Computer Forensics And Cyber Crime An Introduction

MILES ARELLANO

A Field Manual for Collecting, Examining, and Preserving Evidence of Computer Crimes Elsevier
The First International Conference on Digital Forensics and Cyber Crime (ICDF2C) was held in Albany from September 30 to October 2, 2009. The field of digital for- sics is growing rapidly with implications for several fields including law enforcement, network security, disaster recovery and accounting. This is a multidisciplinary area that requires expertise in several areas including, law, computer science, finance, networking, data mining, and criminal justice. This conference brought together pr- titioners and researchers from diverse fields providing opportunities for business and intellectual engagement among attendees. All the conference sessions were very well attended with vigorous discussions and strong audience interest. The conference featured an excellent program comprising high-quality paper pr- entations and invited speakers from all around the world. The first day featured a plenary session including George Philip, President of University at Albany, Harry Corbit, Suprintendent of New York State Police, and William Pelgrin, Director of New York State Office of Cyber Security and Critical Infrastructure Coordination. An outstanding keynote was provided by Miklos Vasarhelyi on continuous auditing. This was followed by two parallel sessions on accounting fraud /financial crime, and m- timedia and handheld forensics. The second day of the conference featured a mesm- izing keynote talk by Nitesh Dhanjani from Ernst and Young that focused on psyc- logical profiling based on open source intelligence from social network analysis. The third day of the conference featured both basic and advanced tutorials on open source forensics.
Investigating Computer-Related Crime, Second Edition Walter de Gruyter GmbH & Co KG
The emergence of the World Wide Web, smartphones, and Computer-Mediated Communications (CMCs) profoundly affect the way in which people interact online and offline. Individuals who engage in socially unacceptable or outright criminal acts increasingly utilize technology to connect with one another in ways that are not otherwise possible in the real world due to shame, social stigma, or risk of detection. As a consequence, there are now myriad opportunities for wrongdoing and abuse through technology. This book offers a comprehensive and integrative introduction to cybercrime. It is the first to connect the disparate literature on the various types of cybercrime, the 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 digital piracy, economic crime and online fraud, pornography and online sex crime, cyber-bulling and cyber-stalking, cyber-terrorism and extremism, digital forensic investigation and its legal context, cybercrime policy. 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 students exercises and instructor resources. This text is essential reading for courses on cybercrime, cyber-deviancy, digital forensics, cybercrime investigation and the sociology of technology.
Cybercrime and Digital Forensics CRC Press

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

Forensic Science, Computers and the Internet Elsevier

Computer forensics plays a very important role in cybercrime investigation, footprint tracking, and criminal activity prosecution. This eBook focuses on making you comfortable with the basic concepts of Cyber Forensics. The eBook "Understanding of Computer Forensics" we will help you understand why cyber forensics is important, when we need to practice cyber forensic techniques and how to perform various tasks to complete the cyber forensic investigation process. Since the syllabus of computer forensics is a little diversified, we have divided our eBooks into different modules and hence you will find well-organized content on Computer Forensics. The term computer forensics refers to the methodological techniques, steps, and procedures that help an investigator, and Law Enforcement Agencies identify, gather, preserve, extract the artifacts from the computer, computer media, and related technology to analyze them and then use them in the legal, juridical matters or proceedings. The rapid increase of cybercrimes has led to the development of various laws and standards that define cybercrimes, digital evidence, search and seizure methodology, evidence recovery, and the investigation process. Huge financial losses caused by computer crimes have made it necessary for organizations to employ a computer forensic agency or hire a computer forensics expert to protect the organization from computer incidents or solve cases involving the use of computers and related technologies. In this book, we will understand all the basic terminologies of computer forensics and understand various phases of a cyber forensics investigation Process.

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

This edited book, Introduction to Cyber Forensic Psychology: Understanding the Mind of the Cyber Deviant Perpetrators, is the first of its kind in Singapore, which explores emerging cybercrimes and cyber enabled crimes.Utilising a forensic psychology perspective to examine the mind of the cyber deviant perpetrators as well as strategies for assessment, prevention, and interventions, this book seeks to tap on the valuable experiences and knowledge of leading forensic psychologists and behavioural scientists in Singapore.Some of the interesting trends discussed in this book include digital self-harm, stalkerware usage, livestreaming of crimes, online expression of hate and rebellion, attacks via smart devices, COVID-19 related scams and cyber vigilantism. Such insights would enhance our awareness about growing pervasiveness of cyber threats and showcase how behavioural sciences is a force-multiplier in complementing the existing technological solutions.

