfree and FEM Drawing on the author's own research, this book provides a single-source guide to meshfree techniques and theories that can effectively handle a variety of complex engineering problems. It analyzes how the methods work, explains how to use and develop the methods, and explores the problems associated with meshfree methods. To access MFree2D (copyright, G. R. Liu), which accompanies MESHFREE METHODS: MOVING BEYOND THE FINITE ELEMENT METHOD, Second Edition (978-1-4200-8209-8) by Dr. G. R. Liu, please go to the website: www.ase.uc.edu/~liugr An access code is needed to use program – to receive it please email Dr. Liu directly at: liugr@ucmail.uc.edu Dr. Liu will reply to you directly with the code, and you can then proceed to use the software.

CompTIA CySA+ Cybersecurity Analyst Certification All-in-One Exam Guide, Second Edition (Exam CS0-002) Brent Chapman 2020-11-27 Prepare for the CompTIA CySA+ certification exam with this fully updated self-study resource This highly effective self-study system provides complete coverage of every objective for the challenging CompTIA CySA+ Cybersecurity Analyst exam. You'll find learning objectives at the beginning of each chapter, exam tips, in-depth explanations, and practice exam questions. All questions closely mirror those on the actual test in content, format, and tone. Designed to help you pass the CS0-002 exam with ease, this definitive guide also serves as an essential on-the-job reference. Covers all exam topics, including: Threat and vulnerability management Threat data and intelligence Vulnerability management, assessment tools, and mitigation Software and systems security Solutions for infrastructure management Software and hardware assurance best practices Security operations and monitoring Proactive threat hunting Automation concepts and technologies Incident response process, procedure, and analysis Compliance and assessment Data privacy and protection Support of organizational risk mitigation Online content includes: 200+ practice questions Interactive performance-based questions Test engine that provides full-length practice exams and customizable quizzes by exam objective

Cybersecurity & Digital Forensics ANAS ZAKIR 2022-03-17 About The Book: This book is for beginners, cybersecurity and digital forensics enthusiasts, or anyone who wants to boost their knowledge, skills and want to learn about cybersecurity & digital forensics. This book explains different programming languages, cryptography,

steganography techniques, networking, web application security, and digital forensics concepts in an evident manner with examples. This book will enable you to grasp different cybersecurity, digital forensics, and programming concepts and will allow you to understand how to implement security and break security in a system for testing purposes. Also, in this book, we will discuss how to manually perform a forensics investigation for extracting volatile & non-volatile data in Linux and Windows OS using the command-line interface. In this book, we will mostly use command-line interface for performing different tasks using programming and commands skills that we will acquire in different chapters. In this book you will learn: • Setting up & Managing Virtual Machine in VirtualBox • Linux OS • Bash Programming and Scripting • Useful Utilities in Linux OS • Python Programming • How to work on CLI • How to use programming skills for automating tasks. • Different Cryptographic techniques such as Symmetric & Asymmetric Cryptography, Digital Signatures, Message Authentication Code, Hashing • Cryptographic Loopholes • Steganography techniques for hiding & extracting information • Networking Concepts such as OSI & TCP/IP Model, IP Addressing, Subnetting, Some Networking Protocols • Network Security & Wireless Security Protocols • A Little bit of Web Development • Detection, Exploitation, and Mitigation of some Web Application Vulnerabilities • Basic knowledge of some powerful & useful Tools • Different concepts related to Digital Forensics • Data Acquisition types and methods • Manual Extraction of Volatile & Non-Volatile Data from OS artifacts & Much More

Digital Forensics in the Era of Artificial Intelligence Nour Moustafa 2022-07-18 Digital forensics plays a crucial role in identifying, analysing, and presenting cyber threats as evidence in a court of law. Artificial intelligence, particularly machine learning and deep learning, enables automation of the digital investigation process. This book provides an in-depth look at the fundamental and advanced methods in digital forensics. It also discusses how machine learning and deep learning algorithms can be used to detect and investigate cybercrimes. This book demonstrates digital forensics and cyber-investigating techniques with real-world applications. It examines hard disk analytics and style architectures, including Master Boot Record and GUID Partition Table as part of the investigative process. It also covers cyberattack analysis in Windows, Linux, and network systems using virtual machines in real-world scenarios. Digital Forensics in the Era of Artificial Intelligence will be helpful for those interested in digital forensics and using machine learning techniques in the investigation of cyberattacks and the detection of evidence in cybercrimes.

