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Practical Cloud Security A Guide For Secure Desig ***2020-01-20***

CALLAHAN QUENTIN

Web Application Security McGraw Hill Professional
Use this hands-on guide to understand the ever growing and complex world of digital security. Learn how to protect yourself from digital crime, secure your communications, and become anonymous online using sophisticated yet practical tools and techniques. This book teaches you how to secure your online identity and personal devices, encrypt your digital data and online communications, protect cloud data and Internet of Things (IoT), mitigate social engineering attacks, keep your purchases secret, and conceal your digital footprint. You will understand best practices to harden your operating system and delete digital traces using the most widely used operating system, Windows. Digital Privacy and Security Using Windows offers a comprehensive list of practical digital privacy tutorials in addition to being a complete repository of free online resources and tools assembled in one place. The book helps you build a robust defense from electronic crime and corporate surveillance. It covers general principles of digital privacy and how to configure and use various security applications to maintain your privacy, such as TOR, VPN, and BitLocker. You will learn to encrypt email communications using Gpg4win and Thunderbird. What You'll Learn Know the various parties interested in having your private data Differentiate between government and corporate surveillance, and the motivations behind each one Understand

how online tracking works technically Protect digital data, secure online communications, and become anonymous online Cover and destroy your digital traces using Windows OS Secure your data in transit and at rest Be aware of cyber security risks and countermeasures Who This Book Is For End users, information security professionals, management, infosec students

Building Secure and Reliable Systems Syngress

A practical, indispensable security guide that will navigate you through the complex realm of securely building and deploying systems in our IoT-connected world About This Book Learn to design and implement cyber security strategies for your organization Learn to protect cyber-physical systems and utilize forensic data analysis to beat vulnerabilities in your IoT ecosystem Learn best practices to secure your data from device to the cloud Gain insight into privacy-enhancing techniques and technologies Who This Book Is For This book targets IT Security Professionals and Security Engineers (including pentesters, security architects and ethical hackers) who would like to ensure security of their organization's data when connected through the IoT. Business analysts and managers will also find it useful. What You Will Learn Learn how to break down cross-industry barriers by adopting the best practices for IoT deployments Build a rock-solid security program for IoT that is cost-effective and easy to maintain Demystify complex topics such as cryptography, privacy, and penetration testing to improve your security posture See how the selection of individual components can affect the security posture of the entire system Use Systems Security Engineering and Privacy-by-design principles to design a secure IoT ecosystem Get to know how to leverage the burdgening cloud-based systems that will support the IoT into the future. In Detail With the advent of Intenret of Things (IoT), businesses will be faced with defending against new types of threats. The business ecosystem now includes cloud computing infrastructure, mobile and fixed endpoints that open up new attack surfaces, a desire to share information with many stakeholders and a need to take action quickly based on large quantities of collected data. . It therefore becomes critical to ensure that cyber security threats are contained to a minimum when implementing new IoT services and solutions. . The interconnectivity of people, devices, and companies raises stakes to a new level as computing and action become even more mobile, everything becomes connected to the cloud, and infrastructure is strained to securely manage the billions of devices that will connect us all to the IoT. This book shows you how to implement cyber-security solutions, IoT design best practices and risk mitigation methodologies to address device and infrastructure threats to IoT solutions. This book will take readers on a journey that begins with understanding the IoT and how it can be applied in various industries, goes on to describe the security challenges associated with the IoT, and then provides a set of guidelines to architect and deploy a secure IoT in your Enterprise. The book will showcase how the IoT is implemented in early-adopting industries and describe how lessons can be learned and shared across diverse industries to support a secure IoT. Style and approach This book aims to educate readers on key areas in IoT security. It walks readers through engaging with security challenges and then provides answers on how to successfully manage IoT security and build a safe infrastructure for smart devices. After reading this book, you

will understand the true potential of tools and solutions in order to build real-time security intelligence on IoT networks.

