Cloud Computing

Equip yourself and your organisation to best meet the unique opportunities and challenges of **Cloud Computing** with ALC's industry-leading training portfolio.

1. CCSP® Certified Cloud Security Professional
2. Cloud Computing Foundation
3. Architecting on Amazon AWS
4. Architecting Microsoft Azure Solutions
5. Office 365 Security & Compliance
6. Office 365 Foundation
7. Cloud Computing Overview

VIEW COURSE INFORMATION >

NUMBER ONE TECHNOLOGY TRAINING PROVIDER

Cloud Computing

www.alctraining.co.nz

CCSP® Certified Cloud Security Professional

Duration: 5 Days

The single most comprehensive training course for anyone concerned with Cloud Security.

Attackers never rest and along with all the traditional threats targeting internal networks and systems, an entirely new variety specifically targeting the cloud has emerged.

As more organisations adopt cloud-based systems, new complexities and challenges surface and the risks increase. Organisations need cloud security professionals with the requisite knowledge, skills and abilities to be able to audit, assess and secure cloud infrastructures.

In this 5-day course you will gain a thorough understanding of the information security risks and mitigation strategies critical to data security in the cloud. In the process the course covers the six knowledge domains of the CCSP Certified Cloud Security Professional qualification, developed by (ISC)2 and the Cloud Security Alliance.

Learning Outcomes

This course teaches you how to:

- Understand Cloud Computing concepts and definitions based on ISO/IEC 17788 and NIST standards
- Indentify Cloud Security Alliance's Treacherous Twelve
- Understand various service delivery models, frameworks and hypervisor threats
- Be able to recommend appropriate controls for protecting data at rest and data in motion
- Be able to recommend risk mitigation strategies
- Design identity and access management solutions

Who Should Attend

The course is designed for:

- Enterprise architects
- Systems engineers
- Security consultants
- Security managers
- Security administrators
- Security architects
- Security engineers
- Systems architects

Course Contents

1. Introductions and Course Overview

2. Architectural Concepts and Designs Requirements

- Important cloud computing concepts
- Cloud reference architecture
- Security concepts relevant to cloud computing
- Security design principles of cloud computing

3. Cloud Data Security

- Design and implementation of cloud data storage architectures
- Design and application of data security strategies
- Implementation of data discovery and classification technologies
- Implementation of data protection for personally identifiable information (PII)
- Design and implementation of Data Rights Management
- Design and implementation of data retention, deletion and archiving policies
- Auditability, traceability and accountability of data events

4. Cloud Platform and Infrastructure Security

- Comprehend cloud infrastructure components
- Analyse risks associated to cloud infrastructure
- Design and plan security controls
- Plan disaster recovery and business continuity management

