

## Computer Anti Forensics Methods And Their Impact On

*In distributed, open systems like cyberspace, where the behavior of autonomous agents is uncertain and can affect other agents' welfare, trust management is used to allow agents to determine what to expect about the behavior of other agents. The role of trust management is to maximize trust between the parties and thereby provide a basis for cooperation to develop. Bringing together expertise from technology-oriented sciences, law, philosophy, and social sciences, Managing Trust in Cyberspace addresses fundamental issues underpinning computational trust models and covers trust management processes for dynamic open systems and applications in a tutorial style that aids in understanding. Topics include trust in autonomic and self-organized networks, cloud computing, embedded computing, multi-agent systems, digital rights management, security and quality issues in trusting e-government service delivery, and context-aware e-commerce applications. The book also presents a walk-through of online identity management and examines using trust and argumentation in recommender systems. It concludes with a comprehensive survey of anti-forensics for network security and a review of password security and protection. Researchers and practitioners in fields such as distributed computing, Internet technologies, networked systems, information systems, human computer interaction, human behavior modeling, and intelligent informatics especially benefit from a discussion of future trust management research directions including pervasive and ubiquitous computing, wireless ad-hoc and sensor networks, cloud computing, social networks, e-services, P2P networks, near-field communications (NFC), electronic knowledge management, and nano-communication networks.*

*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.*

*Mobile devices are ubiquitous; therefore, mobile device forensics is absolutely critical. Whether for civil or criminal investigations, being able to extract evidence from a mobile device is essential. This book covers the technical details of mobile devices and transmissions, as well as forensic methods for extracting evidence. There are books on specific issues like Android forensics or iOS forensics, but there is not currently a book that covers all the topics covered in this book. Furthermore, it is such a critical skill that mobile device forensics is the most common topic the Author is asked to teach to law enforcement. This is a niche that is not being adequately filled with current titles. An In-Depth Guide to Mobile Device Forensics is aimed towards undergraduates and graduate students studying cybersecurity or digital forensics. It covers both technical and legal issues, and includes exercises, tests/quizzes, case studies, and slides to aid comprehension.*

*The rise of computer use and technical adeptness by the general public in the last two decades are undeniable. With greater use comes a greater possibility for misuse, evidenced by today's incredible number of crimes involving computers as well as the growth in severity from that of cyber hooliganism to cyber warfare. Although frequently utilized for privacy and security purposes, the vast range of anti-forensic techniques has contributed to the ability for hackers and criminals to obstruct computer forensic investigations. Understanding how anti-forensics may alter important and relevant data on an electronic device will prove useful for the success and continued advancement of computer forensic investigations. This paper will amalgamate the academic literature on anti-forensics as well as test four of the most accessible anti-forensic tools available online to reveal at what degree they confound traditional computer forensic tools and techniques. Strategies for detecting and mitigating the effects of anti-forensic efforts will be put forth to help inform the future of computer forensic investigative techniques.*

*5th International Conference, ICGS3 2009, London, UK, September 1-2, 2009, Proceedings*

*Global Security, Safety, and Sustainability*

*Computer Vision, Pattern Recognition, Image Processing, and Graphics*

*Computer Forensics InfoSec Pro Guide*

*A Pocket Guide*

*Digital Forensics Field Guides*

*Fifth International Conference, ICDF2C 2013, Moscow, Russia, September 26-27, 2013, Revised Selected Papers*

Every computer crime leaves tracks—you just have to know where to find them. This book shows you how to collect and analyze the digital evidence left behind in a digital crime scene. Computers have always been susceptible to unwanted intrusions, but as the sophistication of computer technology increases so does the need to anticipate, and safeguard against, a corresponding rise in computer-related criminal activity. Computer forensics, the newest branch of computer security, focuses on the aftermath of a computer security incident. The goal of computer forensics is to conduct a structured investigation to determine exactly what happened, who was responsible, and to perform the investigation in such a way that the results are useful in a criminal proceeding. Written by two experts in digital investigation, Computer Forensics provides extensive information on how to handle the computer as evidence. Kruse and Heiser walk the reader through the complete forensics process—from the initial collection of evidence through the final report. Topics include an overview of the forensic relevance of encryption, the examination of digital evidence for clues, and the most effective way to present your evidence and conclusions in court. Unique forensic issues associated with both the Unix and the Windows NT/2000 operating systems are thoroughly covered. This book provides a detailed methodology for collecting, preserving, and effectively using evidence by addressing the three A's of computer forensics: Acquire the evidence without altering or damaging the original data. Authenticate that your recorded evidence is the same as the original seized data. Analyze the data without modifying the recovered data. Computer Forensics is written for everyone who is responsible for investigating digital criminal incidents or who may be interested in the techniques that such investigators use. It is equally helpful to those investigating hacked web servers, and those who are investigating the source of illegal pornography.