CSA Guide to Cloud Computing Microsoft Press

"The promise of cloud computing is here. These pages provide the 'eyes wide open' insights you need to transform your business." --Christopher Crowhurst, Vice President, Strategic Technology, Thomson Reuters A Down-to-Earth Guide to Cloud Computing Cloud Computing: A Practical Approach provides a comprehensive look at the emerging paradigm of Internet-based enterprise applications and services. This accessible book offers a broad introduction to cloud computing, reviews a wide variety of currently available solutions, and discusses the cost savings and organizational and operational benefits. You'll find details on essential topics, such as hardware, platforms, standards, migration, security, and storage. You'll also learn what other organizations are doing and where they're headed with cloud computing. If your company is considering the move from a traditional network infrastructure to a cutting-edge cloud solution, you need this strategic guide. Cloud Computing: A Practical Approach covers: Costs, benefits, security issues, regulatory concerns, and limitations Service providers, including Google, Microsoft, Amazon, Yahoo, IBM, EMC/VMware, Salesforce.com, and others Hardware, infrastructure, clients, platforms, applications, services, and storage Standards, including HTTP, HTML, DHTML, XMPP, SSL, and OpenID Web services, such as REST, SOAP, and JSON Platform as a Service (PaaS), Software as a Service (SaaS), and Software plus Services (S+S) Custom application development environments, frameworks, strategies, and solutions Local clouds, thin clients, and virtualization Migration, best practices, and emerging standards

Cloudonomics McGraw Hill Professional

Securing, observing, and troubleshooting containerized workloads on Kubernetes can be daunting. It requires a range of considerations, from infrastructure choices and cluster configuration to deployment controls and runtime and network security. With this practical book, you'll learn how to adopt a holistic security and observability strategy for building and securing cloud native applications running on Kubernetes. Whether you're already working on cloud native applications or are in the process of migrating to its architecture, this guide introduces key security and observability concepts and best practices to help you unleash the power of cloud native applications. Authors Brendan Creane and Amit Gupta from Tigera take you through the full breadth of new cloud native approaches for establishing security and observability for applications running on Kubernetes. Learn why you need a security and observability strategy for cloud native applications and determine your scope of coverage Understand key concepts behind the book's security and observability approach Explore the technology choices available to support this strategy Discover how to share security responsibilities across multiple teams or roles Learn how to architect Kubernetes security and observability for multicloud and hybrid environments

Cloud Computing: A Practical Approach "O'Reilly Media, Inc."

Prevent destructive attacks to your Azure public cloud infrastructure, remove vulnerabilities, and instantly report cloud security readiness. This book provides comprehensive guidance

from a security insider's perspective. Cyber Security on Azure explains how this 'security as a service' (SECaaS) business solution can help you better manage security risk and enable data security control using encryption options such as Advanced Encryption Standard (AES) cryptography. Discover best practices to support network security groups, web application firewalls, and database auditing for threat protection. Configure custom security notifications of potential cyberattack vectors to prevent unauthorized access by hackers, hacktivists, and industrial spies. What You'll Learn This book provides step-by-step guidance on how to: Support enterprise security policies Improve cloud security Configure intrusion detection Identify potential vulnerabilities Prevent enterprise security failures Who This Book Is For IT, cloud, and security administrators; CEOs, CIOs, and other business professionals