The Complete Idiot's Guide to Forensics, 2nd Edition Alan Axelrod, PhD 2007-09-04 Get a clue about the most vital components of criminal investigation. This new edition offers the most up-do-date scientific investigation methods used by today's law enforcement agencies, including criminal profiling, lie detector technology, and DNA analyses, with an emphasis on forensic pathology, anthropology, and psychology. -Guy Antinozzi is a veteran police officer and detective who teaches in the field -Focuses on the use of forensics in criminal investigations instead of academic and theoretical criminology

The Ultimate Guide to Internet Safety Second Edition Victoria Roddel 2013-07 Learn why it is important to use the Internet wisely and tips for how to stay safe.

Hacking Exposed Computer Forensics, Second Edition Aaron Philipp 2009-10-06 "Provides the right mix of practical how-to knowledge in a straightforward, informative fashion that ties it all the complex pieces together with real-world case studies. ...Delivers the most valuable insight on the market. The authors cut to the chase of what people must understand to effectively perform computer forensic investigations." --Brian H. Karney, COO, AccessData Corporation The latest strategies for

investigating cyber-crime Identify and investigate computer criminals of all stripes with help from this fully updated. real-world resource. Hacking Exposed Computer Forensics, Second Edition explains how to construct a high-tech forensic lab, collect prosecutable evidence, discover e-mail and system file clues, track wireless activity, and recover obscured documents. Learn how to re-create an attacker's footsteps, communicate with counsel, prepare court-ready reports, and work through legal and organizational challenges. Case studies straight from today's headlines cover IP theft, mortgage fraud, employee misconduct, securities fraud, embezzlement, organized crime, and consumer fraud cases. Effectively uncover, capture, and prepare evidence for investigation Store and process collected data in a highly secure digital forensic lab Restore deleted documents, partitions, user activities, and file systems Analyze evidence gathered from Windows, Linux, and Macintosh systems Use the latest Web and client-based e-mail tools to extract relevant artifacts Overcome the hacker's anti-forensic, encryption, and obscurity techniques Unlock clues stored in cell phones, PDAs, and Windows Mobile devices Prepare legal documents that will hold up to judicial and defense scrutiny

Cyber Forensics Albert J. Marcella, Jr. 2012-05 An explanation of the basic principles of data This book explains the basic principles of data as buildingblocks of electronic evidential matter, which are used in a cyberforensics investigations. The entire text is written with noreference to a particular operation system or environment, thus itis applicable to all work environments, cyber investigationscenarios, and technologies. The text is written in astep-by-step manner, beginning with the elementary buildingblocks of data progressing upwards to the representation andstorage of information. It inlcudes practical examples andillustrations throughout to guide the reader.

Cyber Forensics Jr., Albert Marcella 2002-01-23 Given our increasing dependency on computing technology in daily business processes, and the growing opportunity to use engineering technologies to engage in illegal, unauthorized, and unethical acts aimed at corporate infrastructure, every organization is at risk. Cyber Forensics: A Field Manual for Collecting, Examining, and Preserving Evidence o

Cyber Forensics Albert Marcella, Jr. 2007-12-19 Designed as an introduction and overview to the field, Cyber Forensics: A Field Manual for Collecting, Examining, and Preserving Evidence of Computer Crimes, Second Edition integrates theory and practice to present the policies, procedures, methodologies, and legal ramifications and implications of a cyber forensic investigation. The authors guide you step-by-step through the basics of investigation and introduce the tools and procedures required to legally seize and forensically evaluate a suspect machine. Updating and expanding information on concealment techniques, new technologies, hardware, software, and relevant new legislation, this second edition delineates the scope and goals of cyber forensics to reveal and track legal and illegal activity. Beginning with an introduction and definition of cyber forensics, chapters explain the rules of evidence and chain of custody in maintaining legally valid electronic evidence. They describe how to begin an investigation and employ investigative methodology, as well as establish standard operating procedures for the field and cyber forensic laboratory. The authors provide an in depth examination of the manipulation of technology to conceal illegal activities and the use of cyber forensics to uncover them. They discuss topics and issues such as conducting a cyber forensic investigation within both the local and federal legal framework, and evaluating the current data security and integrity exposure of multifunctional devices. Cyber Forensics includes details and tips on taking control of a suspect computer or PDA and its "operating" environment, mitigating potential exposures and risks to chain of custody, and establishing and following a flowchart for the

seizure of electronic evidence. An extensive list of appendices include websites, organizations, pertinent legislation, further readings, best practice recommendations, more information on hardware and software, and a recap of the federal rules of civil procedure.