This book is a collection of outstanding content written by experts working in the field of multimedia security. It provides an insight about various techniques used in multimedia security and identifies its progress in both technological and algorithmic perspectives. In the contemporary world, digitization offers an effective mechanism to process, preserve and transfer all types of information. The incredible progresses in computing and communication technologies augmented by economic feasibility have revolutionized the world. The availability of efficient algorithms together with inexpensive digital recording and storage peripherals have created a multimedia era bringing conveniences to people in sharing the digital data that includes images, audio and video. The ever-increasing pace, at which the multimedia and communication technology is growing, has also made it possible to combine, replicate and distribute the content faster and easier, thereby empowering mankind by having a wealth of information at their disposal. However, security of multimedia is giving tough time to the research community around the globe, due to ever-increasing and efficient attacks carried out on multimedia data by intruders, eves-droppers and hackers. Further, duplication, unauthorized use and mal-distribution of digital content have become a serious challenge as it leads to copyright violation and is considered to be the principal reason that refrains the information providers in freely sharing their proprietary digital content. The book is useful for students, researchers and professionals to advance their study.

Digital forensics has been a discipline of Information Security for decades now. Its principles, methodologies, and techniques have remained consistent despite the evolution of technology, and, ultimately, it can and can be applied to any form of digital data. However, within a corporate environment, digital forensic professionals are particularly challenged. They must maintain the legal admissibility and forensic viability of digital evidence in support of a broad range of different business functions that include incident response, electronic discovery (edisccovery), and ensuring the controls and accountability of such information across networks. Digital Forensics and Investigations: People, Process, and Technologies to Defend the Enterprise provides the methodologies and strategies necessary for these key business functions to seamlessly integrate digital forensic capabilities to guarantee the admissibility and integrity of digital evidence. In many books, the focus on digital evidence is primarily in the technical, software, and investigative elements, of which there are numerous publications. What tends to get overlooked are the people and process elements within the organization. Taking a step back, the book outlines the importance of integrating and accounting for the people, process, and technology components of digital forensics. In essence, to establish a holistic paradigm—and best-practice procedure and policy approach—to defending the enterprise. This book serves as a roadmap for professionals to successfully integrate an organization's people, process, and technology with other key business functions in an enterprise's digital forensic capabilities.

Malware Forensics Field Guide for Windows Systems is a handy reference that shows students the essential tools needed to do computer forensics analysis at the crime scene. It is part of Syngress Digital Forensics Field Guides, a series of companions for any digital and computer forensic student, investigator or analyst. Each Guide is a toolkit, with checklists for specific tasks, case studies of difficult situations, and expert analyst tips that will aid in recovering data from digital media that will be used in criminal prosecution. This book collects data from all methods of electronic data storage and transfer devices, including computers, laptops, PDAs and the images, spreadsheets and other types of files stored on these devices. It is specific for Windows-based systems, the largest running OS in the world. The authors are world-renowned leaders in investigating and analyzing malicious code. Chapters cover malware incident response - volatile data collection and examination on a live Windows system; analysis of physical and process memory dumps for malware artifacts; post-mortem forensics - discovering and extracting malware and associated artifacts from Windows systems; legal considerations; file identification and profiling initial analysis of a suspect file on a Windows system; and analysis of a suspect program. This field guide is intended for computer forensic investigators, analysts, and specialists. A condensed hand-held guide complete with on-the-job tasks and checklists Specific for Windows-based systems, the largest running OS in the world Authors are world-renowned leaders in investigating and analyzing malicious code

Third International Workshop, IWCF 2009, The Hague, The Netherlands, August 13-14, 2009, Proceedings