Threat Hunting in the Cloud Walter de Gruyter GmbH & Co KG

Plan and design robust security architectures to secure your organization's technology landscape and the applications you develop Key FeaturesLeverage practical use cases to successfully architect complex security structuresLearn risk assessment methodologies for the cloud, networks, and connected devicesUnderstand cybersecurity architecture to implement effective solutions in medium-to-large enterprisesBook Description Cybersecurity architects work with others to develop a comprehensive understanding of the business' requirements. They work with stakeholders to plan designs that are implementable, goal-based, and in keeping with the governance strategy of the organization. With this book, you'll explore the fundamentals of cybersecurity architecture: addressing and mitigating risks, designing secure solutions, and communicating with others about security designs. The book outlines strategies that will help you work with execution teams to make your vision a concrete reality, along with covering ways to keep designs relevant over time through ongoing monitoring, maintenance, and continuous improvement. As you progress, you'll also learn about recognized frameworks for building robust designs as well as strategies that you can adopt to create your own designs. By the end of this book, you will have the skills you need to be able to architect solutions with robust security components for your organization, whether they are infrastructure solutions, application solutions, or others. What you will learnExplore ways to create your own architectures and analyze those from othersUnderstand strategies for creating architectures for environments and applicationsDiscover approaches to documentation using repeatable approaches and toolsDelve into communication techniques for designs, goals, and requirementsFocus on implementation strategies for designs that help reduce riskBecome well-versed with methods to apply architectural discipline to your organizationWho this book is for If you are involved in the process of implementing, planning, operating, or maintaining cybersecurity in an organization, then this security book is for you. This includes security practitioners, technology governance practitioners, systems auditors, and software developers invested in keeping their organizations secure. If you're new to cybersecurity architecture, the book takes you through the process step by step; for those who already work in the field and have some experience, the book presents strategies and techniques that will help them develop

their skills further.

Privacy and Security for Cloud Computing "O'Reilly Media, Inc." With their rapidly changing architecture and API-driven automation, cloud platforms come with unique security challenges and opportunities. This hands-on book guides you through security best practices for multivendor cloud environments, whether your company plans to move legacy on-premises projects to the cloud or build a new infrastructure from the ground up. Developers, IT architects, and security professionals will learn cloud-specific techniques for securing popular cloud platforms such as Amazon Web Services, Microsoft Azure, and IBM Cloud. Chris Dotson—an IBM senior technical staff member—shows you how to establish data asset management, identity and access management, vulnerability management, network security, and incident response in your cloud environment.

Microsoft Azure Security Center CRC Press

Despite the buzz surrounding the cloud computing, only a small percentage of organizations have actually deployed this new style of IT—so far. If you're planning your long-term cloud strategy, this practical book provides insider knowledge and actionable real-world lessons regarding planning, design, operations, security, and application transformation. This book teaches business and technology managers how to transition their organization's traditional IT to cloud computing. Rather than yet another book trying to sell or convince readers on the benefits of clouds, this book provides guidance, lessons learned, and best practices on how to design, deploy, operate, and secure an enterprise cloud based on real-world experience. Author James Bond provides useful guidance and best-practice checklists based on his field experience with real customers and cloud providers. You'll view cloud services from the perspective of a consumer and as an owner/operator of an enterprise private or hybrid cloud, and learn valuable lessons from successful and less-than-successful organization use-case scenarios. This is the information every CIO needs in order to make the business and technical decisions to finally execute on their journey to cloud computing. Get updated trends and definitions in cloud computing, deployment models, and for building or buying cloud services Discover challenges in cloud operations and management not foreseen by early adopters Use real-world lessons to plan and build an enterprise private or hybrid cloud Learn how to assess, port, and migrate legacy applications to the cloud Identify security threats and vulnerabilities unique to the cloud Employ a cloud management system for your enterprise (private or multi-provider hybrid) cloud ecosystem Understand the challenges for becoming an IT service broker leveraging the power of the cloud

The Enterprise Cloud CRC Press

This handbook offers a comprehensive overview of cloud computing security technology and implementation while exploring practical solutions to a wide range of cloud computing security issues. As more organizations use cloud computing and cloud providers for data operations, the need for proper security in these and other potentially vulnerable areas has become a global priority for organizations of all sizes. Research efforts from academia and industry, as conducted and reported by experts in all aspects of security related to cloud computing, are gathered

within one reference guide. Features • Covers patching and configuration vulnerabilities of a cloud server • Evaluates methods for data encryption and long-term storage in a cloud server • Demonstrates how to verify identity using a certificate chain and how to detect inappropriate changes to data or system configurations John R. Vacca is an information technology consultant and internationally known author of more than 600 articles in the areas of advanced storage, computer security, and aerospace technology. John was also a configuration management specialist, computer specialist, and the computer security official (CSO) for NASA's space station program (Freedom) and the International Space Station Program from 1988 until his retirement from NASA in 1995.