Computer Forensics and Cyber Crime: An Introduction, 2/e Prentice Hall

"Cybercrime and cyber-terrorism represent a serious challenge to society as a whole." - Hans Christian Krüger, Deputy Secretary General of the Council of Europe Crime has been with us as long as laws have existed, and modern technology has given us a new type of criminal activity: cybercrime. Computer and network related crime is a problem that spans the globe, and unites those in two disparate fields: law enforcement and information technology. This book will help both IT pros and law enforcement specialists understand both their own roles and those of the other, and show why that understanding and an organized, cooperative effort is necessary to win the fight against this new type of crime. 62% of US companies reported computer-related security breaches resulting in damages of $124 million dollars. This data is an indication of the massive need for Cybercrime training within the IT and law enforcement communities. The only book that covers Cybercrime from forensic investigation through prosecution. Cybercrime is one of the battlefields in the war against terror.

Elsevier

Cybercrime and Information Technology: Theory and Practice—The Computer Network Infostructure and Computer Security, Cybersecurity Laws, Internet of Things (IoT), and Mobile Devices is an introductory text addressing current technology, trends, and security issues. While many books on the market cover investigations, forensic recovery, and presentation of evidence, and others explain computer and network security, this book explores both, explaining the essential principles governing computers, wireless and mobile devices, the Internet of Things, cloud systems, and their significant vulnerabilities. Only with this knowledge can students truly appreciate the security challenges and opportunities for cybercrime that cannot be uncovered, investigated, and adjudicated unless they are understood. The legal portion of the book is an overview of the legal system in the United States, including cyberlaw standards, and regulations affecting cybercrime. This section includes cases in progress that are shaping and developing legal precedents. As is often the case, new technologies require new statues and regulations—something the law is often slow to move on given the current speed in which technology advances. Key Features: Provides a strong foundation of cybercrime knowledge along with the core concepts of networking, computer security, Internet of Things (IoTs), and mobile devices. Addresses legal statutes and precedents fundamental to understanding investigative and forensic issues relative to evidence collection and preservation. Identifies the new security challenges of emerging technologies including mobile devices, cloud computing, Software-as-a-Service (SaaS), VMware, and the Internet of Things. Strengthens student understanding of the fundamentals of computer and network security, concepts that are often glossed over in many textbooks, and includes the study of cybercrime as critical forward-looking cybersecurity challenges. Cybercrime and Information Technology is a welcome addition to the literature, particularly for those professors seeking a more hands-on, forward-looking approach to technology and trends. Coverage is applicable to all forensic science courses in computer science and forensic programs, particularly those housed in criminal justice departments emphasizing digital evidence and investigation processes. The textbook is appropriate for courses in the Computer Forensics and Criminal Justice curriculum, and is relevant to those studying Security Administration, Public Administrations, Police Studies, Business Administration, Computer Science, and Information Systems. An Instructor’s Manual with Test Bank and chapter PowerPoint slides is available to qualified professors for use in classroom instruction.

Cybercrime and Information Technology CRC Press

The purpose of law is to prevent the society from harm by declaring what conduct is criminal, and prescribing the punishment to be imposed for such conduct. The pervasiveness of the internet and its anonymous nature make cyberspace a lawless frontier where anarchy prevails. Historically, economic value has been assigned to visible and tangible assets. With the increasing appreciation that intangible data disseminated through an intangible medium can possess economic value, cybercrime is also being recognized as an economic asset. The Cybercrime, Digital Forensics and Jurisdiction disseminate knowledge for everyone involved with understanding and preventing cybercrime - business entities, private citizens, and government agencies. The book is firmly rooted in the law demonstrating that a viable strategy to confront cybercrime must be international in scope.

Cybercrime and Digital Forensics CRC Press

Recent developments in cyber security, crime, and forensics have attracted researcher and practitioner interests from technological, organizational and policy-making perspectives. Technological advances address challenges in information sharing, surveillance and analysis, but organizational advances are needed to foster collaboration between federal, state and local agencies as well as the private sector. Cyber Security, Cyber Crime and Cyber Forensics: Applications and Perspectives provides broad coverage of technical and socio-economic perspectives for utilizing information and communication technologies and developing practical solutions in cyber security, cyber crime and cyber forensics.