A Practical Guide Using Windows OS

Managing Trust in Cyberspace

Digital Image Forensics

Concepts, Methodologies, Tools, and Applications

Methods and Solutions

Guide to Computer Forensics and Investigations

The field of computer forensics has experienced significant growth recently and those looking to get into the industry have significant opportunity for upward mobility. Focusing on the concepts investigators need to know to conduct a thorough investigation, Digital Forensics Explained provides an overall description of the forensic practice from a practitioner ' s perspective. Starting with an overview, the text describes best practices based on the author ' s decades of experience conducting investigations and working in information technology. It illustrates the forensic process, explains what it takes to be an investigator, and highlights emerging trends. Filled with helpful templates and contributions from seasoned experts in their respective fields, the book includes coverage of: Internet and email investigations Mobile forensics for cell phones, iPads, music players, and other small devices Cloud computing from an architecture perspective and its impact on digital forensics Anti-forensic techniques that may be employed to make a forensic exam more difficult to conduct Recoverability of information from damaged media The progression of a criminal case from start to finish Tools that are often used in an examination, including commercial, free, and open-source tools; computer and mobile tools; and things as simple as extension cords Social media and social engineering forensics Case documentation and presentation, including sample summary reports and a cover sheet for a cell phone investigation The text includes acquisition forms, a sequential process outline to guide your investigation, and a checklist of supplies you ' ll need when responding to an incident. Providing you with the understanding and the tools to deal with suspects who find ways to make their digital activities hard to trace, the book also considers cultural implications, ethics, and the psychological effects that digital forensics investigations can have on investigators.

Digital forensics deals with the acquisition, preservation, examination, analysis and presentation of electronic evidence. Networked computing, wireless communications and portable electronic devices have expanded the role of digital forensics beyond traditional computer crime investigations. Practically every crime now involves some aspect of digital evidence; digital forensics provides the techniques and tools to articulate this evidence. Digital forensics also has myriad intelligence applications. Furthermore, it has a vital role in information assurance -- investigations of security breaches yield valuable information that can be used to design more secure systems. Advances in Digital Forensics XIII describes original research results and innovative applications in the discipline of digital forensics. In addition, it highlights some of the major technical and legal issues related to digital evidence and electronic crime investigations. The areas of coverage include: Themes and Issues; Mobile and Embedded Device Forensics; Network and Cloud Forensics; Threat Detection and Mitigation; Malware Forensics; Image Forensics; and Forensic Techniques. This book is the thirteenth volume in the annual series produced by the International Federation for Information Processing (IFIP) Working Group 11.9 on Digital Forensics, an international community of scientists, engineers and practitioners dedicated to advancing the state of the art of research and practice in digital forensics. The book contains a selection of sixteen edited papers from the Thirteenth Annual IFIP WG 11.9 International Conference on Digital Forensics, held in Orlando, Florida, USA in the winter of 2017. Advances in Digital Forensics XIII is an important resource for researchers, faculty members and graduate students, as well as for practitioners and individuals engaged in research and development efforts for the law enforcement and intelligence communities. Gilbert Peterson, Chair, IFIP WG 11.9 on Digital Forensics, is a Professor of Computer Engineering at the Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA. Sujeet Shenoi is the F.P. Walter Professor of Computer Science and a Professor of Chemical Engineering at the University of Tulsa, Tulsa, Oklahoma, USA.

Digital Anti-forensicsAn Implementation and Examination

As computer and internet technologies continue to advance at a fast pace, the rate of cybercrimes is increasing. Crimes employing mobile devices, data embedding/mining systems, computers, network communications, or any malware impose a huge threat to data security, while cyberbullying, cyberstalking, child pornography, and trafficking crimes are made easier through the anonymity of the internet. New developments in digital forensics tools and an understanding of current criminal activities can greatly assist in minimizing attacks on individuals, organizations, and society as a whole. Digital Forensics and Forensic Investigations: Breakthroughs in Research and Practice addresses current challenges and issues emerging in cyber forensics and new investigative tools and methods that can be adopted and implemented to address these issues and counter security breaches within various organizations. It also examines a variety of topics such as advanced techniques for forensic developments in computer and communication-link environments and legal perspectives including procedures for cyber investigations, standards, and policies. Highlighting a range of topics such as cybercrime, threat detection, and forensic science, this publication is an ideal reference source for security analysts, law enforcement, lawmakers, government officials, IT professionals, researchers, practitioners, academicians, and students currently investigating the up-and-coming aspects surrounding network security, computer science, and security engineering.

International Symposium, SSCC 2013, Mysore, India, August 22-24, 2013. Proceedings

Digital Forensics with Kali Linux

People, Process, and Technologies to Defend the Enterprise

System Forensics, Investigation and Response

A Practical Approach to Investigation and Defense

An In-Depth Guide to Mobile Device Forensics

Handbook of Research on Computational Forensics, Digital Crime, and Investigation: Methods and Solutions

**This book constitutes the refereed proceedings of the International Symposium on Security in Computing and Communications, SSCC 2013, held in Mysore, India, in August 2013. The 24 revised full papers presented together with 15 poster papers were carefully reviewed and selected from 111 submissions. The papers cover all aspects of secure computing and communication in networking and distributed systems such as cloud-based data centers.**