Empirical Cloud Security, Second Edition Simon and Schuster

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

Essential Cybersecurity Science Apress

If you're involved in cybersecurity as a software developer, forensic investigator, or network administrator, this practical guide shows you how to apply the scientific method when assessing techniques for protecting your information systems. You'll learn how to conduct scientific experiments on everyday tools and procedures, whether you're evaluating corporate security systems, testing your own security product, or looking for bugs in a mobile game. Once author Josiah Dykstra gets you up to speed on the scientific method, he helps you focus on standalone, domain-specific topics, such as cryptography, malware analysis, and system security engineering. The latter chapters include practical case studies that demonstrate how to use available tools to conduct domain-specific scientific experiments. Learn the steps necessary to conduct scientific experiments in cybersecurity Explore fuzzing to test how your software handles various inputs Measure the performance of the Snort intrusion detection system Locate malicious "needles in a haystack" in your network and IT environment Evaluate cryptography design and application in IoT products Conduct an experiment to identify relationships between similar malware binaries Understand system-level security requirements for

enterprise networks and web services

Cloud Security Handbook Packt Publishing Ltd

While many resources for network and IT security are available, detailed knowledge regarding modern web application security has been lacking—until now. This practical guide provides both offensive and defensive security concepts that software engineers can easily learn and apply. Andrew Hoffman, a senior security engineer at Salesforce, introduces three pillars of web application security: recon, offense, and defense. You'll learn methods for effectively researching and analyzing modern web applications—including those you don't have direct access to. You'll also learn how to break into web applications using the latest hacking techniques. Finally, you'll learn how to develop mitigations for use in your own web applications to protect against hackers. Explore common vulnerabilities plaguing today's web applications Learn essential hacking techniques attackers use to exploit applications Map and document web applications for which you don't have direct access Develop and deploy customized exploits that can bypass common defenses Develop and deploy mitigations to protect your applications against hackers Integrate secure coding best practices into your development lifecycle Get practical tips to help you improve the overall security of your web applications

Security in the Private Cloud John Wiley & Sons

In depth informative guide to implement and use AWS security services effectively. About This Book Learn to secure your network, infrastructure, data and applications in AWS cloud Log, monitor and audit your AWS resources for continuous security and continuous compliance in AWS cloud Use AWS managed security services to automate security. Focus on increasing your business rather than being diverged onto security risks and issues with AWS security. Delve deep into various aspects such as the security model, compliance, access management and much more to build and maintain a secure environment. Who This Book Is For This book is for all IT professionals, system administrators and security analysts, solution architects and Chief Information Security Officers who are responsible for securing workloads in AWS for their organizations. It is helpful for all Solutions Architects who want to design and implement secure architecture on AWS by the following security by design principle. This book is helpful for personnel in Auditors and Project Management role to understand how they can audit AWS workloads and how they can manage security in AWS respectively. If you are learning AWS or championing AWS adoption in your organization, you should read this book to build security in all your workloads. You will benefit from knowing about security footprint of all major AWS services for multiple domains, use cases, and scenarios. What You Will Learn Learn about AWS Identity Management and Access control Gain knowledge to create and secure your private network in AWS Understand and secure your infrastructure in AWS Understand monitoring, logging and auditing in AWS Ensure Data Security in AWS Learn to secure your applications in AWS Explore AWS Security best practices In Detail Mastering AWS Security starts with a deep dive into the fundamentals of the shared security responsibility model. This book tells you how you can enable continuous security, continuous auditing, and continuous compliance by automating your security in AWS with the tools,

services, and features it provides. Moving on, you will learn about access control in AWS for all resources. You will also learn about the security of your network, servers, data and applications in the AWS cloud using native AWS security services. By the end of this book, you will understand the complete AWS Security landscape, covering all aspects of end - to -end software and hardware security along with logging, auditing, and compliance of your entire IT environment in the AWS cloud. Lastly, the book will wrap up with AWS best practices for security. Style and approach The book will take a practical approach delving into different aspects of AWS security to help you become a master of it. It will focus on using native AWS security features and managed AWS services to help you achieve continuous security and continuous compliance.