5. Cloud Application Security

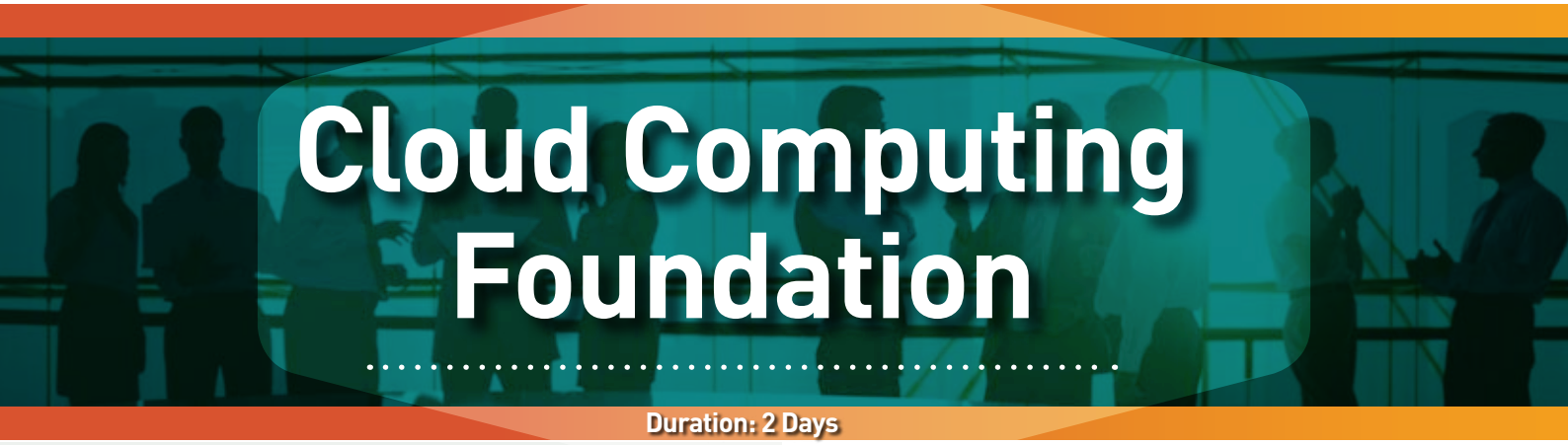
- Training and awareness for application security
- Cloud software assurance and validation
- Use of verified secure software
- Understand and apply the Software Development Life-Cycle (SDLC) process
- Comprehend the specifics of Cloud Application Architecture
- Design appropriate Identity and Access Management (IAM) solutions

6. Operations

- Support the planning process for the data centre design
- Build, run and manage physical infrastructure for cloud environment
- Build, run and manage physical infrastructure for cloud environment within an ITIL framework, aligned to ISO/IEC 20000 standard.
- Ensure compliance with various regulations and control requirements
- Conduct risk assessments for logical and physical infrastructure
- Collection, acquisition and preservation of digital evidence

7. Legal and Compliance

- Legal requirements and unique risks within the cloud environment
- Privacy issues, including jurisdictional variation
- The audit process and methodologies adapted for the cloud environment
- Implications of cloud to enterprise risk management
- Outsourcing and cloud contract design



Cloud Computing Foundation

Duration: 2 Days

The essential course for anyone who wants a solid and accurate understanding of the fundamentals of Cloud Computing.

Cloud computing offers a new way to gain on-demand, elastic capabilities, avoiding the need for significant capital investment whilst promoting a culture of innovation through a 'fail-fast' paradigm.

Clients benefit from a pay-as-you-go model, coupled with intuitive self-service capabilities providing unprecedented speed-to-market and clear cost transparencies with market leaders such as Microsoft, Amazon and Google.

Despite the prevalence of cloud computing, there is a still a lack of clarity around cloud computing standards and terminology.

This 2-day course has been designed to ensure that participants get a solid and accurate understanding of the fundamentals of cloud computing. The course also provides preparation for the **Cloud Computing Foundation** certificate exam.

Learning Outcomes

After attending this course participants will be well prepared to:

- Understand the concepts, characteristics, delivery models and benefits of cloud computing
- Understand the key security and compliance cloud computing challenges
- Understand the key technical and organis ation cloud challenges
- Understand the characteristics, use cases, and choices available of Public Cloud Computing
- Understand the characteristics, use cases, and choices available of Private Cloud Computing
- Understand the characteristics, use cases, and choices available of Hybrid Cloud Computing
- Understand the approach to creating an action plan for a cloud pilot project.

Course Contents

1. Introduction to Cloud Computing
- Overview of Cloud
- Benefits of Cloud
- Five Cloud Characteristics (NIST)
- Three Cloud Service Models (NIST)
- Four Cloud Deployment Models (NIST)

2. Cloud Security & Compliance Challenges
- Understanding of security, compliance and risk
- Roles and responsibilities between cloud consumers and cloud providers
- Assessing and understanding cloud provider security
- Overview and usage of the Cloud Security Alliance (CSA) resources, such as the cloud controls matrix (CCM) and the consensus assessment initiative (CAI)
- Understanding of data responsibility and jurisdiction
- The role and structure of service level agreements (SLAs)