Investigating Computer-Related Crime, Second Edition Peter Stephenson 2013-04-19 Since the last edition of this book was written more than a decade ago, cybercrime has evolved. Motives have not changed, but new means and opportunities have arisen with the advancement of the digital age. Investigating Computer-Related Crime: Second Edition incorporates the results of research and practice in a variety of venues, growth in the field, and new technology to offer a fresh look at the topic of digital investigation. Following an introduction to cybercrime and its impact on society, this book examines: Malware and the important differences between targeted attacks and general attacks The framework for conducting a digital investigation, how it is conducted, and some of the key issues that arise over the course of an investigation How the computer forensic process fits into an investigation The concept of system glitches vs. cybercrime and the importance of weeding out incidents that don't need investigating Investigative politics that occur during the course of an investigation, whether to involve law enforcement, and when an investigation should be stopped How to prepare for cybercrime before it happens End-to-end digital investigation Evidence collection, preservation, management, and effective use How to critique your investigation and maximize lessons learned This edition reflects a heightened focus on cyber stalking and cybercrime scene assessment, updates the tools used by digital forensic examiners, and places increased emphases on following the cyber trail and the concept of end-to-end digital investigation. Discussion questions at the end of each chapter are designed to stimulate further debate into this fascinating field.

Fundamentals of Computer Sunil Chauhan 2006-04

The Basics of Digital Forensics John Sammons 2014-10-13 The Basics of Digital Forensics provides a foundation for people new to the digital forensics field. This book teaches you how to conduct examinations by discussing what digital forensics is, the methodologies used, key tactical concepts, and the tools needed to perform examinations. Details on digital forensics for computers, networks, cell phones, GPS, the cloud and the Internet are discussed. Also, learn how to collect evidence, document the scene, and how deleted data can be recovered. The new Second Edition of this book provides you with completely up-to-date real-world examples and all the key technologies used in digital forensics, as well as new coverage of network intrusion response, how hard drives are organized, and electronic discovery. You'll also learn how to incorporate quality assurance into an investigation, how to prioritize evidence items to examine (triage), case processing, and what goes into making an expert witness. The Second Edition also features expanded resources and references, including online resources that keep you current, sample legal documents, and suggested further reading. Learn what Digital Forensics entails Build a toolkit and prepare an investigative plan Understand the common artifacts to look for in an exam Second Edition features all-new coverage of hard drives, triage, network intrusion response, and electronic discovery; as well as updated case studies, expert interviews, and expanded resources and references

The Basics of Digital Forensics, 2nd Edition John Sammons 2014 The Basics of Digital Forensics provides a foundation for people new to the digital forensics field. This book teaches you how to conduct examinations by discussing what digital forensics is, the methodologies used, key tactical concepts, and the tools needed to perform examinations. Details on digital forensics for computers, networks, cell phones, GPS, the cloud and the Internet are discussed. Also, learn how to collect evidence, document the scene, and how

deleted data can be recovered. The new Second Edition of this book provides you with completely up-to-date real-world examples and all the key technologies used in digital forensics, as well as new coverage of network intrusion response, how hard drives are organized, and electronic discovery. You'll also learn how to incorporate quality assurance into an investigation, how to prioritize evidence items to examine (triage), case processing, and what goes into making an expert witness. The Second Edition also features expanded resources and references, including online resources that keep you current, sample legal documents, and suggested further reading. Learn what Digital Forensics entails Build a toolkit and prepare an investigative plan Understand the common artifacts to look for in an exam Second Edition features all-new coverage of hard drives, triage, network intrusion response, and electronic discovery; as well as updated case studies, expert interviews, and expanded resources and references.