Kubernetes Security and Observability O'Reilly Media

Build a resilient cloud architecture to tackle data disasters with ease About This Book Gain a firm grasp of Cloud data security and governance, irrespective of your Cloud platform Practical examples to ensure you secure your Cloud environment efficiently A step-by-step guide that will teach you the unique techniques and methodologies of Cloud data governance Who This Book Is For If you are a cloud security professional who wants to ensure cloud security and data governance no matter the environment, then this book is for you. A basic understanding of working on any cloud platform would be beneficial. What You Will Learn Configure your firewall and Network ACL Protect your system against DDOS and application-level attacks Explore cryptography and data security for your cloud Get to grips with configuration management tools to automate your security tasks Perform vulnerability scanning with the help of the standard tools in the industry Learn about central log management In Detail Modern day businesses and enterprises are moving to the Cloud, to improve efficiency and speed, achieve flexibility and cost effectiveness, and for on-demand Cloud services. However, enterprise Cloud security remains a major concern because migrating to the public Cloud requires transferring some control over organizational assets to the Cloud provider. There are chances these assets can be mismanaged and therefore, as a Cloud security professional, you need to be armed with techniques to help businesses minimize the risks and misuse of business data. The book starts with the basics of Cloud security and offers an understanding of various policies, governance, and compliance challenges in Cloud. This helps you build a strong foundation before you dive deep into understanding what it takes to design a secured network infrastructure and a well-architected application using various security services in the Cloud environment. Automating security tasks, such as Server Hardening with Ansible, and other automation services, such as Monit, will monitor other security daemons and take the necessary action in case these security daemons are stopped maliciously. In short, this book has everything you need to secure your Cloud environment with. It is your ticket to obtain industry-adopted best practices for developing a secure, highly available, and fault-tolerant architecture for organizations. Style and approach This book follows a step-by-step, practical approach to secure your applications and data when they are located remotely.

Enterprise Cloud Security and Governance John Wiley & Sons

To facilitate scalability and resilience, many organizations now

run applications in cloud native environments using containers and orchestration. But how do you know if the deployment is secure? This practical book examines key underlying technologies to help developers, operators, and security professionals assess security risks and determine appropriate solutions. Author Liz Rice, Chief Open Source Officer at Isovalent, looks at how the building blocks commonly used in container-based systems are constructed in Linux. You'll understand what's happening when you deploy containers and learn how to assess potential security risks that could affect your deployments. If you run container applications with kubectl or docker and use Linux command-line tools such as ps and grep, you're ready to get started. Explore attack vectors that affect container deployments Dive into the Linux constructs that underpin containers Examine measures for hardening containers Understand how misconfigurations can compromise container isolation Learn best practices for building container images Identify container images that have known software vulnerabilities Leverage secure connections between containers Use security tooling to prevent attacks on your deployment

The Cloud at Your Service Apress

This book analyzes the latest advances in privacy, security and risk technologies within cloud environments. With contributions from leading experts, the text presents both a solid overview of the field and novel, cutting-edge research. A Glossary is also included at the end of the book. Topics and features: considers the various forensic challenges for legal access to data in a cloud computing environment; discusses privacy impact assessments for the cloud, and examines the use of cloud audits to attenuate cloud security problems; reviews conceptual issues, basic requirements and practical suggestions for provisioning dynamically configured access control services in the cloud; proposes scoped invariants as a primitive for analyzing a cloud server for its integrity properties; investigates the applicability of existing controls for mitigating information security risks to cloud computing environments; describes risk management for cloud computing from an enterprise perspective.