**In the digital world, the need to protect online communications increase as the technology behind it evolves. There are many techniques currently available to encrypt and secure our communication channels. Data hiding techniques can take data confidentiality to a new level as we can hide our secret messages in ordinary, honest-looking data files. Steganography is the science of hiding data. It has several categorizations, and each type has its own techniques in hiding. Steganography has played a vital role in secret communication during wars since the dawn of history. In recent days, few computer users successfully manage to exploit their Windows® machine to conceal their private data. Businesses also have deep concerns about misusing data hiding techniques. Many employers are amazed at how easily their valuable information can get out of their company walls. In many legal cases a disgruntled employee would successfully steal company private data despite all security measures implemented using simple digital hiding techniques. Human right activists who live in countries controlled by oppressive regimes need ways to smuggle their online communications without attracting surveillance monitoring systems, continuously scan in/out internet traffic for interesting keywords and other artifacts. The same applies to journalists and whistleblowers all over the world. Computer forensic investigators, law enforcements officers, intelligence services and IT security professionals need a guide to tell them where criminals can conceal their data in Windows® OS & multimedia files and how they can discover concealed data quickly and retrieve it in a forensic way. Data Hiding Techniques in Windows OS is a response to all these concerns. Data hiding topics are usually approached in most books using an academic method, with long math equations about how each hiding technique algorithm works behind the scene, and are usually targeted at people who work in the academic arenas. This book teaches professionals and end users alike how they can hide their data and discover the hidden ones using a variety of ways under the most commonly used operating system on earth, Windows®. This is your hands-on guide to understand, detect and use today's most popular techniques in hiding and exploring hidden data under Windows® machines, covering all Windows® versions from XP till Windows® 10. Starting with the Roman Emperor, Julius Caesar, and his simple cipher method to the surveillance programs deployed by NSA, to monitor communication and online traffic, this book will teach you everything you need to know to protect your digital data using steganographic & anonymity cryptographic techniques. Written in a simple style and requiring only basic knowledge of main Windows® functions, techniques are presented in a way to easily implement them directly on your computer. A brief history of steganography since early inception to present day Simple methods to hide your data without using any third party tools, and different ways to investigate and explore hidden data Exploiting multimedia files to conceal data using text, image, video and audio steganography Exploiting Windows® NTFS file system to hide your secret data A wide array of encryption techniques to protect your confidential data and securing your online communications Using cryptographic anonymity tools to conceal your identity online Explaining how hidden data could be used to plant a malware and launch sophisticated attacks against computer systems Methods to crack steganography and cryptography A chapter dedicated to anti-forensic techniques, detailing how to conceal data when using a Windows® machine Updated with the latest advances from the field, GUIDE TO COMPUTER FORENSICS AND INVESTIGATIONS, Fifth Edition combines all-encompassing topic coverage and authoritative information from seasoned experts to deliver the most comprehensive forensics resource available. This proven author team's wide ranging areas of expertise mirror the breadth of coverage provided in the book, which focuses on techniques and practices for gathering and analyzing evidence used to solve crimes involving computers. Providing clear instruction on the tools and techniques of the trade, it introduces readers to every step of the computer forensics investigation-from lab set-up to testifying in court. It also details step-by-step guidance on how to use current forensics software. Appropriate for learners new to the field, it is also an excellent refresher and technology update for professionals in law enforcement, investigations, or computer security. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.**

**This book constitutes the proceedings of the International Conference on Information Security and Assurance, held in Brno, Czech Republic in August 2011.**

**Data Hiding Techniques in Windows OS**

**Multimedia Security**

**Computer Forensics**

**The Basics of Digital Forensics**

**Computer Forensics For Dummies**

**Perform data acquisition, digital investigation, and threat analysis using Kali Linux tools**

**ICIW2007**

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.

This book covers the full life cycle of conducting a mobile and computer digital forensic examination, including planning and performing an investigation as well as report writing and testifying. Case reviews in corporate, civil, and criminal situations are also described from both prosecution and defense perspectives. Digital Forensics Explained, Second Edition draws from years of experience in local, state, federal, and international environments and highlights the challenges inherent in deficient cyber security practices. Topics include the importance of following the scientific method and verification, legal and ethical issues, planning an investigation (including tools and techniques), incident response, case project management and authorization, social media and internet, cloud, anti-forensics, link and visual analysis, and psychological considerations. The book is a valuable resource for the academic environment, law enforcement, those in the legal profession, and those working in the cyber security field. Case reviews include cyber security breaches, anti-forensic challenges, child exploitation, and social media investigations. Greg Gogolin, PhD, CISSP, is a Professor of Information Security and Intelligence at Ferris State University and a licensed Professional Investigator. He has worked more than 100 cases in criminal, civil, and corporate environments. Cloud computing has revolutionized computer systems, providing greater dynamism and flexibility to a variety of operations. It can help businesses quickly and effectively adapt to market changes, and helps promote users' continual access to vital information across platforms and devices. Cloud Computing Advancements in Design, Implementation, and Technologies outlines advancements in the state-of-the-art, standards, and practices of cloud computing, in an effort to identify emerging trends that will ultimately define the future of the cloud. A valuable reference for academics and practitioners alike, this title covers topics such as virtualization technology, utility computing, cloud application services (SaaS), grid computing, and services computing.