Malware Forensics Field Guide for Windows Systems CRC Press

Computers can be powerful tools for creating positive change, but in the wrong hands, they can also be destructive weapons. Cybercrime is a growing field of criminal activity, and it is important for readers to know as much as possible about it to avoid becoming a victim. Readers learn valuable information through detailed main text, fact boxes, and helpful sidebars. They also discover what they can do now to prepare for an exciting career investigating cybercriminals. Full-color photographs are included to show readers the technological advances used to combat the many forms of cybercrime—from sextortion to cyberterrorism.

Cyber Forensics www.craw.in

The Digital Age offers many far-reaching opportunities - opportunities that allow for fast global communications, efficient business transactions and stealthily executed cyber crimes. Featuring contributions from digital forensic experts, the editor of Forensic Computer Crime Investigation presents a vital resource that outlines the latest strategi

Digital Forensics and Cyber Crime Elsevier

Computer Forensics and Cyber CrimeAn IntroductionPrentice Hall

Computer Forensics and Cyber Crime Pearson Education India

This book presents a comprehensive study of different tools and techniques available to perform network forensics. Also, various aspects of network forensics are reviewed as well as related technologies and their limitations. This helps security practitioners and researchers in better understanding of the problem, current solution space, and future research scope to detect and investigate various network intrusions against such attacks efficiently. Forensic computing is rapidly gaining importance since the amount of crime involving digital systems is steadily increasing. Furthermore, the area is still underdeveloped and poses many technical and legal challenges. The rapid development of the Internet over the past decade appeared to have facilitated an increase in the incidents of online attacks. There are many reasons which are motivating the attackers to be fearless in carrying out the attacks. For example, the speed with which an attack can be carried out, the anonymity provided by the medium, nature of medium where digital information is stolen without actually removing it, increased availability of potential victims and the global impact of the attacks are some of the aspects. Forensic analysis is performed at two different levels: Computer Forensics and Network Forensics. Computer forensics deals with the collection and analysis of data from computer systems, networks, communication streams and storage media in a manner admissible in a court of law. Network forensics deals with the capture, recording or analysis of network events in order to discover evidential information about the source of security attacks in a court of law. Network forensics is not another term for network security. It is an extended phase of network security as the data for forensic analysis are collected from security products like firewalls and intrusion detection systems. The results of this data analysis are utilized for investigating the attacks. Network forensics generally refers to the collection and analysis of network data such as network traffic, firewall logs, IDS logs, etc. Technically, it is a member of the already-existing and expanding the field of digital forensics. Analogously, network forensics is defined as "The use of scientifically proved techniques to collect, fuses, identifies, examine, correlate, analyze, and document digital evidence from multiple, actively processing and transmitting digital sources for the purpose of uncovering facts related to the planned intent, or measured success of unauthorized activities meant to disrupt, corrupt, and or compromise system components as well as providing information to assist in response to or recovery from these activities." Network forensics plays a significant role in the security of today’s organizations. On the one hand, it helps to learn the details of external attacks ensuring similar future attacks are thwarted. Additionally, network forensics is essential for investigating insiders’ abuses that constitute the second costliest type of attack within organizations. Finally, law enforcement requires network forensics for crimes in which a computer or digital system is either being the target of a crime or being used as a tool in carrying a crime. Network security protects the system against attack while network forensics focuses on recording evidence of the attack. Network security products are generalized and look for possible harmful behaviors. This monitoring is a continuous process and is performed all through the day. However, network forensics involves post mortem investigation of the attack and is initiated after crime notification. There are many tools which assist in capturing data transferred over the networks so that an attack or the malicious intent of the intrusions may be investigated. Similarly, various network forensic frameworks are proposed in the literature.

Scene of the Cybercrime: Computer Forensics Handbook Prentice Hall

Following on the success of his introductory text, Digital Evidence and Computer Crime, Eoghan Casey brings together a few top experts to create the first detailed guide for professionals who are already familiar with digital evidence. The Handbook of Computer Crime Investigation helps readers master the forensic analysis of computer systems with a three-part approach covering tools, technology, and case studies. The Tools section provides the details on leading software programs, with each chapter written by that product's creator. The section ends with an objective comparison of the strengths and limitations of each tool. The main Technology section provides the technical "how to" information for collecting and analyzing digital evidence in common situations, starting with computers, moving on to networks, and culminating with embedded systems. The Case Examples section gives readers a sense of the technical, legal, and practical challenges that arise in real computer investigations. The Tools section provides details of leading hardware and software The main Technology section provides the technical "how to" information for collecting and analysing digital evidence in common situations Case Examples give readers a sense of the technical, legal, and practical challenges that arise in real computer investigations

Cyber Crime and Forensic Computing Routledge

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.

