[Books] Risk Assessment And Security For Pipelines Tunnels And Underground Rail And Transit Operations

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The Security Risk Assessment Handbook- Douglas Landoll 2011-05-23

Conducted properly, information security risk assessments provide managers with the feedback needed to understand threats to corporate assets, determine vulnerabilities of current controls, and select appropriate safeguards. Performed incorrectly, they can provide the false sense of security that allows potential threats to develop into disastrous losses of proprietary information, capital, and corporate value. Picking up where its

bestselling predecessor left off, The Security Risk Assessment Handbook: A Complete Guide for Performing Security Risk Assessments, Second Edition gives you detailed instruction on how to conduct a risk assessment effectively and efficiently. Supplying wide-ranging coverage that includes security risk analysis, mitigation, and risk assessment reporting, this updated edition provides the tools needed to solicit and review the scope and rigor of risk assessment proposals with competence and confidence. Trusted to assess security for leading organizations and government agencies, including the CIA, NSA, and NATO, Douglas Landoll unveils the little-known tips, tricks, and techniques used by savvy security professionals in the field. He details time-tested methods to help you: Better negotiate the scope and rigor of security assessments Effectively interface with security assessment teams Gain an improved understanding of final report recommendations Deliver insightful comments on draft reports The book includes charts, checklists, and sample reports to help you speed up the data gathering, analysis, and document development process. Walking you through the process of conducting an effective security assessment, it provides the tools and up-to-date understanding you need to select the security measures best suited to your organization.

Security Risk Management- Evan Wheeler 2011-04-20

Security Risk Management is the definitive guide for building or running an information security risk management program. This book teaches practical techniques that will be used on a daily basis, while also explaining the

fundamentals so students understand the rationale behind these practices. It explains how to perform risk assessments for new IT projects, how to efficiently manage daily risk activities, and how to qualify the current risk level for presentation to executive level management. While other books focus entirely on risk analysis methods, this is the first comprehensive text for managing security risks. This book will help you to break free from the so-called best practices argument by articulating risk exposures in business terms. It includes case studies to provide hands-on experience using risk assessment tools to calculate the costs and benefits of any security investment. It explores each phase of the risk management lifecycle, focusing on policies and assessment processes that should be used to properly assess and mitigate risk. It also presents a roadmap for designing and implementing a security risk management program. This book will be a valuable resource for CISOs, security managers, IT managers, security consultants, IT auditors, security analysts, and students enrolled in information security/assurance college programs. Named a 2011 Best Governance and ISMS Book by InfoSec Reviews Includes case studies to provide hands-on experience using risk assessment tools to calculate the costs and benefits of any security investment Explores each phase of the risk management lifecycle, focusing on policies and assessment processes that should be used to properly assess and mitigate risk Presents a roadmap for designing and implementing a security risk management program

Security Risk Assessment-John M. White 2014-07-22

Security Risk Assessment is the most up-to-date and comprehensive resource available on how to conduct a thorough security assessment for any organization. A good security assessment is a fact-finding process that determines an organization's state of security protection. It exposes vulnerabilities, determines the potential for losses, and devises a plan to address these security concerns. While most security professionals have heard of a security assessment, many do not know how to conduct one, how it's used, or how to evaluate what they have found. Security Risk Assessment offers security professionals step-by-step guidance for conducting a complete risk assessment. It provides a template draw from, giving security professionals the tools needed to conduct an assessment using the most current approaches, theories, and best practices. Discusses practical and proven techniques for effectively conducting security assessments Includes interview guides, checklists, and sample reports Accessibly written for security professionals with different levels of experience conducting security assessments

A Practical Introduction to Security and Risk Management-Bruce Newsome 2013-10-15

A Practical Introduction to Security and Risk Management is the first book to introduce the full spectrum of security and risks and their management. Author and field expert Bruce Newsome helps readers learn how to understand, analyze, assess, control, and generally manage security and risks from the

personal to the operational. They will develop the practical knowledge and skills they need, including analytical skills, basic mathematical methods for calculating risk in different ways, and more artistic skills in making judgments and decisions about which risks to control and how to control them. Organized into 16 brief chapters, the book shows readers how to: analyze security and risk; identify the sources of risk (including hazards, threats, and contributors); analyze exposure and vulnerability; assess uncertainty and probability; develop an organization's culture, structure, and processes congruent with better security and risk management; choose different strategies for managing risks; communicate and review; and manage security in the key domains of operations, logistics, physical sites, information, communications, cyberspace, transport, and personal levels.

The Security Risk Assessment Handbook-Douglas J. Landoll 2021-08-17

Conducted properly, information security risk assessments provide managers with the feedback needed to understand threats to corporate assets, determine vulnerabilities of current controls, and select appropriate safeguards. Performed incorrectly, they can provide the false sense of security that allows potential threats to develop into disastrous losses of proprietary information, capital, and corporate value. Picking up where its bestselling predecessors left off, The Security Risk Assessment Handbook: A Complete Guide for Performing Security Risk Assessments, Third Edition gives you detailed instruction on how to conduct a risk assessment