Photographic imagery has come a long way from the pinhole cameras of the nineteenth century. Digital imagery, and its applications, develops in tandem with contemporary society's sophisticated literacy of this subtle medium. This book examines the ways in which digital images have become ever more ubiquitous as legal and medical evidence, just as they have become our primary source of news and have replaced paper-based financial documentation. Crucially, the contributions also analyze the very profound problems which have arisen alongside the digital image, issues of veracity and progeny that demand systematic and detailed response: It looks real, but is it? What camera captured it? Has it been doctored or subtly altered? Attempting to provide answers to these slippery issues, the book covers how digital images are created, processed and stored before moving on to set out the latest techniques for forensically examining images, and finally addressing practical issues such as courtroom admissibility. In an environment where even novice users can alter digital media, this authoritative publication will do much to stabilize public trust in these real, yet vastly flexible, images of the world around us.

Digital Anti-forensics

Digital Forensics and Cyber Crime

6th National Conference, NCVPRIPG 2017, Mandi, India, December 16-19, 2017, Revised Selected Papers

Practical Cyber Forensics

File System Forensic Analysis

A Holistic View

Crime Science and Digital Forensics

"This unique book delves down into the capabilities of hiding and obscuring data object within the Windows Operating System. However, one of the most noticeable and credible features of this publication is, it takes the reader from the very basics and background of data hiding techniques, and run's on the reading-road to arrive at some of the more complex methodologies employed for concealing data object from the human eye and/or the investigation. As a practitioner in the Digital Age, I can see this book sitting on the shelves of Cyber Security Professionals, and those working in the world of Digital Forensics - it is a recommended read, and is in my opinion a very valuable asset to those who are interested in the landscape of unknown unknowns. This is a book which may well help to discover more about that which is not in immediate view of the onlooker, and open up the mind to expand its imagination beyond its accepted limitations of known knows." - John Walker, CSIRT/SOC/Cyber Threat Intelligence Specialist Featured in Digital Forensics Magazine, February 2017 In the digital world, the need to protect online communications increase as the technology behind it evolves. There are many techniques currently available to encrypt and secure our communication channels. Data hiding techniques can take data confidentiality to a new level as we can hide our secret messages in ordinary, honest-looking data files. Steganography is the science of hiding data. It has several categorizations, and each type has its own techniques in hiding. Steganography has played a vital role in secret communication during wars since the dawn of history. In recent days, few computer users successfully manage to exploit their Windows® machine to conceal their private data. Businesses also have deep concerns about misusing data hiding techniques. Many employers are amazed at how easily their valuable information can get out of their company walls. In many legal cases a disgruntled employee would successfully steal company private data despite all security measures implemented using simple digital hiding techniques. Human right activists who live in countries controlled by oppressive regimes need ways to smuggle their online communications without attracting surveillance monitoring systems, continuously scan in/out internet traffic for interesting keywords and other artifacts. The same applies to journalists and whistleblowers all over the world. Computer forensic investigators, law enforcements officers, intelligence services and IT security professionals need a guide to tell them where criminals can conceal their data in Windows® OS & multimedia files and how they can discover concealed data quickly and retrieve it in a forensic way. Data Hiding Techniques in Windows OS is a response to all these concerns. Data hiding topics are usually approached in most books using an academic method, with long math equations about how each hiding technique algorithm works behind the scene, and are usually targeted at people who work in the academic arenas. This book teaches professionals and end users alike how they can hide their data and discover the hidden ones using a variety of ways under the most commonly used operating system on earth, Windows®.

This book constitutes the thoroughly refereed post-conference proceedings of the 5th International ICST Conference on Digital Forensics and Cyber Crime, ICDF2C 2013, held in September 2013 in Moscow, Russia. The 16 revised full papers presented together with 2 extended abstracts and 1 poster paper were carefully reviewed and selected from 38 submissions. The papers cover diverse topics in the field of digital forensics and cybercrime, ranging from regulation of social networks to file carving, as well as technical issues, information warfare, cyber terrorism, critical infrastructure protection, standards, certification, accreditation, automation and digital forensics in the cloud.