AWS Security Springer

This book provides a practical and comprehensive approach to information security and privacy law for both international and domestic statutes. It provides all the tools needed to handle the business, legal and technical risks of protecting information on a global scale. For anyone responsible for or advising a corporation involved in domestic or international business, who must comply with a dizzying array of statutes, regulations, technologies, methodologies and standards, this book is for you.

Cloud Security Handbook for Architects O'Reilly Media

Well-known security experts decipher the most challenging aspect of cloud computing-security Cloud computing allows for both large and small organizations to have the opportunity to use Internet-based services so that they can reduce start-up costs, lower capital expenditures, use services on a pay-as-you-use basis, access applications only as needed, and quickly reduce or increase capacities. However, these benefits are accompanied by a myriad of security issues, and this valuable book tackles the most common security challenges that cloud computing faces. The authors offer you years of unparalleled expertise and knowledge as they discuss the extremely challenging topics of

data ownership, privacy protections, data mobility, quality of service and service levels, bandwidth costs, data protection, and support. As the most current and complete guide to helping you find your way through a maze of security minefields, this book is mandatory reading if you are involved in any aspect of cloud computing. Coverage Includes: Cloud Computing Fundamentals Cloud Computing Architecture Cloud Computing Software Security Fundamentals Cloud Computing Risks Issues Cloud Computing Security Challenges Cloud Computing Security Architecture Cloud Computing Life Cycle Issues Useful Next Steps and Approaches

Cloud Security and Privacy Simon and Schuster

Embrace the cloud and kick hackers to the curb with this accessible guide on cloud security Cloud technology has changed the way we approach technology. It’s also given rise to a new set of security challenges caused by bad actors who seek to exploit vulnerabilities in a digital infrastructure. You can put the kibosh on these hackers and their dirty deeds by hardening the walls that protect your data. Using the practical techniques discussed in Cloud Security For Dummies, you’ll mitigate the risk of a data breach by building security into your network from the bottom-up. Learn how to set your security policies to balance ease-of-use and data protection and work with tools provided by vendors trusted around the world. This book offers step-by-step demonstrations of how to: Establish effective security protocols for your cloud application, network, and infrastructure Manage and use the security tools provided by different cloud vendors Deliver security audits that reveal hidden flaws in your security setup and ensure compliance with regulatory frameworks As firms around the world continue to expand their use of cloud technology, the cloud is becoming a bigger and bigger part of our lives. You can help safeguard this critical component of modern IT architecture with the straightforward strategies and hands-on techniques discussed in this book.

Container Security John Wiley & Sons

This practical and didactic text/reference discusses the leading edge of secure cloud computing, exploring the essential concepts and principles, tools, techniques and deployment models in this field. Enlightening perspectives are presented by an international collection of pre-eminent authorities in cloud security assurance from both academia and industry. Topics and features: · Describes the important general concepts and principles of security assurance in cloud-based environments · Presents applications and approaches to cloud security that illustrate the current state of the art · Reviews pertinent issues in relation to challenges that prevent organizations moving to cloud architectures · Provides relevant theoretical frameworks and the latest empirical research findings · Discusses real-world vulnerabilities of cloud-based software in order to address the challenges of securing distributed software · Highlights the practicalities of cloud security, and how applications can assure and comply with legislation · Includes review questions at the end of each chapter This Guide to Security Assurance for Cloud Computing will be of great benefit to a broad audience covering enterprise architects, business analysts and leaders, IT infrastructure managers, cloud security engineers and consultants, and application developers involved in system design and implementation. The work is also suitable as a

textbook for university instructors, with the outline for a possible course structure suggested in the preface. The editors are all members of the Computing and Mathematics Department at the University of Derby, UK, where Dr. Shao Ying Zhu serves as a Senior Lecturer in Computing, Dr. Richard Hill as a Professor and Head of the Computing and Mathematics Department, and Dr. Marcello Trovati as a Senior Lecturer in Mathematics. The other publications of the editors include the Springer titles Big-Data Analytics and Cloud Computing, Guide to Cloud Computing and Cloud Computing for Enterprise Architectures.