effectively and efficiently. Supplying wide-ranging coverage that includes security risk analysis, mitigation, and risk assessment reporting. The third edition has expended coverage essential topics such as threat analysis, data gathering, risk analysis, and risk assessment methods and added coverage of new topics essential for current assessment projects (e.g., cloud security, supply chain management, security risk assessment methods). This edition includes detailed guidance on gathering data and analyzing over 200 administrative, technical, and physical controls using the RIIOT data gathering method; introduces the RIIOT FRAME (risk assessment method), includes hundreds of tables, over 70 new diagrams and figures, over 80 exercises, and provides a detailed analysis of many of the popular security risk assessment methods in use today. The companion website (infosecurityrisk.com) provides downloads for checklists, spreadsheets, figures, and tools. The security risk assessment handbook walks you through the process of conducting an effective security assessment, it provides the tools, methods, and up-to-date understanding you need to select the security measures best suited to your organization. Trusted to assess security for small companies, leading organizations and government agencies, including the CIA, NSA, and NATO, Douglas Landoll unveils the little-known tips, tricks, and techniques used by savvy security professionals in the field. He details time-tested methods to help you: - Better negotiate the scope and rigor of security assessments - Effectively interface with security

assessment teams - Gain an improved understanding of final report recommendations - Deliver insightful comments on draft reports

Security Risk Assessment and Management-Betty E. Biringer 2007-03-12

Proven set of best practices for security risk assessment and management, explained in plain English This guidebook sets forth a systematic, proven set of best practices for security risk assessment and management of buildings and their supporting infrastructures. These practices are all designed to optimize the security of workplace environments for occupants and to protect the interests of owners and other stakeholders. The methods set forth by the authors stem from their research at Sandia National Laboratories and their practical experience working with both government and private facilities. Following the authors' step-by-step methodology for performing a complete risk assessment, you learn to: Identify regional and site-specific threats that are likely and credible Evaluate the consequences of these threats, including loss of life and property, economic impact, as well as damage to symbolic value and public confidence Assess the effectiveness of physical and cyber security systems and determine site-specific vulnerabilities in the security system The authors further provide you with the analytical tools needed to determine whether to accept a calculated estimate of risk or to reduce the estimated risk to a level that meets your particular security needs. You then learn to implement a risk-reduction program through proven methods to upgrade security to protect against

a malicious act and/or mitigate the consequences of the act. This comprehensive risk assessment and management approach has been used by various organizations, including the U.S. Bureau of Reclamation, the U.S. Army Corps of Engineers, the Bonneville Power Administration, and numerous private corporations, to assess and manage security risk at their national infrastructure facilities. With its plain-English presentation coupled with step-by-step procedures, flowcharts, worksheets, and checklists, you can easily implement the same proven approach and methods for your organization or clients. Additional forms and resources are available online at www.wiley.com/go/security risk.

Information Security Risk Assessment Toolkit-Mark Talabis 2012-10-26

In order to protect company's information assets such as sensitive customer records, health care records, etc., the security practitioner first needs to find out: what needs protected, what risks those assets are exposed to, what controls are in place to offset those risks, and where to focus attention for risk treatment. This is the true value and purpose of information security risk assessments. Effective risk assessments are meant to provide a defendable analysis of residual risk associated with your key assets so that risk treatment options can be explored. Information Security Risk Assessment Toolkit gives you the tools and skills to get a quick, reliable, and thorough risk assessment for key stakeholders. Based on authors' experiences of

real-world assessments, reports, and presentations Focuses on implementing a process, rather than theory, that allows you to derive a quick and valuable assessment Includes a companion web site with spreadsheets you can utilize to create and maintain the risk assessment

Risk Management for Security Professionals-Carl Roper 1999-05-05

This book describes the risk management methodology as a specific process, a theory, or a procedure for determining your assets, vulnerabilities, and threats and how security professionals can protect them. Risk Management for Security Professionals is a practical handbook for security managers who need to learn risk management skills. It goes beyond the physical security realm to encompass all risks to which a company may be exposed. Risk Management as presented in this book has several goals: Provides standardized common approach to risk management through a framework that effectively links security strategies and related costs to realistic threat assessment and risk levels Offers flexible yet structured framework that can be applied to the risk assessment and decision support process in support of your business or organization Increases awareness in terms of potential loss impacts, threats and vulnerabilities to organizational assets Ensures that various security recommendations are based on an integrated assessment of loss impacts, threats, vulnerabilities and resource constraints Risk management is essentially a process methodology that will provide a cost-benefit payback factor to senior management. Provides a stand-alone guide to the

risk management process Helps security professionals learn the risk countermeasures and their pros and cons Addresses a systematic approach to logical decision-making about the allocation of scarce security resources

Risk and the Theory of Security Risk Assessment-Carl S. Young 2020-01-28

This book provides the conceptual foundation of security risk assessment and thereby enables reasoning about risk from first principles. It presents the underlying theory that is the basis of a rigorous and universally applicable security risk assessment methodology. Furthermore, the book identifies and explores concepts with profound operational implications that have traditionally been sources of ambiguity if not confusion in security risk management. Notably, the text provides a simple quantitative model for complexity, a significant driver of risk that is typically not addressed in security-related contexts. Risk and The Theory of Security Risk Assessment is a primer of security risk assessment pedagogy, but it also provides methods and metrics to actually estimate the magnitude of security risk. Concepts are explained using numerous examples, which are at times both enlightening and entertaining. As a result, the book bridges a longstanding gap between theory and practice, and therefore will be a useful reference to students, academics and security practitioners.