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

Use this hands-on, introductory guide to understand and implement digital forensics to investigate computer crime using Windows, the most widely used operating system. This book provides you with the necessary skills to identify an intruder's footprints and to gather the necessary digital evidence in a forensically sound manner to prosecute in a court of law. Directed toward users with no experience in the digital forensics field, this book provides guidelines and best practices when conducting investigations as well as teaching you how to use a variety of tools to investigate computer crime. You will be prepared to handle problems such as law violations, industrial espionage, and use of company resources for private use. Digital Forensics Basics is written as a series of tutorials with each task demonstrating how to use a specific computer forensics tool or technique. Practical information is provided and users can read a task and then implement it directly on their devices. Some theoretical information is presented to define terms used in each technique and for users with varying IT skills. What You'll Learn Assemble computer forensics lab requirements, including workstations, tools, and more Document the digital crime scene, including preparing a sample chain of custody form Differentiate between law enforcement agency and corporate investigationsGather intelligence using OSINT sources Acquire and analyze digital evidence Conduct in-depth forensic analysis of Windows operating systems covering Windows 10-specific feature forensicsUtilize anti-forensic techniques, including steganography, data destruction techniques, encryption, and anonymity techniques Who This Book Is For Police and other law enforcement personnel, judges (with no technical background), corporate and nonprofit management, IT specialists and computer security professionals, incident response team members, IT military and intelligence services officers, system administrators, e-business security professionals, and banking and insurance professionals

13th IFIP WG 11.9 International Conference, Orlando, FL, USA, January 30 - February 1, 2017, Revised Selected Papers

Computational Forensics

Advances in Digital Forensics XIII

4th International Conference, ICDF2C 2012, Lafayette, IN, USA, October 25-26, 2012, Revised Selected Papers

An Implementation and Examination

Digital Forensics and Investigations

Internet Forensics

Institute, The Hague, The Netherlands and the University of Amsterdam, Amsterdam, The Netherlands.

Security Smarts for the Self-Guided IT Professional Find out how to excel in the field of computer forensics investigations. Learn what it takes to transition from an IT professional to a computer forensic examiner in the private sector. Written by a Certified Security Professional, Computer Forensics: InfoSec Pro Guide is filled with real-world case studies that demonstrate the concepts covered in the book. You'll learn how to set up a forensics lab, select hardware and software, choose forensic imaging procedures to capture evidence from different sources, follow a sound investigative process, safely store evidence, and verify your findings. Best practices for documenting your results, preparing reports, and presenting evidence in court are also covered in this detailed guide. Forensics: InfoSec Pro Guide features: Lingo—Common security terms defined so that you're in the know on the job IMHO—Frank and relevant opinions based on the author's years of industry experience Budget Note—Tips for getting security technology for your organization's budget In Actual Practice—Exceptions to the rules of security explained in real-world contexts Your Plan—Customizable checklists you can use on the job now Into Action—Tips on how, why, and when to apply new skills and techniques Because it's so large and unregulated, the Internet is a fertile breeding ground for all kinds of scams and schemes. Usually it's your credit card number they're after, and they won't stop there. Not just mere annoyances, these scams are real crimes, with the potential to cause significant financial damage. Internet Forensics from O'Reilly, there's something you can do about it. This practical guide to defending against Internet fraud gives you the skills you need to uncover the origins of the spammers, con artists, and identity thieves that plague the Internet. The developer community, Internet Forensics shows you how to extract the information that lies hidden in every email message, web page, and web server on the Internet. It describes the lengths the bad guys will go to cover their tracks, and offers tips through their disguises. You'll also gain an understanding for how the Internet functions, and how spammers use these protocols to their devious advantage. The book is organized around the core technologies of the Internet—email, web sites, servers, and more. It describes how these are used and abused and show you how information hidden in each of them can be revealed. Short examples illustrate all the major techniques that are discussed. The ethical and legal issues that arise in the uncovering of Internet data are also addressed. Not surprisingly, the audience for Internet Forensics is boundless. For developers, it's a serious foray into the world of Internet security; for weekend surfers fed up with spam, it's an entertaining and fun guide that lets them play amateur detective and confines of their home or office.

