



Certified Cloud Security Professional

Architectural Concepts

Learning Objective

- ◆ Understanding of Cloud Computing and related technologies

Topics Covered

- Business Requirements
- Cloud Evolution, Vernacular, and Definitions
- Cloud Computing Roles and Responsibilities
- Cloud Computing Definitions
- Foundational Concepts of Cloud Computing
- Sensitive Data
- Virtualization
- Encryption
- Auditing and Compliance
- Cloud Service Provider Contracts

Design Requirements

Learning Objective

- ◆ Design for Cloud Security

- Business Requirements Analysis
- Boundaries of Cloud Models

- Design Principles for Protecting Sensitive Data

Data Classification

Learning Objective

- ◆ Classification of Data in Cloud

Topics Covered:

- Data Inventory and Discovery
- Jurisdictional Requirements
- Data Rights Management
- Intellectual Property Protections
- DRM Tool Traits
- Data Control
- Data Retention
- Data Audit
- Data Destruction/Disposal

Cloud Data Security

Learning Objective

- ◆ Securing Data in Cloud

Topics Covered

- Cloud Data Life Cycle
 - Create
 - Store
 - Use
 - Share

- Archive
- Destroy
- Cloud Storage Architectures
- Volume Storage: File-Based Storage and Block Storage
- Object-Based Storage
- Databases
- Content Delivery Network (CDN)
- Cloud Data Security Foundational Strategies
- Encryption
- Masking, Obfuscation, Anonymization, and Tokenization
- Security Information and Event Management
- Egress Monitoring (DLP)

Security in the Cloud

Learning Objective

◆ Cloud Security

Topics Covered

- Shared Cloud Platform Risks and Responsibilities
- Cloud Computing Risks by Deployment and Service Model
- Private Cloud
- Community Cloud
- Public Cloud
- Hybrid Cloud
- IaaS (Infrastructure as a Service)
- PaaS (Platform as a Service)
- SaaS (Software as a Service)
- Virtualization
- Cloud Attack Surface
- Threats by Deployment Model
- Countermeasure Methodology
- Disaster Recovery (DR) and Business Continuity Management (BCM)
- Cloud-Specific BIA Concerns
- Customer/Provider Shared BC/DR Responsibilities

Responsibilities in the Cloud

Learning Objective

- ◆ Responsibilities in cloud

Topics Covered

- Foundations of Managed Services
- Business Requirements
- Business Requirements: The Cloud Provider Perspective
- Shared Responsibilities by Service Type
- IaaS
- PaaS
- SaaS
- Shared Administration of OS, Middleware, or Applications
- Operating System Baseline Configuration and Management
- Shared Responsibilities: Data Access
- Customer Directly Administers Access
- Provider Administers Access on Behalf of the Customer
- Third-Party (CASB) Administers Access on Behalf of the Customer
- Lack of Physical Access
- Audits
- Shared Policy
- Shared Monitoring and Testing

Cloud Application Security

Learning Objective

◆ Understanding Application Security in Cloud

Topics Covered

- Training and Awareness
- Common Cloud Application Deployment Pitfalls
- Cloud-Secure Software Development Life Cycle (SDLC)
- ISO/IEC 27034-1 Standards for Secure Application
- Development
- Identity and Access Management (IAM)
- Identity Repositories and Directory Services
- Single Sign-On (SSO)
- Federated Identity Management
- Federation Standards
- Multi-factor Authentication
- Supplemental Security Devices
- Cloud Application Architecture
- Application Programming Interfaces
- Tenancy Separation
- Cryptography
- Sandboxing
- Application Virtualization
- Cloud Application Assurance and Validation
- Threat Modeling
- Quality of Service
- Software Security Testing
- Approved APIs
- Software Supply Chain (API) Management
- Securing Open Source Software
- Runtime Application Self-Protection (RASP)
- Secure Code Reviews
- OWASP Top 9 Coding Flaws

Operations Elements

Learning Objective

- ◆ Understanding Operations Elements

Topics Covered

- Physical/Logical Operations
- Facilities and Redundancy
- Virtualization Operations
- Storage Operations
- Physical and Logical Isolation
- Security Training and Awareness
- Training Program Categories
- Additional Training Insights
- Basic Operational Application Security
- Threat Modeling
- Application Testing Methods

Operations Management

Learning Objective

- ◆ Learn operations management

Topics Covered

- Monitoring, Capacity, and Maintenance
- Monitoring
- Maintenance
- Change and Configuration Management (CM)
- Baselines
- Deviations and Exceptions

- Roles and Process
- Business Continuity and Disaster Recovery (BC/DR)
- Primary Focus
- Continuity of Operations
- The BC/DR Plan
- The BC/DR Kit
- Relocation
- Power
- Testing

Legal and Compliance Part

Learning Objective

- ◆ Understanding Legal and Compliance

Topics Covered

- Legal Requirements and Unique Risks in the Cloud
- Environment
- Legal Concepts
- U.S. Laws
- International Laws
- Laws, Frameworks, and Standards Around
- the World
- The Difference Between Laws, Regulations and
- Standards