Security Risk Management Body of Knowledge-Julian Talbot 2011-09-20

A framework for formalizing risk management thinking intoday¿s complex business environment Security Risk Management Body of Knowledge details

thesecurity risk management process in a format that can easily beapplied by executive managers and security risk managementpractitioners. Integrating knowledge, competencies, methodologies,and applications, it demonstrates how to document and incorporatebest-practice concepts from a range of complementarydisciplines. Developed to align with International Standards for RiskManagement such as ISO 31000 it enables professionals to applysecurity risk management (SRM) principles to specific areas ofpractice. Guidelines are provided for: Access Management; BusinessContinuity and Resilience; Command, Control, and Communications;Consequence Management and Business Continuity Management;Counter-Terrorism; Crime Prevention through Environmental Design;Crisis Management; Environmental Security; Events and MassGatherings; Executive Protection; Explosives and Bomb Threats;Home-Based Work; Human Rights and Security; Implementing SecurityRisk Management; Intellectual Property Protection; IntelligenceApproach to SRM; Investigations and Root Cause Analysis; MaritimeSecurity and Piracy; Mass Transport Security; OrganizationalStructure; Pandemics; Personal Protective Practices; Psychology ofSecurity; Red Teaming and Scenario Modeling; Resilience andCritical Infrastructure Protection; Asset-, Function-, Project-,and Enterprise-Based Security Risk Assessment; SecuritySpecifications and Postures; Security Training; Supply ChainSecurity;

Transnational Security; and Travel Security. Security Risk Management Body of Knowledge is supportedby a series of training courses, DVD seminars, tools, andtemplates. This is an indispensable resource for risk and securityprofessional, students, executive management, and line managerswith security responsibilities.

Quantitative Security Risk Assessment of Enterprise Networks-Xinming Ou 2011-11-09

Protection of enterprise networks from malicious intrusions is critical to the economy and security of our nation. This article gives an overview of the techniques and challenges for security risk analysis of enterprise networks. A standard model for security analysis will enable us to answer questions such as “are we more secure than yesterday” or “how does the security of one network configuration compare with another one”. In this article, we will present a methodology for quantitative security risk analysis that is based on the model of attack graphs and the Common Vulnerability Scoring System (CVSS). Our techniques analyze all attack paths through a network, for an attacker to reach certain goal(s).

Security Risk Assessment-John M. White 2014-07-23

Security Risk Assessment is the most up-to-date and comprehensive resource available on how to conduct a thorough security assessment for any organization. A good security assessment is a fact-finding process that determines an organization's state of security protection. It exposes vulnerabilities, determines the potential for losses, and devises a plan to address these security concerns. While

most security professionals have heard of a security assessment, many do not know how to conduct one, how it's used, or how to evaluate what they have found. Security Risk Assessment offers security professionals step-by-step guidance for conducting a complete risk assessment. It provides a template draw from, giving security professionals the tools needed to conduct an assessment using the most current approaches, theories, and best practices. Discusses practical and proven techniques for effectively conducting security assessments Includes interview guides, checklists, and sample reports Accessibly written for security professionals with different levels of experience conducting security assessments

Strategic Security Management-Karim Vellani 2019-09-05

Strategic Security Management, Second Edition provides security leadership and decision-makers with a fresh perspective on threat, vulnerability, and risk assessment. The book offers a framework to look at applying security analysis and theory into practice for effective security program, implementation, management and evaluation. Chapters examine metric-based security resource allocation of countermeasures, including security procedures, utilization of personnel, and electronic measures. The new edition is fully updated to reflect the latest industry best-practices and includes contributions from security industry leaders—based on their years of professional experience—including: Nick Vellani, Michael Silva, Kenneth Wheatley, Robert Emery, Michael Haggard. Strategic Security

Management, Second Edition will be a welcome addition to the security literature for all security professionals, security managers, and criminal justice students interested in understanding foundational security principles and their application.

Enterprise Security Risk Management-Brian Allen, Esq., CISSP, CISM, CPP, CFE 2017-11-29

As a security professional, have you found that you and others in your company do not always define “security” the same way? Perhaps security interests and business interests have become misaligned. Brian Allen and Rachelle Loyear offer a new approach: Enterprise Security Risk Management (ESRM). By viewing security through a risk management lens, ESRM can help make you and your security program successful. In their long-awaited book, based on years of practical experience and research, Brian Allen and Rachelle Loyear show you step-by-step how Enterprise Security Risk Management (ESRM) applies fundamental risk principles to manage all security risks. Whether the risks are informational, cyber, physical security, asset management, or business continuity, all are included in the holistic, all-encompassing ESRM approach which will move you from task-based to risk-based security. How is ESRM familiar? As a security professional, you may already practice some of the components of ESRM. Many of the concepts – such as risk identification, risk transfer and acceptance, crisis management, and incident response – will be well known to you. How is ESRM new? While many of the principles are familiar, the authors have identified

few organizations that apply them in the comprehensive, holistic way that ESRM represents – and even fewer that communicate these principles effectively to key decision-makers. How is ESRM practical? ESRM offers you a straightforward, realistic, actionable approach to deal effectively with all the distinct types of security risks facing you as a security practitioner. ESRM is performed in a life cycle of risk management including: Asset assessment and prioritization. Risk assessment and prioritization. Risk treatment (mitigation). Continuous improvement. Throughout Enterprise Security Risk Management: Concepts and Applications, the authors give you the tools and materials that will help you advance you in the security field, no matter if you are a student, a newcomer, or a seasoned professional. Included are realistic case studies, questions to help you assess your own security program, thought-provoking discussion questions, useful figures and tables, and references for your further reading. By redefining how everyone thinks about the role of security in the enterprise, your security organization can focus on working in partnership with business leaders and other key stakeholders to identify and mitigate security risks. As you begin to use ESRM, following the instructions in this book, you will experience greater personal and professional satisfaction as a security professional – and you'll become a recognized and trusted partner in the business-critical effort of protecting your enterprise and all its assets.