Learn the skills you need to take advantage of Kali Linux for digital forensics investigations using this comprehensive guide Key Features Master powerful Kali Linux tools for digital investigation and analysis Perform evidence acquisition, preservation, and analysis using Kali Linux tools within Kali Linux Implement the concept of cryptographic hashing and imaging using Kali Linux Perform memory forensics with Volatility and internet forensics with Xplico Discover the capabilities of professional forensic tools such as Autopsy and NetworkMiner (Framework) used by law enforcement and military personnel alike Book Description Kali Linux is a Linux-based distribution used mainly for penetration testing and digital forensics. It has a wide range of tools to help in forensics investigations and incident response. You will start by understanding the fundamentals of digital forensics and setting up your Kali Linux environment to perform different investigation practices. The book will delve into the realm of operating systems and the various formats and techniques to hide secret hiding places unseen by the end user or even the operating system. The book will also teach you to create forensic images of data and maintain integrity using hashing tools. Next, you will also master some advanced topics such as autopsies and network forensics. The book also introduces you to powerful tools that will take your forensic abilities and investigations to a professional level, catering for all aspects of full digital forensic investigations from hardware to software. If you are a beginner or an experienced user, this book is for you. If you are a beginner, you will have had hands-on experience in implementing all the pillars of digital forensics—acquisition, extraction, analysis, and presentation using Kali Linux tools. What you will learn Get to grips with the fundamentals of digital forensics and incident response Understand the workings of file systems, storage, and data fundamentals Discover incident response procedures and best practices Use DC3DD and Guymager for acquisition and preservation techniques Recover deleted data with Foremost and Scalpel Perform network and internet capture analysis with Xplico Carry out professional digital forensics investigations using the DFF and Autopsy automated forensic suites Who this book is for This book is for digital forensic investigators, security analysts, or any stakeholder interested in learning digital forensics using Kali Linux. Basic knowledge of Kali Linux will be an advantage.

Algorithm Development, Analysis and Applications

Digital Forensics Explained

Malware Forensics Field Guide for Windows Systems

Using Digital Evidence to Solve Computer Crime

Incident Response Essentials

Cloud Computing Advancements in Design, Implementation, and Technologies

ICW2007- 2nd International Conference on Information Warfare & Security

"This book provides a media for advancing research and the development of theory and practice of digital crime prevention and forensics, embracing a broad range of digital crime and forensics disciplines"--Provided by publisher.

This volume is a collation of articles on counter forensics practices and digital investigative methods from the perspective of crime science. The book also shares alternative dialogue on information security techniques used to protect data from unauthorised access and manipulation. Scandals such as those at OPCW and Gatwick Airport have reinforced the importance of crime science and the need to take proactive measures rather than a wait and see approach currently used by many organisations. This book proposes a new approach in dealing with cybercrime and unsociable behavior involving remote technologies using a combination of evidence-based disciplines in order to enhance cybersecurity and authorised controls. It starts by providing a rationale for combining selected disciplines to enhance cybersecurity by discussing relevant theories and highlighting the features that strengthen privacy when mixed. The essence of a holistic model is brought about by the challenge facing digital forensic professionals within environments where tested investigative practices are unable to provide satisfactory evidence and security. This book will be of interest to students, digital forensic and cyber security practitioners and policy makers. It marks a new route in the study of combined disciplines to tackle cybercrime using digital investigations and crime science.

The Annual (ICGS) International Conference is an established platform in which security, safety and sustainability issues can be examined from several global perspectives through dialogue between academics, students, government representatives, chief executives, security professionals, and research scientists from the United Kingdom and from around the globe. The 2009 two-day conference focused on the challenges of complexity, rapid pace of change and risk/opportunity issues associated with modern products, systems, social events and infrastructures. The importance of adopting systematic and systemic approaches to the assurance of these systems was emphasized within a special stream focused on strategic frameworks, architectures and human factors. The conference provided an opportunity for systems scientists, assurance researchers, owners, operators and maintainers of large, complex and advanced systems and infrastructures to update their knowledge with the state of best practice in these challenging domains while networking with the leading researchers and solution providers. ICGS3 2009 received paper submissions from more than 20 different countries around the world. Only 28 papers were selected and were presented as full papers. The program also included three keynote lectures by leading researchers, security professionals and government representatives. June 2009 Hamid Jahankhani Ali Hessami Feng Hsu

This book constitutes the refereed proceedings of the 6th National Conference on Computer Vision, Pattern Recognition, Image Processing, and Graphics, NCVPRIPG 2017, held in Mandi, India, in December 2017. The 48 revised full papers presented in this volume were carefully reviewed and selected from 147 submissions. The papers are organized in topical sections on video processing; image and signal processing; segmentation, retrieval, captioning; pattern recognition applications.