A Workbench for Inventing and Sharing Digital Forensic Technology CRC Press

Product Description: Completely updated in a new edition, this book fully defines computer-related crime and the legal issues involved in its investigation. Re-organized with different chapter headings for better understanding of the subject, it provides a framework for the development of a computer crime unit. Updated with new information on technology, this book is the only comprehensive examination of computer-related crime and its investigation on the market. It includes an exhaustive discussion of legal and social issues, fully defines computer crime, and provides specific examples of criminal activities involving computers, while discussing the phenomenon in the context of the criminal justice system. Computer Forensics and Cyber Crime 2e provides a comprehensive analysis of current case law, constitutional challenges, and government legislation. New to this edition is a chapter on Organized Crime & Terrorism and how it relates to computer related crime as well as more comprehensive information on Processing Evidence and Report Preparation. For computer crime investigators, police chiefs, sheriffs, district attorneys, public defenders, and defense attorneys.

Introduction To Cyber Forensic Psychology: Understanding The Mind Of The Cyber Deviant Perpetrators Jones & Bartlett Publishers

The leading introduction to computer crime and forensicsis now fully updated to reflect today's newest attacks, laws, and investigatory best practices. Packed with new case studies, examples, and statistics, Computer Forensics and Cyber Crime, Third Edition adds up-to-the-minute coverage of smartphones, cloud computing, GPS, Mac OS X, Linux, Stuxnet, cyberbullying, cyberterrorism, search and seizure, online gambling, and much more. Covers all forms of modern and traditional computer crime, defines all relevant terms, and explains all technical and legal concepts in plain English, so students can succeed even if they have no technical, legal, or investigatory background.

Applications for Investigation Processes Academic Press

Updated to include the most current events and information on cyberterrorism, the second edition of Computer Forensics: Cybercriminals, Laws, and Evidence continues to balance technicality and legal analysis as it enters into the world of cybercrime by exploring what it is, how it is investigated, and the regulatory laws around the collection and use of electronic evidence. Students are introduced to the technology involved in computer forensic investigations and the technical and legal difficulties involved in searching, extracting, maintaining, and storing electronic evidence, while simultaneously looking at the legal implications of such investigations and the rules of legal procedure relevant to electronic evidence. Significant and current computer forensic developments are examined, as well as the implications for a variety of fields including computer science, security, criminology, law, public policy, and administration.

Cyber Security, Cyber Crime and Cyber Forensics: Applications and Perspectives Pearson

This book constitutes the refereed proceedings of the 11th International Conference on Digital Forensics and Cyber Crime, ICDF2C 2020, held in Boston, MA, in October 2020. Due to COVID-19 pandemic the conference was held virtually. The 11 reviewed full papers and 4 short papers were selected from 35 submissions and are grouped in topical sections on digital forensics; cyber-physical system Forensics; event reconstruction in digital forensics; emerging topics in forensics; cybersecurity and digital forensics.

Modern Principles, Practices, and Algorithms Springer Science & Business Media

Written by a former NYPD cyber cop, this is the only book available that discusses the hard questions cyber crime investigators are asking. The book begins with the chapter "What is Cyber Crime? This introductory chapter describes the most common challenges faced by cyber investigators today. The following chapters discuss the methodologies behind cyber investigations; and frequently encountered pitfalls. Issues relating to cyber crime definitions, the electronic crime scene, computer forensics, and preparing and presenting a cyber crime investigation in court will be examined. Not only will these topics be generally be discussed and explained for the novice, but the hard questions —the questions that have the power to divide this community— will also be examined in a comprehensive and thoughtful manner. This book will serve as a foundational text for the cyber crime community to begin to move past current difficulties into its next evolution. This book has been written by a retired NYPD cyber cop, who has worked many high-profile computer crime cases Discusses the complex relationship between the public and private sector with regards to cyber crime Provides essential information for IT security professionals and first responders on maintaining chain of evidence

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