3. Cloud Technical and Organisational Challenges
- Overview of cloud application design considerations
- Understand the implications of big data
- Understand the cloud application lifecycle
- Describe the key principles of cloud automation and testing
- Harnessing the power of shadow IT

4. Public Cloud Computing
- Overview of public cloud, pros, cons and use cases
- Broad understanding of Microsoft, Amazon and Google cloud services scope

5. Private Cloud Computing
- Overview of private cloud, pros, cons and use cases
- Broad understanding of cloud technology options

6. Hybrid Cloud Computing
- Overview of hybrid cloud, pros, cons and use cases
- Broad understanding of cloud technology options

7. Creating a Cloud Action Plan
- Understanding the scope and purpose of a cloud action plan
- Selecting a cloud partner and implementing a successful pilot
- Broad understanding of stakeholder management to maximise cloud deployment success.

Who Should Attend

The course is designed for:

- Individuals and organisations seeking a foundational understanding of cloud computing
- Non-technical staff that wish to learn more about the basics of cloud computing, from backgrounds such as finance, legal, marketing, procurement and sales
- Staff involved in cloud computing initiatives or projects, such as project managers, business analysts, architects, engineers and developers
- Managers responsible for staff working on cloud computing initiatives or projects

Architecting on Amazon AWS

Duration: 3 Days

Best practices for architecting IT infrastructure on Amazon Web Services.

This unique 3-day course covers the fundamentals of building IT infrastructure on AWS. The course is designed to teach solution architects how to optimise the use of the AWS Cloud by understanding AWS services and how these services fit into cloud-based solutions.

Because architectural solutions may differ depending on the industry, the type of applications deployed and the size of business, this course emphasises AWS Cloud best practices and recommended design patterns to help participants think through the process of architecting optimal IT solutions on AWS.

A special feature is that AWS best practices and recommended design patterns are aligned to key concepts and practical approaches found in The Open Group Architecture Framework and demonstrated by using the Avolution Abacus enterprise modelling tool.

Case studies are featured throughout the course to showcase how some AWS customers have designed their infrastructures and the strategies and services they implemented.

The course provides strong preparation for the AWS Certified Solutions Architect Associate exam.

Who Should Attend

- Individuals and organisations seeking an advanced understanding of Amazon Web Services.
- Managers responsible for staff working on Amazon Web Services initiatives or projects.
- Technical staff involved in Amazon Web Services initiatives or projects, such as technical project managers, business analysts, security architects, enterprise architects, solution architects and infrastructure architects.

Pre-Requisites:

Candidates should ideally have at least 2 years of IT experience with at least:

- ***1 year working with cloud solutions and services.***
- ***Experience with architecting, designing, implementing or administering cloud solutions.***
- ***Have access to an AWS account to perform all the lab exercises.***
- ***Awareness of The Open Group Architecture Framework (TOGAF) 9.1.***

Course Contents

1. Introduction to Cloud Computing

- Overview of Cloud
- Benefits of Cloud
- Five Cloud Characteristics (NIST)
- Three Cloud Service Models (NIST)
- Four Cloud Deployment Models (NIST)
- Introduction to The Open Group Architecture Framework (TOGAF)

2. Introduction to Amazon Web Services

- Overview of the IaaS and SaaS portal features and relevant AWS services.
- Overview of AWS key security features.

3. Architecting your Solution using TOGAF

- Deeper dive into the following AWS services:
  - i. Route 53
  - ii. Elastic Load Balancing
  - iii. EC2 & EC2 Systems Manager
  - iv. Virtual Private Cloud (VPC)
  - v. S3, Elastic Block Storage and Elastic File Storage
  - vi. CloudFront
  - vii. Glacier, Snowball and SnowMobile
  - viii. RDS
  - ix. Direct Connect
  - x. CloudWatch
  - xi. CloudFormation
  - xii. Identity & Access Management
  - xiii. CloudHSM
  - xiv. Simple Queue Service
  - xv. Simple Notification & Email Service
  - xvi. Directory Services
- Hands-On Labs
- Baseline discovery techniques aligned to TOGAF.
- Future state architectures aligned to TOGAF.
- Architecting public and hybrid cloud solutions using AWS components.

