*Training Course:*
*SEC545: Cloud Security Architecture and*
*Operations*

*8 - 12 September 2024*
*Alexandria (Egypt)*

# Training Course:
# SEC545: Cloud Security Architecture and Operations

Training Course code:  IT234727  From:  8 - 12 September 2024  Venue:  Alexandria (Egypt) - Training Course Fees:  4345  ⬜ Euro

## Introduction

As more organizations move data and infrastructure to the cloud, security is becoming a major priority. Operations and development teams are finding new uses for cloud services, and executives are eager to save money and gain new capabilities and operational efficiency by using these services. But will information security prove to be an Achilles⬜ heel? Many cloud providers do not provide detailed control information about their internal environments, and quite a few common security controls used internally may not translate directly to the public cloud.

SEC545: Cloud Security Architecture and Operations will tackle these issues one by one. We⬜ll start with a brief introduction to cloud security fundamentals, then cover the critical concepts of cloud policy and governance for security professionals. For the rest of day one and all of day two, we⬜ll move into technical security principles and controls for all major cloud types SaaS, PaaS, and IaaS. We⬜ll learn about the Cloud Security Alliance framework for cloud control areas, then delve into assessing risk for cloud services, looking specifically at technical areas that need to be addressed.

## Course Objective of Cloud Security Architecture and Operations

### You Will Be Able To

- Revise and build internal policies to ensure cloud security is properly addressed

- Understand all major facets of cloud risk, including threats, vulnerabilities, and impact

- Articulate the key security topics and risks associated with SaaS, PaaS, and IaaS cloud deployment models

- Evaluate Cloud Access Security Brokers CASBs to better protect and monitor SaaS deployments

- Build security for all layers of a hybrid cloud environment, starting with hypervisors and working to application layer controls

- Evaluate basic virtualization hypervisor security controls

- Design and implement network security access controls and monitoring capabilities in a public cloud environment

- Design a hybrid cloud network architecture that includes IPSec tunnels

- Integrate cloud identity and access management IAM into security architecture

- Evaluate and implement various cloud encryption types and formats

- Develop multi-tier cloud architectures in a Virtual Private Cloud VPC, using subnets, availability zones, gateways, and NAT

- Integrate security into DevOps teams, effectively creating a DevSecOps team structure

- Build automated deployment workflows using Amazon Web Services and native tools

- Incorporate vulnerability management, scanning, and penetration testing into cloud environment

## Target Audience of Cloud Security Architecture and Operations

### Who Should Attend

- Security architects

- Senior security engineers

- Technical security managers

- Security Operations Center SOC analysts, engineers, and managers

- CND analysts

- Individuals working to implement Continuous Diagnostics and Mitigation CDM, Continuous Security Monitoring CSM, or Network Security Monitoring NSM

## Course Outlines for Cloud Security Architecture and Operations

### Day 1

### Cloud Security Foundations

- Introduction to the Cloud and Cloud Security Basics

- Cloud Security Alliance Guidance

- Cloud Policy and Planning

- SaaS Security

- Cloud Access Security

### Day 2

### Core Security Controls for Cloud Computing

- Cloud Security: In-House versus Cloud

- A Virtualization Security Primer

- Cloud Network Security

- Instance and Image Security

- Identity and Access Management

- Data Security for the Cloud

- Application Security for the Cloud

- Provider Security: Cloud Risk Assessment

## Day 3

### Cloud Security Architecture and Design

- Cloud Security Architecture Overview

- Cloud Architecture and Security Principles

- Infrastructure and Core Component Security

- Access Controls and Compartmentalization

- Confidentiality and Data Protection

- Availability

## Day 4

### Cloud Security Automation and Orchestration

- Scripting and Automation in the Cloud

- SecDevOps Principles

- Creating Secure Cloud Workflows

- Building Automated Event Management

- Building Automated Defensive Strategies

- Tools and Tactics

- Real-World Use Cases

## Day 5

### Cloud Security - Offense and Defense

- Threats to Cloud Computing

- Vulnerability Management in the Cloud

- Cloud Pen Testing

- Intrusion Detection in the Cloud

- Cloud IR and Event Management

- Cloud Forensics

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## TRAINING CENTER

## Registration form on the Training Course:
## SEC545: Cloud Security Architecture and Operations

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