Critical Infrastructure Risk Assessment-Ernie Hayden, MIPM, CISSP, CEH, GICSP(Gold), PSP 2020-08-25

As a manager or engineer have you ever been assigned a task to perform a risk assessment of one of your facilities or plant systems? What if you are an insurance inspector or corporate auditor? Do you know how to prepare yourself for the inspection, decided what to look for, and how to write your report? This is a handbook for junior and senior personnel alike on what constitutes critical infrastructure and risk and offers guides to the risk assessor on preparation, performance, and documentation of a risk assessment of a complex facility. This is a definite "must read" for consultants, plant managers, corporate risk managers, junior and senior engineers, and university students before they jump into their first technical assignment.

Threat Assessment and Risk Analysis-Greg Allen

2015-11-05

Threat Assessment and Risk Analysis: An Applied Approach details the entire risk analysis process in accessible language, providing the tools and insight needed to effectively analyze risk and secure facilities in a broad range of industries and organizations. The book explores physical vulnerabilities in such systems as transportation, distribution, and communications, and demonstrates how to measure the key risks and their consequences, providing cost-effective and achievable methods for evaluating the appropriate security risk mitigation countermeasures. Users will find a book that outlines the processes for identifying and assessing the most essential threats and risks an organization faces, along with information on how to address only those that

justify security expenditures. Balancing the proper security measures versus the actual risks an organization faces is essential when it comes to protecting physical assets. However, determining which security controls are appropriate is often a subjective and complex matter. The book explores this process in an objective and achievable manner, and is a valuable resource for security and risk management executives, directors, and students. Guides readers from basic principles to complex processes in a logical, building block fashion Provides a clear, step-by-step process for performing a physical security threat and risk analysis for any organization Covers quantitative and qualitative risks such as operational risk, legal risk, reputational risk, social risks, and economic risks Utilizes the Department of Homeland Security risk assessment framework and best practices, including CARVER, API/NPRA, and RAMCAP

Industrial Security-David L. Russell 2015-03-12

A comprehensive and practical guide to security organization and planning in industrial plants Features Basic definitions related to plant security Features Countermeasures and response methods Features Facilities and equipment, and security organization Topics covered are applicable to multiple types of industrial plants Illustrates practical techniques for assessing and evaluating financial and corporate risks

Information security: risk assessment, management systems, the ISO/IEC 27001 standard-Cesare Gallotti 2019-01-17

In this book, the following subjects are included:

information security, the risk assessment and treatment processes (with practical examples), the information security controls. The text is based on the ISO/IEC 27001 standard and on the discussions held during the editing meetings, attended by the author. Appendixes include short presentations and check lists. CESARE GALLOTTI has been working since 1999 in the information security and IT process management fields and has been leading many projects for companies of various sizes and market sectors. He has been leading projects as consultant or auditor for the compliance with standards and regulations and has been designing and delivering ISO/IEC 27001, privacy and ITIL training courses. Some of his certifications are: Lead Auditor ISO/IEC 27001, Lead Auditor 9001, CISA, ITIL Expert and CBCI, CIPP/e. Since 2010, he has been Italian delegate for the the editing group for the ISO/IEC 27000 standard family. Web: www.cesaregallotti.it.

Risk Analysis and the Security Survey-James F. Broder 2011-12-07

As there is a need for careful analysis in a world where threats are growing more complex and serious, you need the tools to ensure that sensible methods are employed and correlated directly to risk. Counter threats such as terrorism, fraud, natural disasters, and information theft with the Fourth Edition of Risk Analysis and the Security Survey. Broder and Tucker guide you through analysis to implementation to provide you with the know-how to implement rigorous, accurate, and cost-effective security policies and designs. This book builds on the legacy of its predecessors by updating and covering new content.

Understand the most fundamental theories surrounding risk control, design, and implementation by reviewing topics such as cost/benefit analysis, crime prediction, response planning, and business impact analysis--all updated to match today's current standards. This book will show you how to develop and maintain current business contingency and disaster recovery plans to ensure your enterprises are able to sustain loss are able to recover, and protect your assets, be it your business, your information, or yourself, from threats. Offers powerful techniques for weighing and managing the risks that face your organization Gives insights into universal principles that can be adapted to specific situations and threats Covers topics needed by homeland security professionals as well as IT and physical security managers

Terrorism Risk Assessment Instruments-R. Corrado 2021-03-25

The search for a distinct "terrorist profile" has been going on for many years, and while it is generally agreed that nobody is born a terrorist, there is plenty of disagreement about why a person might become one. Whereas personal and situational push and pull factors can be combined to determine how and why young people become involved in terrorism, preventing an individual from following a path that ends in violence without moral restraint poses an enormous challenge, especially in an open society. This book presents papers from the NATO Advanced Research Workshop titled "A Review of the Utility of Existing Terrorism Risk Assessment Instruments and Policies: Is there the Need for Possible New Approaches?", held in Berlin, Germany, on 29-30

November 2019. Researchers were asked to present papers for discussion sessions with invited participants and practitioners from a number of NATO member and partner countries. Various assessment instruments for identifying problematic individuals at an early stage were presented by experts. It was generally agreed that, due to cultural, religious and other differences, there is no simple way to identify the relatively few high-risk individuals among the larger population of politically radicalized but not necessarily violent individuals who pose no threat. Framed by an Introduction and Conclusion, the 16 chapters in the book are divided into three parts: Theory and Risk/Threat Assessment Instrument Policy Themes; Implementation of Politically Motivated Terrorism Protocols; and Personality Traits/Disorders, Anti-State Terrorism Profiles and the DSM-5 Personality Trait Instrument. This practice-oriented book will be of interest to all those tasked with protecting society from some of its most dangerous members.