4. Migrating Applications and Data

- Deeper dive on core application and database services.
- Hands-On Labs
- Baseline discovery techniques aligned to TOGAF.
- Future state architectures aligned to TOGAF.
- Common tools for data migration.
- Event-Driven Scaling
- Automation & Decoupling

5. The Well Architected Framework

- The Five Pillars
- Alignment to TOGAF.

6. Design Patters and Use Cases.

- Using the AWS Architecture Centre.
- Quick Starts
- Key Reference Architectures:
  - i. Web Application Hosting
  - ii. Batch Processing
  - iii. Fault Tolerance and High Availability
  - iv. Content and Media Serving
- Large Scale Design Patterns

Architecting Microsoft Azure Solutions

Duration: 3 Days

Architecting Microsoft Azure Solutions covers the basic building-blocks of IT infrastructure on Microsoft Azure.

The course is designed to mentor solution architects on how to optimise the use of the Azure Cloud by understanding key Azure services and ensuring best-fit as part of a holistic architecture to deliver business outcomes.

This 3-day course is unique to ALC, in that Azure best practices and recommended design patterns are aligned to key concepts and practical approaches found in The Open Group Architecture Framework and demonstrated by using the Avolution Abacus enterprise modelling tool.

By presenting case studies throughout the course that showcase how Azure can be deployed for small, medium and large customers, candidates are able to gain a clear understanding of the key challenges and range of solutions that allow their employers and key stakeholders to deliver business value. This course provides a strong foundation for candidates wishing to sit the Architecting Microsoft Azure Solution exam.

Who Should Attend

The course is designed for:

- Individuals and organisations seeking an advanced understanding of Microsoft Azure services
- Individuals and organisations seeking an advanced understanding of Microsoft Azure services
- Managers responsible for staff are working on Microsoft Services initiatives or projects
- Technical staff involved in Microsoft Azure initiatives or projects, such as technical project managers, business analysts, security architects, enterprise architects, solution architects and infrastructure architects.

Pre-Requisites:

Candidates should ideally have at least 2 years of IT experience with at least:

- ***1 year working with Microsoft Azure solutions and services***
- ***Experience with architecting, designing, implementing or administering cloud solutions***
- ***Have access to an Azure account to perform all the lab exercises***
- ***A sound knowledge of Cloud Computing as covered in ALC's Cloud Computing Foundation course***

Course Contents

1. Introduction to Cloud Computing

- Overview of Cloud
- Benefits of Cloud
- Five Cloud Characteristics (NIST)
- Three Cloud Service Models (NIST)
- Four Cloud Deployment Models (NIST)
- Introduction to The Open Group Architecture Framework (TOGAF)

2. Introduction to Azure

- Overview or terminology and core concepts
- Overview of the IaaS and SaaS portal features and relevant Azure services
- Overview of Azure key security features
- Understanding performance, resiliency, scalability and security

3. Architecting your Solution using TOGAF

- Deeper dive into the following Azure services:
  - i. Azure Resource Manager
  - ii. DNS, DHCP, IP Addressing, Security Groups and User Defined Routes
  - iii. Load Balancer, Traffic Manager & Application Gateway
  - iv. Virtual Machines
  - v. Virtual Network
  - vi. Blob, Queue, File and Disk Storage
  - vii. Content Delivery Network
  - viii. Backup, Import / Export
  - ix. SQL
  - x. ExpressRoute
  - xi. Monitor & Application Insights
  - xii. Automation
  - xiii. Active Directory
  - xiv. KeyVault
  - xv. Queue Storage
  - xvi. Directory Services
- Hands-On Labs
- Baseline discovery techniques aligned to TOGAF
- Future state architectures aligned to TOGAF
- Architecting public and hybrid cloud solutions using Azure components.

