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Risk Assessment Checklist/Program for Virtualized Infrastructure (ESXi Host, VMware, VCenter, VBlock, Vmax)

By

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Practitioners and researchers in this industry must always rely on strong personal judgment and experience in evaluating and applying information and methods being acquired from this book while also exercising professional due care and caution to ensure their safety and those of others, as well as parties for whom their own professional responsibility.

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About the Author

A Certified Information Systems Auditor (CISA), PECB certified Lead Auditor in ISO 27001 (Information Security Management System), ISO 22301 (Business Continuity Management System), ISO 20000 (IT Service Management System) and Lead Cyber Security Manager (ISO 27032), Nwabueze Ohia is a seasoned Information Assurance and Cyber Security professional/expert with over 12 years working experience in consulting and full time employment. He has worked in the banking sector in Nigeria as IT auditor and information security practitioner with experience spanning information systems audit and assurance, information/cyber security, technical infrastructure security/assurance, system controls analyst, IT risk analyst, data analyst and consultant. He is an expert in the development of audit work programs, checklists and risk assessment template that conform to Institute of Internal Auditors (IIA) standard, which practitioners has found useful in the discharge of their assurance functions. With his rich knowledge of the financial services sector and underlining security/controls required of systems and IT infrastructure in the sector, his eBooks, educational and professional materials, which are result oriented and tailored towards addressing information security issues have assisted practitioners within Nigeria, Sub-Sahara Africa and beyond in addressing risk in the ever changing and dynamic control environment. Beyond the financial services sector, practitioners in other industries such as insurance, telecommunication, web hosting, Internet service providers, SaaS, cloud service provider, distribution & supply chain management, shipping, oil & gas, etc., have leveraged on materials produced by Nwabueze to excel in their endeavors.

Nwabueze Ohia has written several educational and professional materials in the field of information assurance, information/cyber security and technical infrastructures, which are published on his website (<http://oxleyconsults.com.ng>). In addition, he has four books to his credit, which he self-published on Amazon Kindle Book store as well as other ebook platforms across the globe. His wealth of experience in information assurance and cyber security consulting as well as working in financial service sector are brought to bear on all his published materials/eBooks as an experience professional with practical/hands-on perspective. He holds a Higher National Diploma (HND) in Electrical/Electronics Engineering (Telecommunications) from Federal Polytechnic Nekede Owerri, a

Bachelor of Technology (B. Tech) degree in Information Management Technology (IMT) and recently completed Master of Science Degree (MSc) in Information Management Technology (IMT) from Federal University of Technology Owerri, Imo State. This is in addition to series of professional/technical training courses he has attended in the course of his career, which endorsing him as a subject matter expert in his chosen profession.

Nwabueze Ohia is passionate about giving back to the internet and the knowledgebase of his chosen profession, having greatly been enriched by same, which he has demonstrated through several writeups, articles and professional papers published on his website for other to read and be enriched including guest posting on other professional web platforms. He finds joy and fulfillment in extending helping hands to the needy and the downtrodden of our society. His hobbies are traveling round the world, soccer, lawn tennis and above all, web application development/programming. Born in 1983 to Nigerian parents from the Eastern part of the country, he is happily married with a daughter.

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Preface

By Nwabueze Ohia

Virtualization can be referred to as the act of creating virtual versions/models of a device or system resource, such as a server, network resource, storage device or even an operating system where through configuration, resources are divided/partitioned into one or more execution/programmable environments. Virtualized infrastructures have become very popular in recent times given its cost saving potentials. Rather than purchasing physical hardware (servers, workstations or network devices) for every application/solution to be deployed by an organization, a single high-end hardware (server or device) with large system resource such as memory, processing capacity (CPU), storage and operating system is purchased and its resources partitioned into fragments to create multiple environments within the single hardware infrastructure. This reduces the requirement for physical space, power and other resource that would have been used if each application or solution were to be deployed on separate physical hardware infrastructure.

While it is advantageous to use virtualized infrastructure for application deployment for cost savings, it comes with its own risk, vulnerabilities and challenges, which if not identified, scoped and mitigated could lead to major security challenge or disaster for an organization where the entire infrastructure as well as individual applications hosted on the single physical infrastructure risk being compromised. As such, it is important for the inherent risks/vulnerabilities associated with virtualized infrastructures to be identified and the organization's exposure to them assessed to ensure their impact known and adequately mitigated while assuring on the overall security of the organization systems and network. This is couple with the threat of abuse or misuse of the system by operators and users.

The risk associated with virtualized infrastructure (be it ESXi Host, VMware, VCenter, VBlock, Vmax) would vary with organizations and largely depends on how the infrastructures were deployed. As such, it is important that personnel with security oversight responsibilities on the virtualized infrastructure put in context organization's uniqueness in terms of its information security policies, procedures, security baselines, regulatory and legal requirements while conducting their security assessment or reviews to know how best to protect them.

This book is therefore a documentation of risks and vulnerabilities associated with virtualized infrastructure (ESXi Host, VMware, VCenter, VBlock, Vmax), threats and threat agents that could exploit those weaknesses, their impact on the organization and actions required to mitigate the risks. It serves as a risk assessment checklist/guide for risk assurance practitioners (IT Risk Manager, Cyber/Information Security Analysts, Information Systems Auditors and Systems Control Analysts) and enable them understand as well as identify some of the risks inherent in the virtualized infrastructure, implications/impact of such risks/vulnerabilities and ways to mitigate them. The book is a risk assessment checklist/program guide for risk assurance practitioners and provides unique/rich database of vulnerabilities/risk, control lapses, process failures and substandard practices associated with virtualized infrastructure. This risk assessment checklist can easily be integrated with popular audit management software such as teammatessolutions or MKinsight.

Intended for organizations desirous of build a risk management program around their virtualized infrastructure (ESXi Host, VMware, VCenter, VBlock, Vmax) from the ground up or strengthen an existing one. Below is a sample page of the virtualized infrastructure risk assessment checklist/program. For full access to the document, you can subscribe to our membership plan or purchase the book by click the Buy Now or Add to Cart button below.