Risk Assessment-Marvin Rausand 2020-03-31

Introduces risk assessment with key theories, proven methods, and state-of-the-art applications Risk Assessment: Theory, Methods, and Applications remains one of the few textbooks to address current risk analysis and risk assessment with an emphasis on the possibility of sudden, major accidents across various areas of practice—from machinery and manufacturing processes to nuclear power plants and transportation systems. Updated to align with ISO 31000 and other amended standards, this all-new 2nd Edition

discusses the main ideas and techniques for assessing risk today. The book begins with an introduction of risk analysis, assessment, and management, and includes a new section on the history of risk analysis. It covers hazards and threats, how to measure and evaluate risk, and risk management. It also adds new sections on risk governance and risk-informed decision making; combining accident theories and criteria for evaluating data sources; and subjective probabilities. The risk assessment process is covered, as are how to establish context; planning and preparing; and identification, analysis, and evaluation of risk. Risk Assessment also offers new coverage of safe job analysis and semi-quantitative methods, and it discusses barrier management and HRA methods for offshore application. Finally, it looks at dynamic risk analysis, security and life-cycle use of risk. Serves as a practical and modern guide to the current applications of risk analysis and assessment, supports key standards, and supplements legislation related to risk analysis Updated and revised to align with ISO 31000 Risk Management and other new standards and includes new chapters on security, dynamic risk analysis, as well as life-cycle use of risk analysis Provides in-depth coverage on hazard identification, methodologically outlining the steps for use of checklists, conducting preliminary hazard analysis, and job safety analysis Presents new coverage on the history of risk analysis, criteria for evaluating data sources, risk-informed decision making, subjective probabilities, semi-quantitative methods, and

barrier management Contains more applications and examples, new and revised problems throughout, and detailed appendices that outline key terms and acronyms Supplemented with a book companion website containing Solutions to problems, presentation material and an Instructor Manual Risk Assessment: Theory, Methods, and Applications, Second Edition is ideal for courses on risk analysis/risk assessment and systems engineering at the upper-undergraduate and graduate levels. It is also an excellent reference and resource for engineers, researchers, consultants, and practitioners who carry out risk assessment techniques in their everyday work.

Review of the Department of Homeland Security's Approach to Risk Analysis- National Research Council 2010-10-10

The events of September 11, 2001 changed perceptions, rearranged national priorities, and produced significant new government entities, including the U.S. Department of Homeland Security (DHS) created in 2003. While the principal mission of DHS is to lead efforts to secure the nation against those forces that wish to do harm, the department also has responsibilities in regard to preparation for and response to other hazards and disasters, such as floods, earthquakes, and other "natural" disasters. Whether in the context of preparedness, response or recovery from terrorism, illegal entry to the country, or natural disasters, DHS is committed to processes and methods that feature risk assessment as a critical component for making better-informed decisions. Review of the Department of Homeland Security's Approach to Risk

Analysis explores how DHS is building its capabilities in risk analysis to inform decision making. The department uses risk analysis to inform decisions ranging from high-level policy choices to fine-scale protocols that guide the minute-by-minute actions of DHS employees. Although DHS is responsible for mitigating a range of threats, natural disasters, and pandemics, its risk analysis efforts are weighted heavily toward terrorism. In addition to assessing the capability of DHS risk analysis methods to support decision-making, the book evaluates the quality of the current approach to estimating risk and discusses how to improve current risk analysis procedures. Review of the Department of Homeland Security's Approach to Risk Analysis recommends that DHS continue to build its integrated risk management framework. It also suggests that the department improve the way models are developed and used and follow time-tested scientific practices, among other recommendations.

Risk Assessment for Water Infrastructure Safety and Security-Anna Doro-on 2011-08-17

One of the seventeen critical infrastructures vital to the security of the United States, the water supply system remains largely unprotected from the threat of terrorism, including possible revenge by Al Qaeda over the killing of Osama Bin Laden. Recognizing and identifying prospective events of terrorism against the water infrastructure is critical to the protection of the nation, as the consequences triggered by a terrorist attack on the water supply would be devastating. Risk Assessment for Water Infrastructure: Safety and

Security provides a unique quantitative risk assessment methodology for protection and security against terrorist contamination, vandalism, attacks against dams, and other threats to water supply systems. Focusing on the human safety, environmental, and economic consequences triggered by potential terrorist attacks and other threats, the book presents: The development of an integrated approach of risk assessment based upon the cumulative prospect theory The qualitative/quantitative processes and models for security and safe facility operations as required by EPA, DHS, and other governmental and regulatory agencies The application of an integrated model to the risk assessment of surface water, dams, wells, wastewater treatment facilities, reservoirs, and aqueducts of large urban regions The development of intelligence analysis incorporating risk assessment for terrorism prevention Finally, the book presents the legal and regulatory requirements and policy related to the protection and security of water infrastructure from terrorism and natural hazards to both human health and the environment. By analyzing potential terrorist risks against the water supply, strategic improvements in U.S. water infrastructure security may be achieved, including changes in policy, incorporation of intrusion detection technology, increased surveillance, and increased intelligence. More information can be found on the author's website.