4. Designing App Service Web Apps, Application Storage and Data Access

- Deeper dive into applications and non-relational datastores
- Hands-On Labs
- Baseline discovery techniques aligned to TOGAF
- Future state architectures aligned to TOGAF
- Common tools for data migration
- Hybrid Cloud scenarios
- Event-Driven Scaling

5. Designing an Advanced Application

- High Performance Computing (HPC)
- Deeper dive into the advanced application services
- Alignment to TOGAF
- Hybrid Cloud scenarios.6. Designing a Management, Monitoring & Business Continuity
- Overview of the Operations Management Suite Services
- Overview of the Application Insights Services
- Third-party monitoring
- Deeper dive into Hyper-V Replica and Azure Site Recovery
- Using PowerShell Automation
- Evaluating the use of DevOps Tools.

Office 365 Security & Compliance

Duration: 2 Days

Unique 2-day course outlining the key security and compliance features of the Office 365 platform in the Office 365 Security & Compliance centre.

This course provides a detailed understanding of all the key Office 365, Azure Information Protection and Microsoft Active Services, across business and enterprise plans, including key integrations and security considerations that will foster employee collaboration whilst protecting business information and data.

Who Should Attend

The course is designed for:

- Individuals and organisations seeking an advanced understanding of Office 365 and Azure security services and features
- Managers responsible for staff working on Office 365 and Azure security initiatives or projects
- Technical staff involved in Office 365 and Azure initiatives or projects, such as technical project managers, business analysts, security architects, enterprise architects, solution architects and infrastructure architects.

Course Contents

1. Understanding Cloud Computing

- Overview of cloud computing benefits, characteristics, service models and deployment models
- Understanding cloud security service definitions, requirements and policies
- Demonstrating knowledge within key security and legal concepts relating to cloud computing

2. Overview of Office 365 Services

- Analyse and understand Office 365 readiness
- Evaluate subscription plans and options
- Exploring and navigating the management portal
- Describe the function of the following Office 365 Business and Enterprise plan services:
  - i. Exchange Online
  - ii. SharePoint Online
  - iii. OneDrive
  - iv. Skype for Business Online
  - v. Yammer
  - vi. Workplace Analytics
  - vii. Microsoft InTune
  - viii. PowerBI
  - ix. Project Online
  - x. Microsoft Dynamics 365
  - xi. Office 365 Pro Plus Apps
  - xii. Planner
  - xiii. Sway
  - xiv. Office 365 Video
  - xv. Microsoft Teams
  - xvi. Flow
- Overview of the Office 365 fast track service.

3. Overview of the Office 365 Security & Compliance Centre

- Understanding the information available in the navigation pane options
- Granting permissions for compliance tasks
- Viewing and managing alert policies and alerts
- Describe the function and usage of the following features:
  - i. Threat management
  - ii. Data governance
  - iii. Search & investigation
  - iv. Reports
  - v. Service assurance

4. Understanding and Using the Office 365 Security & Compliance Centre

- Features and benefits of using the following services:
  - i. Email Archiving
  - ii. Anti-spam / Anti-Malware Protection
  - iii. Data Loss Prevention
  - iv. Device Management
  - v. eDiscovery
  - vi. Preservation Policies
  - vii. Import Tools for Exchange and SharePoint
  - viii. Auditing
  - ix. Encryption
  - x. In-Place Hold and Litigation Hold in Exchange Online
  - xi. Information Management Policies
  - xii. Information Rights Management

5. Managing Office 365 with Windows PowerShell

- Getting Started with Office 365 PowerShell
- Manage user accounts and licences with Office 365 PowerShell
- Using PowerShell for SharePoint and Exchange Online services
- Understanding and using additional PowerShell cmdlets and resources.