Cybersecurity Law, Standards and Regulations, 2nd Edition Tari Schreider 2020-02-22 In today's litigious business world, cyber-related matters could land you in court. As a computer security professional, you are protecting your data, but are you protecting your company? While you know industry standards and regulations, you may not be a legal expert. Fortunately, in a few hours of reading, rather than months of classroom study, Tari Schreider's Cybersecurity Law, Standards and Regulations (2nd Edition), lets you integrate legal issues into your security program. Tari Schreider, a board-certified information security practitioner with a criminal justice administration background, has written a much-needed book that bridges the gap between cybersecurity programs and cybersecurity law. He says, "My nearly 40 years in the fields of cybersecurity, risk management, and disaster recovery have taught me some immutable truths. One of these truths is that failure to consider the law when developing a cybersecurity program results in a protective façade or false sense of security." In a friendly style, offering real-world business examples from his own experience supported by a wealth of court cases, Schreider covers the range of practical information you will need as you explore – and prepare to apply – cybersecurity law. His practical, easy-to-understand explanations help you to: Understand your legal duty to act reasonably and responsibly to protect assets and information. Identify which cybersecurity laws have the potential to impact your cybersecurity program. Upgrade cybersecurity policies to comply with state, federal, and regulatory statutes. Communicate effectively about cybersecurity law with corporate legal department and counsel. Understand the implications of emerging legislation for your cybersecurity program. Know how to avoid losing a cybersecurity court case on procedure – and develop strategies to handle a dispute out of court. Develop an international view of cybersecurity and data privacy – and international legal frameworks. Schreider takes you beyond security standards and regulatory controls to ensure that your current or future cybersecurity program complies with all laws and legal jurisdictions. Hundreds of citations and references allow you to dig deeper as you explore specific topics relevant to your organization or your studies. This book needs to be required reading before your next discussion with your corporate legal department. This new edition responds to the rapid changes in the cybersecurity industry, threat landscape and providers. It addresses the increasing risk of zero-day attacks, growth of state-sponsored adversaries and consolidation of cybersecurity products and services in addition to the substantial updates of standards, source links and cybersecurity products.

Digital Forensics and Incident Response Gerard Johansen 2020-01-29 Build your organization's cyber defense system by effectively implementing digital forensics and incident management techniques Key Features Create a solid incident response framework and manage cyber incidents

effectively Perform malware analysis for effective incident response Explore real-life scenarios that effectively use threat intelligence and modeling techniques Book Description An understanding of how digital forensics integrates with the overall response to cybersecurity incidents is key to securing your organization's infrastructure from attacks. This updated second edition will help you perform cutting-edge digital forensic activities and incident response. After focusing on the fundamentals of incident response that are critical to any information security team, you'll move on to exploring the incident response framework. From understanding its importance to creating a swift and effective response to security incidents, the book will guide you with the help of useful examples. You'll later get up to speed with digital forensic techniques, from acquiring evidence and examining volatile memory through to hard drive examination and network-based evidence. As you progress, you'll discover the role that threat intelligence plays in the incident response process. You'll also learn how to prepare an incident response report that documents the findings of your analysis. Finally, in addition to various incident response activities, the book will address malware analysis, and demonstrate how you can proactively use your digital forensic skills in threat hunting. By the end of this book, you'll have learned how to efficiently investigate and report unwanted security breaches and incidents in your organization. What you will learn Create and deploy an incident response capability within your own organization Perform proper evidence acquisition and handling Analyze the evidence collected and determine the root cause of a security incident Become well-versed with memory and log analysis Integrate digital forensic techniques and procedures into the overall incident response process Understand the different techniques for threat hunting Write effective incident reports that document the key findings of your analysis Who this book is for This book is for cybersecurity and information security professionals who want to implement digital forensics and incident response in their organization. You will also find the book helpful if you are new to the concept of digital forensics and are looking to get started with the fundamentals. A basic understanding of operating systems and some knowledge of networking fundamentals are required to get started with this book.

Official (ISC)2® Guide to the CCFP CBK Peter Stephenson 2014-07-24 Cyber forensic knowledge requirements have expanded and evolved just as fast as the nature of digital information has—requiring cyber forensics professionals to understand far more than just hard drive intrusion analysis. The Certified Cyber Forensics Professional (CCFPSM) designation ensures that certification holders possess the necessary breadth, depth of knowledge, and analytical skills needed to address modern cyber forensics challenges. Official (ISC)2® Guide to the CCFP® CBK® supplies an authoritative review of the key concepts and requirements of the Certified Cyber Forensics Professional (CCFP®) Common Body of Knowledge (CBK®). Encompassing all of the knowledge elements needed to demonstrate competency in cyber forensics, it covers the six domains: Legal and Ethical Principles, Investigations, Forensic Science, Digital Forensics, Application Forensics, and Hybrid and Emerging Technologies. Compiled by leading digital forensics experts from around the world, the book provides the practical understanding in forensics techniques and procedures, standards of practice, and legal and ethical principles required to ensure accurate, complete, and reliable digital evidence that is admissible in a court of law. This official guide supplies a global perspective of key topics within the cyber forensics field, including chain of custody, evidence analysis, network forensics, and cloud forensics. It also explains how to apply forensics techniques to other information security disciplines, such as e-discovery, malware analysis, or incident response. Utilize this book as your fundamental study tool for achieving the