Information Security Risk Management for ISO27001/ISO27002-Alan Calder 2010-04-27

Drawing on international best practice, including ISO/IEC 27005, NIST

SP800-30 and BS7799-3, the book explains in practical detail how to carry out an information security risk assessment. It covers key topics, such as risk scales, threats and vulnerabilities, selection of controls, and roles and responsibilities, and includes advice on choosing risk assessment software.

Security Risk Management for the Internet of Things-John Soldatos 2020-06-15

In recent years, the rising complexity of Internet of Things (IoT) systems has increased their potential vulnerabilities and introduced new cybersecurity challenges. In this context, state of the art methods and technologies for security risk assessment have prominent limitations when it comes to large scale, cyber-physical and interconnected IoT systems. Risk assessments for modern IoT systems must be frequent, dynamic and driven by knowledge about both cyber and physical assets. Furthermore, they should be more proactive, more automated, and able to leverage information shared across IoT value chains. This book introduces a set of novel risk assessment techniques and their role in the IoT Security risk management process. Specifically, it presents architectures and platforms for end-to-end security, including their implementation based on the edge/fog computing paradigm. It also highlights machine learning techniques that boost the automation and proactiveness of IoT security risk assessments. Furthermore, blockchain solutions for open and transparent sharing of IoT security information across the supply chain are introduced. Frameworks for privacy awareness, along with technical

measures that enable privacy risk assessment and boost GDPR compliance are also presented. Likewise, the book illustrates novel solutions for security certification of IoT systems, along with techniques for IoT security interoperability. In the coming years, IoT security will be a challenging, yet very exciting journey for IoT stakeholders, including security experts, consultants, security research organizations and IoT solution providers. The book provides knowledge and insights about where we stand on this journey. It also attempts to develop a vision for the future and to help readers start their IoT Security efforts on the right foot.

Lessons Learned from the Fukushima Nuclear Accident for Improving Safety and Security of U.S. Nuclear Plants-National Academies of Sciences, Engineering, and Medicine 2016-06-06

The U.S. Congress asked the National Academy of Sciences to conduct a technical study on lessons learned from the Fukushima Daiichi nuclear accident for improving safety and security of commercial nuclear power plants in the United States. This study was carried out in two phases: Phase 1, issued in 2014, focused on the causes of the Fukushima Daiichi accident and safety-related lessons learned for improving nuclear plant systems, operations, and regulations exclusive of spent fuel storage. This Phase 2 report focuses on three issues: (1) lessons learned from the accident for nuclear plant security, (2) lessons learned for spent fuel storage, and (3) reevaluation of conclusions from previous Academies studies on spent fuel storage.

Department of Homeland Security Bioterrorism Risk

Assessment-National Research Council 2009-01-03

The mission of Department of Homeland Security Bioterrorism Risk Assessment: A Call for Change, the book published in December 2008, is to independently and scientifically review the methodology that led to the 2006 Department of Homeland Security report, Bioterrorism Risk Assessment (BTRA) and provide a foundation for future updates. This book identifies a number of fundamental concerns with the BTRA of 2006, ranging from mathematical and statistical mistakes that have corrupted results, to unnecessarily complicated probability models and models with fidelity far exceeding existing data, to more basic questions about how terrorist behavior should be modeled. Rather than merely criticizing what was done in the BTRA of 2006, this new NRC book consults outside experts and collects a number of proposed alternatives that could improve DHS's ability to assess potential terrorist behavior as a key element of risk-informed decision making, and it explains these alternatives in the specific context of the BTRA and the bioterrorism threat.

The Security Risk Assessment Handbook-Douglas J. Landoll 2005-12-12

The Security Risk Assessment Handbook: A Complete Guide for Performing Security Risk Assessments provides detailed insight into precisely how to conduct an information security risk assessment. Designed for security professionals and their customers who want a more in-depth understanding of the risk assessment process, this volume contains real-world advice that promotes professional development.

It also enables security consumers to better negotiate the scope and rigor of a security assessment, effectively interface with a security assessment team, deliver insightful comments on a draft report, and have a greater understanding of final report recommendations. This book can save time and money by eliminating guesswork as to what assessment steps to perform, and how to perform them. In addition, the book offers charts, checklists, examples, and templates that speed up data gathering, analysis, and document development. By improving the efficiency of the assessment process, security consultants can deliver a higher-quality service with a larger profit margin. The text allows consumers to intelligently solicit and review proposals, positioning them to request affordable security risk assessments from quality vendors that meet the needs of their organizations.

Risk Management for Computer Security-Andy Jones 2005-03-29

The information systems security (InfoSec) profession remains one of the fastest growing professions in the world today. With the advent of the Internet and its use as a method of conducting business, even more emphasis is being placed on InfoSec. However, there is an expanded field of threats that must be addressed by today's InfoSec and information assurance (IA) professionals. Operating within a global business environment with elements of a virtual workforce can create problems not experienced in the past. How do you assess the risk to the organization when information can be accessed, remotely, by