6. Overview of Azure Security Services

- Understanding the key capabilities, reference architectures and benefits of Azure Active Directory Services
- Evaluate free, basic and premium subscription plans and options
- Outline of the integration features between Office 365 and Azure Active Directory
- Understanding the key capabilities and benefits of Azure Information Protection and Rights Management Services
- Outline of the integration features between Office 365 and Azure Information Protection Services.

Prerequisites:
Candidates should ideally have at least 2 years of IT experience with at least:

- ***1 year working with Office 365 solutions and services***
- ***Experience with architecting, designing, implementing or administering Active Directory and Windows Server 2012***

Office 365 Foundation

Duration: 2 Days

Complete 2-day course covering Office 365 fundamentals and services.

Microsoft Office 365 is revolutionising the digital workplace through the commoditisation of core digital services that all organisations rely on to conduct day-to-day business activities. Offered via a Software-As-A-Service model, Office 365 empowers organisations to retain and grow employee talent by providing anywhere, anytime any device access with collaboration and security protection services to colleagues, partners and clients.

This 2-day course provides a comprehensive coverage of Office 365 fundamentals and services. Candidates will build an understanding of all the key Office 365 services as well as broad capabilities of the Microsoft Azure platform.

Some familiarity with Office 365 desktop apps is required.

Learning Outcomes

After attending the course participants will:

- Understand Cloud Computing concepts and definitions based on the ISO/IEC 17788 and NIST standards
- Understand and articulate the key features and benefits for all the key services on the Office 365 platform
- Gain knowledge around how key security and legal concepts apply to Office 365
- Be aware of the organisational challenges when moving to Office 365
- Form a basic understanding of the Office 365 subscription plans and be confident in locating further information
- Gain awareness and understanding of how the Office 365 fast track service can be utilised to reduce costs and improve agility
- Be aware of the key concepts relating to Microsoft Azure
- Gain a good understanding of the Microsoft InTune product and how it can manage mobile devices
- Gain a good insight into the types of challenges that end-users can face when using Office 365 product.

Pre-Requisites:
It is assumed that participants have a working knowledge of Office 365 along with some technical knowledge.

Course Contents

1. Understanding Cloud Computing

- Overview of cloud computing benefits, characteristics, service models and deployment models
- Understanding cloud security service definitions, requirements and policies
- Understanding cloud availability and release management best practices.

2. Enabling Microsoft Cloud Services

- Analyse and understand Office 365 readiness
- Enabling Microsoft Office 365 and Microsoft InTune
- Overview of subscription plans
- Describe the function of the following Office 365 services:
  - i. Exchange Online
  - ii. SharePoint Online
  - iii. OneDrive
  - iv. Skype for Business Online
  - v. Yammer
  - vi. Workplace Analytics
  - vii. Microsoft InTune
  - viii. PowerBI
  - ix. Project Online
  - x. Microsoft Dynamics 365
  - xi. Office 365 Pro Plus Apps
  - xii. Planner
  - xiii. Sway
  - xiv. Office 365 Video
  - xv. Microsoft Teams
  - xvi. Flow
- Overview of the Office 365 fast track service
- Understanding Microsoft Azure.

3. Administering Office 365 and Microsoft InTune

- Administering Office 365
- Administering Microsoft InTune
- Overview of Windows PowerShell

4. Using and Configuring Microsoft Cloud Services

- Overview of Active Directory
- Deeper understanding and usage of key Office 365 services:
  - i. Exchange Online
  - ii. SharePoint Online
  - iii. OneDrive
  - iv. Skype for Business Online
  - v. Microsoft Intune

5. Supporting Cloud Users

- Resolving common issues related to:
  - i. Installing Office Applications
  - ii. Office Sign In
  - iii. Emails & Calendaring
  - iv. SharePoint Online
  - v. OneDrive
  - vi. Skype for Business Online

Who Should Attend

The course is intended for:

- Individuals and organisations seeking a sound understanding of cloud computing
- Technical staff who wish to validate fundamental knowledge needed to begin building a career using Microsoft technologies. This program provides an appropriate entry point to a future career in technology.
- Technical staff involved in Office 365 initiatives or projects, such as project managers, business analysts, architects, engineers and developers
- Managers responsible for staff working on cloud computing initiatives or projects.