Handbook of Electronic Security and Digital Forensics

Breakthroughs in Research and Practice

Digital Forensics and Forensic Investigations: Breakthroughs in Research and Practice

International Conference, ISA 2011, Brno, Czech Republic, August 15-17, 2011, Proceedings

Digital Forensics Basics

Computer Vision: Concepts, Methodologies, Tools, and Applications

The primary purpose of computer forensics is to enable organisations to pinpoint where the malware has infected their computer systems and which files have been infected, so that they can close the vulnerability. More and more organisations have realised that they need to acquire a forensic capability to ensure they are ready to cope with an information security incident. This pocket guide illustrates the technical complexities involved in computer forensics, and shows managers what makes the discipline relevant to their organisation. For technical staff, the book offers an invaluable insight into the key processes and procedures that are required.

This book contains a selection of thoroughly refereed and revised papers from the Fourth International ICST Conference on Digital Forensics and Cyber Crime, ICDF2C 2012, held in October 2012 in Lafayette, Indiana, USA. The 20 papers in this volume are grouped in the following topical sections: cloud investigation; malware; behavioral; law; mobile device forensics; and cybercrime investigations.

The fields of computer vision and image processing are constantly evolving as new research and applications in these areas emerge. Staying abreast of the most up-to-date developments in this field is necessary in order to promote further research and apply these developments in real-world settings. Computer Vision: Concepts, Methodologies, Tools, and Applications is an innovative reference source for the latest academic material on development of computers for gaining understanding about videos and digital images. Highlighting a range of topics, such as computational models, machine learning, and image processing, this multi-volume book is ideally designed for academicians, technology professionals, students, and researchers interested in uncovering the latest innovations in the field.

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

Security in Computing and Communications

The Primer for Getting Started in Digital Forensics

There is More to a Picture than Meets the Eye

An Incident-Based Approach to Forensic Investigations

Information Security and Assurance

The Definitive Guide to File System Analysis: Key Concepts and Hands-on Techniques Most digital evidence is stored within the computer's file system, but understanding how file systems work is one of the most technically challenging concepts for a digital investigator because there exists little documentation. Now, security expert Brian Carrier has written the definitive reference for everyone who wants to understand and be able to testify about how file system analysis is performed. Carrier begins with an overview of investigation and computer foundations and then gives an authoritative, comprehensive, and illustrated overview of contemporary volume and file systems: Crucial information for discovering hidden evidence, recovering deleted data, and validating your tools. Along the way, he describes data structures, analyzes example disk images, provides advanced investigation scenarios, and uses today's most valuable open source file system analysis tools—including tools he personally developed. Coverage includes Preserving the digital crime scene and duplicating hard disks for "dead analysis" Identifying hidden data on a disk's Host Protected Area (HPA) Reading source data: Direct versus BIOS access, dead versus live acquisition, error handling, and more Analyzing DOS, Apple, and GPT partitions: BSD disk labels; and Sun Volume Table of Contents using key concepts, data structures, and specific techniques Analyzing the contents of multiple disk volumes, such as RAID and disk spanning Analyzing FAT, NTFS, Ext2, Ext3, UFS1, and UFS2 file systems using key concepts, data structures, and specific techniques Finding evidence: File metadata, recovery of deleted files, data hiding locations, and more Using The Sleuth Kit (TSK), Autopsy Forensic Browser, and related open source tools When it comes to file system analysis, no other book offers this much detail or expertise. Whether you're a digital forensics specialist, incident response

team member, law enforcement officer, corporate security specialist, or auditor, this book will become an indispensable resource for forensic investigations, no matter what analysis tools you use. Become an effective cyber forensics investigator and gain a collection of practical, efficient techniques to get the job done. Diving straight into a discussion of anti-forensic techniques, this book shows you the many ways to effectively detect them. Now that you know what you are looking for, you'll shift your focus to network forensics, where you cover the various tools available to make your network forensics process less complicated. Following this, you will work with cloud and mobile forensic techniques by considering the concept of forensics as a service (FaSS), giving you cutting-edge skills that will future-proof your career. Building on this, you will learn the process of breaking down malware attacks, web attacks, and email scams with case studies to give you a clearer view of the techniques to be followed. Another tricky technique is SSD forensics, so the author covers this in detail to give you the alternative analysis techniques you'll need. To keep you up to speed on contemporary forensics, Practical Cyber Forensics includes a chapter on Bitcoin forensics, where key crypto-currency forensic techniques will be shared. Finally, you will see how to prepare accurate investigative reports. What You Will Learn Carry out forensic investigation on Windows, Linux, and macOS systems Detect and counter anti-forensic techniques Deploy network, cloud, and mobile forensics Investigate web and malware attacks Write efficient investigative reports Who This Book Is For Intermediate infosec professionals looking for a practical approach to investigative cyber forensics techniques.