employees in the field or while they are traveling internationally? How do you assess the risk to employees who are not working on company premises and are often thousands of miles from the office? How do you assess the risk to your organization and its assets when you have offices or facilities in a nation whose government may be supporting the theft of the corporate "crown jewels" in order to assist their own nationally owned or supported corporations? If your risk assessment and management program is to be effective, then these issues must be assessed. Personnel involved in the risk assessment and management process face a much more complex environment today than they have ever encountered before. This book covers more than just the fundamental elements that make up a good risk program. It provides an integrated "how to" approach to implementing a corporate program, complete with tested methods and processes; flowcharts; and checklists that can be used by the reader and immediately implemented into a computer and overall corporate security program. The challenges are many and this book will help professionals in meeting their challenges as we progress through the 21st Century. *Presents material in an engaging, easy-to-follow manner that will appeal to both advanced INFOSEC career professionals and network administrators entering the information security profession *Addresses the needs of both the individuals who are new to the subject as well as of experienced professionals *Provides insight into the factors that need to be considered & fully explains the numerous methods, processes & procedures of

risk management

Measuring and Managing Information Risk-Jack Freund 2014-08-23

Using the factor analysis of information risk (FAIR) methodology developed over ten years and adopted by corporations worldwide, Measuring and Managing Information Risk provides a proven and credible framework for understanding, measuring, and analyzing information risk of any size or complexity. Intended for organizations that need to either build a risk management program from the ground up or strengthen an existing one, this book provides a unique and fresh perspective on how to do a basic quantitative risk analysis. Covering such key areas as risk theory, risk calculation, scenario modeling, and communicating risk within the organization, Measuring and Managing Information Risk helps managers make better business decisions by understanding their organizational risk. Uses factor analysis of information risk (FAIR) as a methodology for measuring and managing risk in any organization. Carefully balances theory with practical applicability and relevant stories of successful implementation. Includes examples from a wide variety of businesses and situations presented in an accessible writing style.

How to Measure Anything in Cybersecurity Risk-Douglas W. Hubbard 2016-07-25

A ground shaking exposé on the failure of popular cyber risk management methods How to Measure Anything in Cybersecurity Risk exposes the shortcomings of current "risk management" practices, and offers a series of improvement techniques that help you fill the holes and ramp up

security. In his bestselling book How to Measure Anything, author Douglas W. Hubbard opened the business world's eyes to the critical need for better measurement. This book expands upon that premise and draws from The Failure of Risk Management to sound the alarm in the cybersecurity realm. Some of the field's premier risk management approaches actually create more risk than they mitigate, and questionable methods have been duplicated across industries and embedded in the products accepted as gospel. This book sheds light on these blatant risks, and provides alternate techniques that can help improve your current situation. You'll also learn which approaches are too risky to save, and are actually more damaging than a total lack of any security. Dangerous risk management methods abound; there is no industry more critically in need of solutions than cybersecurity. This book provides solutions where they exist, and advises when to change tracks entirely. Discover the shortcomings of cybersecurity's "best practices" Learn which risk management approaches actually create risk Improve your current practices with practical alterations Learn which methods are beyond saving, and worse than doing nothing Insightful and enlightening, this book will inspire a closer examination of your company's own risk management practices in the context of cybersecurity. The end goal is airtight data protection, so finding cracks in the vault is a positive thing—as long as you get there before the bad guys do. How to Measure Anything in Cybersecurity Risk is your guide to more robust protection through better

quantitative processes, approaches, and techniques.

Risk Propagation Assessment for Network Security-Mohamed Slim Ben Mahmoud 2013-04-08

The focus of this book is risk assessment methodologies for network architecture design. The main goal is to present and illustrate an innovative risk propagation-based quantitative assessment tool. This original approach aims to help network designers and security administrators to design and build more robust and secure network topologies. As an implementation case study, the authors consider an aeronautical network based on AeroMACS (Aeronautical Mobile Airport Communications System) technology. AeroMACS has been identified as the wireless access network for airport surface communications that will soon be deployed in European and American airports mainly for communications between aircraft and airlines. It is based on the IEEE 802.16-2009 standard, also known as WiMAX. The book begins with an introduction to the information system security risk management process, before moving on to present the different risk management methodologies that can be currently used (quantitative and qualitative). In the third part of the book, the authors' original quantitative network risk assessment model based on risk propagation is introduced. Finally, a network case study of the future airport AeroMACS system is presented. This example illustrates how the authors' quantitative risk assessment proposal can provide help to network security designers for the decision-making process and how the security of the

entire network may thus be improved. Contents Part 1. Network Security Risk Assessment 1. Introduction to Information System Security Risk Management Process. 2. System Security Risk Management Background. 3. A Quantitative Network Risk Management Methodology Based on Risk Propagation. Part 2. Application to Airport Communication Network Design 4. The AeroMACS Communication System in the SESAR Project. 5. Aeronautical Network Case Study.

Threat Assessment-James T Turner 2012-12-06

Detailed “how to's” of threat assessment—from the initial contact to the sharing of results! Risk management can be an organizational nightmare, but it is an essential part of your operations. Recent events have shown us that organizations need to know how to respond swiftly and effectively in emergencies and that companies need to protect their employees from internal and external threats. This book provides you with the tools you need to protect both your employees and yourself from a variety of threats. Threat Assessment: A Risk Management Approach examines the factors that human resource, security, legal, and behavioral professionals need to understand in work violence and threat situations that disrupt the working environment, revealing the best ways to reduce risk and manage emergencies. It includes case studies and hypothetical examples that show recommended practices in action and provides detailed interviewing methods that can increase the efficiency of current strategies. Helpful appendices provide sample forms for identification cards, stay-away letters, workplace behavior improvement

plans for problem employees, questions for health care providers, and announcements for employees regarding security changes. An extensive bibliography points the way to other useful material on this subject. Threat Assessment: A Risk Management Approach explores: the role of the multidisciplinary threat management team corporate liaisons with law enforcement agencies cyberthreats and stalking insider threats category classification of offending behaviors Risk management is a constantly evolving field, and Threat Assessment provides you with access to the latest updates. Staying up-to-date on risk management innovations will help you increase corporate sensitivity to possible threats and provide the safest possible working environment to your employees. The authors of Threat Assessment are seasoned professionals with extensive experience in risk management. You can learn from their expertise and adapt it to your situation, improving workplace safety and contributing to security in your own community.