Cloud Computing Overview

A concise one-day introduction to Cloud for executives and anyone who wants to get rapidly up-to-speed.

Do you want to improve your knowledge of cloud computing concepts and better understand the benefits that cloud can bring to your growing business?

Cloud computing offers a new way to gain on-demand, elastic capabilities, avoiding the need for significant capital investment, whilst promoting a culture of innovation through a 'fail-fast' paradigm. Clients benefit from a pay-as-you-go model, coupled with intuitive self-service capabilities, providing unprecedented speed-to-market and clear cost transparencies with market leaders such as Microsoft, Amazon and Google.

This 1-day course, outlining the essential definitions and business benefits of cloud computing, has been specially tailored to meet the needs of busy executives.

Learning Outcomes

The key objectives of this course are for participants to be able to:

- Recall terms and key facts about the concepts, characteristics, delivery models and benefits of cloud computing
- Understand the concepts, characteristics, delivery models and benefits of cloud computing
- Recall terms and concepts about the security and compliance cloud computing challenges
- Understanding the key security and compliance cloud computing challenges
- Recall terms and concepts about the technical and organization cloud computing challenges
- Understanding the key technical and organisation cloud challenges
- Understanding the characteristics of public, private and hybrid cloud deployment models.

1. Introduction to Cloud Computing

- Overview of Cloud
- Benefits of Cloud
- Five Cloud Characteristics (NIST)
- Three Cloud Service Models (NIST)
- Four Cloud Deployment Models (NIST)

2. Cloud Security & Compliance Challenges

- Understanding of security, compliance and risk
- Roles and responsibilities between cloud consumers and cloud providers
- Assessing and understanding cloud provider security
- Overview and usage of the Cloud Security Alliance (CSA) resources, such as the cloud controls matrix (CCM) and the consensus assessment initiative (CAI)
- Understanding of data responsibility and jurisdiction
- The role and structure of service level agreements (SLAs)

3. Cloud Technical and Organisational Challenges

- Overview of cloud application design considerations
- Understand the implications of big data
- Understand the cloud application lifecycle
- Describe the key principles of cloud automation and testing
- Harnessing the power of shadow IT

4. Cloud Computing Deployment Models

- Overview of public, private and hybrid cloud deployment models
- Broad understanding of Microsoft, Amazon and Google cloud services scope

Who Should Attend

The course is designed for:

- Managers responsible for cloud computing initiatives or projects
- Non-technical staff from backgrounds such as finance, legal, marketing, procurement and sales
- Individuals and organisations seeking a concise run-down on cloud computing.

Information Security Courses Available from ALC

- Cyber Security Foundation®
- Cyber Security Foundation+Practitioner
- CISSP® Certified Information Systems Security Professional
- CCSP® Certified Cloud Security Professional
- CISM® Certified Information Security Manager
- CISA® Certified Information Systems Auditor
- CRISC® Certified in Risk and Information Systems Control
- SABSA® Foundation
- SABSA® Advanced A1: Risk, Assurance & Governance
- SABSA® Advanced A3: Architecture & Design
- SABSA® Advanced A4: Incident, Monitoring & Investigations
- ISO/IEC 27001 - ISMS Lead Implementer
- ISO/IEC 27001 - ISMS Lead Auditor
- ISO/IEC 27001:2013 Foundation
- Fundamentals of Incident Handling
- Advanced Incident Handling
- Creating a Computer Security Incident Response Team
- Managing a Computer Security Incident Response Team
- Digital Evidence Fundamentals
- Digital Forensics Practitioner
- Architecting Secure Cloud
- Information Security for Executives
- Security Metrics: the Key to Effective Security Management
- Securing Your TOGAF® Environment

FOR MORE DETAILS CONTACT
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