CCFP certification the first time around. Beyond that, it will serve as a reliable resource for cyber forensics knowledge throughout your career.

Handbook of Electronic Security and Digital Forensics Hamid Jahankhani 2010 The widespread use of information and communications technology (ICT) has created a global platform for the exchange of ideas, goods and services, the benefits of which are enormous. However, it has also created boundless opportunities for fraud and deception. Cybercrime is one of the biggest growth industries around the globe, whether it is in the form of violation of company policies, fraud, hate crime, extremism, or terrorism. It is therefore paramount that the security industry raises its game to combat these threats. Today's top priority is to use computer technology to fight computer crime, as our commonwealth is protected by firewalls rather than firepower. This is an issue of global importance as new technologies have provided a world of opportunity for criminals. This book is a compilation of the collaboration between the researchers and practitioners in the security field; and provides a comprehensive literature on current and future e-security needs across applications, implementation, testing or investigative techniques, judicial processes and criminal intelligence. The intended audience includes members in academia, the public and private sectors, students and those who are interested in and will benefit from this handbook.

Forensic Science Kathy Mirakovits 2016-04-19 As forensic science continues to play a wider role in the investigation of crimes and apprehension of criminals, those without crime scene or crime lab training must now become familiar with the techniques and language of the forensic scientist. Avoiding the complicated science and graphic violence typical of most forensic references, this book is written specifically for those without forensic science experience. While it provides a professional reference for those not steeped in the details of forensic science, the wealth of instructor material available for teachers and its pedagogical approach make this an ideal textbook for high school and introductory level courses. Following up on the tremendously popular first edition, Forensic Science: The Basics, Second Edition now adds the insight of a new co-author who is known nationally for training instructors how to teach forensic science at all levels of education. The book takes readers from the initial evidence collection process, through the evaluation procedures, right up to and including the courtroom presentation. Packed with case studies, photographs, and exercises, this book provides everything the non-scientist needs to be able to understand and utilize the vital research approaches that forensic science can offer. "Test Yourself" questions at the end of each chapter familiarize you with the language and approaches needed to understand and communicate with experienced crime scene investigators and laboratory personnel. Offering the forensic sciences at their most accessible, Forensic Science: The Basics, Second Edition is a valuable resource for detectives, journalists, prosecutors, defense attorneys, and other non-science professionals who need to understand, interpret, and report on the newest advances in crime scene investigation. PowerPoint® lecture slides, test bank, and other ancillary material on CD-ROM is available with qualifying course adoption

Advanced Methodologies and Technologies in System Security, Information Privacy, and Forensics Khosrow-Pour, D.B.A., Mehdi 2018-10-05 Cyber-attacks are rapidly becoming one of the most prevalent issues globally, and as they continue to escalate, it is imperative to explore new approaches and technologies that help ensure the security of the online community. Beyond cyber-attacks, personal information is now routinely and exclusively housed in cloud-based systems. The rising use of information technologies requires stronger information security and system procedures to reduce the risk of information breaches. Advanced Methodologies and Technologies in System Security, Information

Privacy, and Forensics presents emerging research and methods on preventing information breaches and further securing system networks. While highlighting the rising concerns in information privacy and system security, this book explores the cutting-edge methods combatting digital risks and cyber threats. This book is an important resource for information technology professionals, cybercrime researchers, network analysts, government agencies, business professionals, academicians, and practitioners seeking the most up-to-date information and methodologies on cybercrime, digital terrorism, network security, and information technology ethics.