Information Security Handbook-Darren Death 2017-12-08

Implement information security effectively as per your organization's needs. About This Book Learn to build your own information security framework, the best fit for your organization Build on the concepts of threat modeling, incidence response, and security analysis Practical use cases and best practices for information security Who This Book Is For This book is for security analysts and professionals who deal with security mechanisms in an organization. If you are

looking for an end to end guide on information security and risk analysis with no prior knowledge of this domain, then this book is for you. What You Will Learn Develop your own information security framework Build your incident response mechanism Discover cloud security considerations Get to know the system development life cycle Get your security operation center up and running Know the various security testing types Balance security as per your business needs Implement information security best practices In Detail Having an information security mechanism is one of the most crucial factors for any organization. Important assets of organization demand a proper risk management and threat model for security, and so information security concepts are gaining a lot of traction. This book starts with the concept of information security and shows you why it's important. It then moves on to modules such as threat modeling, risk management, and mitigation. It also covers the concepts of incident response systems, information rights management, and more. Moving on, it guides you to build your own information security framework as the best fit for your organization. Toward the end, you'll discover some best practices that can be implemented to make your security framework strong. By the end of this book, you will be well-versed with all the factors involved in information security, which will help you build a security framework that is a perfect fit your organization's requirements. Style and approach This book takes a practical approach, walking you through information security fundamentals, along with

information security best practices.

Cyber-Risk Management-Atle Refsdal 2015-10-01

This book provides a brief and general introduction to cybersecurity and cyber-risk assessment. Not limited to a specific approach or technique, its focus is highly pragmatic and is based on established international standards (including ISO 31000) as well as industrial best practices. It explains how cyber-risk assessment should be conducted, which techniques should be used when, what the typical challenges and problems are, and how they should be addressed. The content is divided into three parts. First, part I provides a conceptual introduction to the topic of risk management in general and to cybersecurity and cyber-risk management in particular. Next, part II presents the main stages of cyber-risk assessment from context establishment to risk treatment and acceptance, each illustrated by a running example. Finally, part III details four important challenges and how to reasonably deal with them in practice: risk measurement, risk scales, uncertainty, and low-frequency risks with high consequence. The target audience is mainly practitioners and students who are interested in the fundamentals and basic principles and techniques of security risk assessment, as well as lecturers seeking teaching material. The book provides an overview of the cyber-risk assessment process, the tasks involved, and how to complete them in practice.

Security Risk Assessment-Genserik Reniers 2017-11-20

This book deals with the state-of-the-art of physical security knowledge and research in the chemical

and process industries. Legislation differences between Europe and the USA are investigated, followed by an overview of the how, what and why of contemporary security risk assessment in this particular industrial sector. Innovative solutions such as attractiveness calculations and the use of game theory, advancing the present science of adversarial risk analysis, are discussed. The book further stands up for developing and employing dynamic security risk assessments, for instance based on Bayesian networks, and using OR methods to truly move security forward in the chemical and process industries.

Information Security Risk Analysis, Second Edition- Thomas R. Peltier 2005-04-26

The risk management process supports executive decision-making, allowing managers and owners to perform their fiduciary responsibility of protecting the assets of their enterprises. This crucial process should not be a long, drawn-out affair. To be effective, it must be done quickly and efficiently. Information Security Risk Analysis, Second Edition enables CIOs, CSOs, and MIS managers to understand when, why, and how risk assessments and analyses can be conducted effectively. This book discusses the principle of risk management and its three key elements: risk analysis, risk assessment, and vulnerability assessment. It examines the differences between quantitative and qualitative risk assessment, and details how various types of qualitative risk assessment can be applied to the assessment process. The text offers a thorough discussion of recent changes to FRAAP and the need to develop a pre-

screening method for risk assessment and business impact analysis.

Reference Manual To Mitigate Potential Terrorist Attacks Against Buildings-Department of Homeland Security. Federal Emergency Management Agency 2003

Securing the Belt and Road Initiative-Alessandro Arduino 2018-02-01

This collection explores the expansion of Chinese outbound investments, aimed to sustain the increased need for natural resources, and how they have amplified the magnitude of a possible international crisis that the People's Republic of China may face in the near future by bringing together the views of a wide range of scholars. President Xi's Belt and Road initiative (BRI), aimed to promote economic development and exchanges with China for over 60 countries, necessitates a wide range of security procedures. While the threats to Chinese enterprises and Chinese workers based on foreign soil are poised to increase, there is an urgent need to develop new guidelines for risk assessment, special insurance and crisis management. While the Chinese State Owned Enterprises are expanding their international reach capabilities, they still do not have the capacity to assure adequate security. In such a climate, this collection will be of profound value to policy makers, those working in the financial sector, and academics.

The Security Risk Assessment Handbook, 2nd Edition-Douglas Landoll 2016

The Security Risk Assessment Handbook: A Complete Guide for Performing Security Risk Assessments provides detailed insight into

precisely how to conduct an information security risk assessment. Designed for security professionals and their customers who want a more in-depth understanding of the risk assessment process, this volume contains real-wor.