

# PRINCIPLES OF CLOUD COMPUTING SECURITY

*“Mitigating Cyber Risks and Safeguarding Data in the Cloud Environment”*

## Schedule

Date	Venue	Fees (Face-to-Face)
06 - 10 Jul 2026	Dubai, UAE	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

## Introduction

As organizations migrate critical data and operations to cloud platforms, ensuring robust cloud security is no longer optional—it is essential. Understanding the principles of cloud computing security enables professionals to protect sensitive assets, ensure compliance, and maintain trust in cloud-based services.

This comprehensive 5-day course equips participants with essential knowledge of cloud architectures, threat models, access controls, encryption, regulatory compliance, and incident response in cloud environments. It covers industry best practices across public, private, and hybrid cloud deployments.

## Objectives

By the end of this course, participants will be able to:

- Understand the foundational models and architecture of cloud computing
- Identify and mitigate common cloud-specific threats and vulnerabilities
- Implement secure access controls, encryption, and data protection strategies
- Evaluate vendor compliance with key security frameworks (ISO, NIST, CSA)
- Design and execute cloud incident response and recovery plans

## Why Attend

- Gain a deep understanding of cloud security risks and mitigation tactics
- Learn to evaluate and manage cloud service provider (CSP) security posture
- Develop secure architectures for SaaS, PaaS, and IaaS models
- Ensure compliance with regional and global data protection laws
- Prepare for cloud security audits and certifications (e.g., CCSK, CISM, CISSP)

## Target Audience

This program is designed for:

- IT Security Managers and Cloud Security Engineers
- Cloud Architects and System Administrators
- Compliance and Risk Officers
- IT Auditors and Cybersecurity Consultants
- Technology Leaders involved in cloud strategy and governance

## Individual Benefits

Key competencies that will be developed include:

- Threat modeling and risk assessment for cloud environments
- Cloud data encryption, key management, and secure APIs
- Identity and Access Management (IAM) implementation
- Cloud governance, policy, and compliance alignment
- Cloud breach response and business continuity planning

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved cloud security posture and incident readiness
- Reduced risk of data breaches and regulatory violations
- Enhanced cloud governance and vendor oversight
- Stronger alignment with international security standards
- Increased stakeholder trust in cloud transformation initiatives

## Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Cloud trends, threat landscape, and architectures
- Case Studies - Security incidents across SaaS/PaaS/IaaS platforms
- Workshops - Risk assessments, access control models, compliance plans
- Peer Exchange - Cloud security practices across industries
- Tools - Cloud security frameworks, IAM templates, audit checklists

## Course Outline

**Training Hours: 7:30 AM - 3:30 PM** Daily Format: 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 - 02:00

### Day 1: Cloud Computing Fundamentals and Risk Landscape

- Module 1: Cloud Service Models and Architectures (07:30 - 09:30) • SaaS, PaaS, IaaS, public/private/hybrid models
- Module 2: Shared Responsibility Model and Security Roles (09:45 - 11:15) • Client vs provider security duties
- Module 3: Common Threats and Vulnerabilities in Cloud (11:30 - 01:00) • Data breaches, misconfigurations, insider risks
- Module 4: Workshop - Cloud Risk Mapping Exercise (02:00 - 03:30) • Identify threats across cloud environments

### Day 2: Identity, Access, and Data Protection

- Module 5: Identity and Access Management (IAM) in the Cloud (07:30 - 09:30) • Authentication, roles, MFA, zero trust
- Module 6: Data Encryption and Key Management (09:45 - 11:15) • At rest, in transit, key lifecycle
- Module 7: API Security and Secure Development Practices (11:30 - 01:00) • OAuth, tokens, code security
- Module 8: Workshop - Configure a Cloud IAM Policy (02:00 - 03:30) • Role-based access control setup

### Day 3: Compliance, Legal, and Governance

- Module 9: Cloud Compliance Standards and Certifications (07:30 - 09:30) • ISO 27017/18, NIST, CSA STAR
- Module 10: Data Privacy and Regulatory Requirements (09:45 - 11:15) • GDPR, HIPAA, local data residency
- Module 11: Vendor Risk Management and SLA Security (11:30 - 01:00) • Third-party audits, contractual clauses
- Module 12: Workshop - Cloud Compliance Gap Analysis (02:00 - 03:30) • Review a cloud provider's security posture

### Day 4: Architecture and Security Design

- Module 13: Designing Secure Cloud Infrastructures (07:30 - 09:30) • Network segmentation, firewalls, VPCs
- Module 14: Secure DevOps (DevSecOps) in the Cloud (09:45 - 11:15) • CI/CD, container security, automation
- Module 15: Security Monitoring and Logging (11:30 - 01:00) • SIEM, anomaly detection, alerting
- Module 16: Workshop - Design a Secure Cloud Architecture (02:00 - 03:30) • Best practices walkthrough

### Day 5: Incident Response and Business Continuity

- Module 17: Cloud Incident Detection and Response (07:30 - 09:30) • Runbooks, investigation, containment
- Module 18: Disaster Recovery and Business Continuity Planning (09:45 - 11:15) • RTO/RPO, replication, backups
- Module 19: Cloud Security Operations Center (CSOC) Integration (11:30 - 01:00) • Centralized oversight and automation
- Module 20: Final Workshop - Simulate a Cloud Security Breach Response (02:00 - 03:30) • Real-world scenario execution

## Certification

Participants will receive a Certificate of Completion in Principles of Cloud Computing Security, validating their expertise in securing cloud environments, protecting data, and ensuring regulatory compliance in cloud-based infrastructure and services.

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