Forensic Podiatry Denis Wesley Vernon 2017-06-01 Forensic Podiatry: Principles and Methods, Second Edition has been completely updated to reflect the latest developments and advancements in this changing field. New additions to the book, from the previous edition, include all new chapters on the expert witness, Frye Test, and Daubert Standard, as well as revised theories on gait analysis, bare footprint identification, and footwear examination. The new edition includes extensive case studies and an international compilation of current best practices. Since this text's first publication, the field of forensic podiatry has rapidly developed from relative obscurity to a dynamic, internationally recognized discipline. Forensic podiatrists have been able to advance improvements in the field, both in widening the range of applications and deepening the practice through improved techniques to strengthen evidentiary conclusions. Written by two pioneers in the field, Forensic Podiatry includes over one hundred detailed illustrations to serve as an invaluable resource for students, practicing forensic podiatrists, legal professionals and those new to the profession.

Digital Forensics and Incident Response - Second Edition Gerard Johansen 2020-01-29 Build your organization's cyber defense system by effectively implementing digital forensics and incident management techniques Key Features Create a solid incident response framework and manage cyber incidents effectively Perform malware analysis for effective incident response Explore real-life scenarios that effectively use threat intelligence and modeling techniques Book Description An understanding of how digital forensics integrates with the overall response to cybersecurity incidents is key to securing your organization's infrastructure from attacks. This updated second edition will help you perform cutting-edge digital forensic activities and incident response. After focusing on the fundamentals of incident response that are critical to any information security team, you'll move on to exploring the incident response framework. From understanding its importance to creating a swift and effective response to security incidents, the book will guide you with the help of useful examples. You'll later get up to speed with digital forensic techniques, from acquiring evidence and examining volatile memory through to hard drive examination and network-based evidence. As you progress, you'll discover the role that threat intelligence plays in the incident response process. You'll also learn how to prepare an incident response report that documents the findings of your analysis. Finally, in addition to various incident response activities, the book will address malware analysis, and demonstrate how you can proactively use your digital forensic skills in threat hunting. By the end of this book, you'll have learned how to efficiently investigate and report unwanted security breaches and incidents in your organization. What you will learn Create and deploy an incident response capability within your own organization Perform proper evidence acquisition and handling Analyze the evidence collected and determine the root cause of a security incident Become well-versed with memory and log analysis Integrate digital forensic techniques and procedures into the overall incident response process Understand the different techniques for threat hunting Write effective incident reports that document the key findings of your analysis Who this book is for This book is for

cybersecurity and information security professionals who want to implement digital forensics and incident response in their organization. You will also find the book helpful if you are new to the concept of digital forensics and are looking to get started with the fundamentals. A basic understanding of operating systems and some knowledge of networking fundamentals are required to get started with this book.

Practical Mobile Forensics Heather Mahalik 2016 A hands-on guide to mastering mobile forensics for the iOS, Android, and the Windows Phone platformsAbout This Book- Get to grips with the basics of mobile forensics and the various forensic approaches- Retrieve and analyze the data stored on mobile devices and on the cloud- A practical guide to leverage the power of mobile forensics on the popular mobile platforms with lots of tips, tricks and caveatsWho This Book Is ForThis book is for forensics professionals who are eager to widen their forensics skillset to mobile forensics and acquire data from mobile devices.What You Will Learn- Discover the new features in practical mobile forensics- Understand the architecture and security mechanisms present in iOS and Android platforms- Identify sensitive files on the iOS and Android platforms- Set up the forensic environment- Extract data on the iOS and Android platforms- Recover data on the iOS and Android platforms- Understand the forensics of Windows devices- Explore various third-party application techniques and data recovery techniquesIn DetailMobile phone forensics is the science of retrieving data from a mobile phone under forensically sound conditions. This book is an update to Practical Mobile Forensics and it delves into the concepts of mobile forensics and its importance in today's world.We will deep dive into mobile forensics techniques, iOS 8 - 9 and Android 4.4 - 6, and Windows Phone devices. We will demonstrate the latest open source and commercial mobile forensics tools, enabling you to analyze and retrieve data effectively. You will learn how to introspect and retrieve data from cloud, and document and prepare reports for your investigations.By the end of this book, you will have mastered the current operating systems and techniques so you can recover data from mobile devices by leveraging open source solutions.Style and approach This book takes a very practical approach and depicts real-life mobile forensics scenarios with lots of tips and tricks to help acquire the required forensics skillset for various mobile platforms.

The Basics of Digital Forensics, Second Edition John Sammons 2014-12-29