



# **Certified Cloud Computing Associate (CCCA)**

## **Course Outline**

**[www.globalicttraining.com](http://www.globalicttraining.com)**

## **DURATION**

2 days/16 Hours

## **INTRODUCTION & OVERVIEW**

The certified cloud computing associate program will impart participant an in-depth knowledge of cloud computing – architectures, technologies, application development on clouds, emerging cloud standards, and performance monitoring and evaluation. The program will provide participants essential skills to examine cloud computing as well the technologies and framework that support cloud computing, the ability to apply cloud computing in different application contexts, and the ability to review and recommend suitability of, as well as implications of, cloud computing for a given application considering several technical and non-technical aspects.

Participants will gain requisite skills to review in-depth a variety of currently available cloud computing options, satisfactorily address the issue and challenges, develop cloud-based applications, offer cloud computing services, and deploy applications in clouds, addressing the cloud challenges. In addition, participants will develop the following skills:

- Develop an understanding of business aspects of cloud computing including decisions/issues in its successful adoption.
- Understand the impact and changes of cloud computing on IT Service Management.
- Identify the possible risks involved in cloud computing and the risk mitigation measures.

## **TARGET AUDIENCE**

- Cloud Infrastructure Engineer
- Cloud Operations Engineer
- Cloud Operations Manager
- Information / Database Architect - Cloud
- Infrastructure Architect – Cloud
- IHL Students

## **COURSE OUTLINE**

### **Cloud Computing: Concepts and Overview**

- History of Computing
- Introduction: Cloud Computing
- Hype Cycle: Cloud
- The Beginning of Cloud Computing & Evolution

### **A Closer Look: Cloud Computing**

- Definition & Concepts
- Five Characteristics: NIST
- The Cloud Cube model
- Benefits & Demerits of cloud computing
- Foundation & Precursors: Cloud Computing
  - Utility Computing
  - Grid Computing - Autonomic computing
  - Platform Virtualization
  - Service Oriented Architectures

## **Cloud Computing: Service & Deployment Models**

- Cloud: Service Models
  - SaaS
  - PaaS
  - IaaS
  - Other significant service models
  - Market Trends and Abstract Interaction Dynamics for XaaS
- The Cloud Reference Model
- Scope of Control: Service Models
- Deployment Models
  - Private cloud
  - Community cloud
  - Public cloud
  - Hybrid cloud    Cloud Computing: The need
  - Implications for business
  - Impact of cloud on business operations
- Open Cloud Manifesto
- Cloud Washing

## **Cloud Architecture**

- Architecture Basics
- SPI Model
- High Level Architectural Approach
- Cloud Reference Model
- A zoomed architecture: Case Study
- Cloud Storage - Pay-per-use model

- Software agnostic
- Reservation-less provisioning
- Provider owned
- Scope of Control: Service Models
- SaaS, PaaS and IaaS in Detail

### **Cloud Service Providers & Services**

- Scope for Cloud Service Providers
- Cloud Computing Taxonomy
- Cloud Overview
  - Microsoft
  - Amazon
  - Google
  - Others
  - Comparison of Service Providers
- Common Questions for choosing Service Provider
- Open Source Cloud Platforms
- SaaS, PaaS and IaaS Service Providers in Details

### **Business Aspects of Cloud Computing & Adoption**

- Cloud Adoption Drivers
- Creative Destruction Theory
- A business strategy based on agility
- Potential Candidates for Cloud Computing
- Key Characteristics: Cloud Adoption
- Service Providers: What to look for?
- Business Aspects
  - Cloud-based Business network
  - Implications of the transition to Cloud Computing

## **Cloud Application deployment considerations**

- Cloud Computing Problems
- Loss of Control in the Cloud
- Taxonomy of Fear
- Seven Cloud Risks – Gartner
- Threats and vulnerabilities
- Common networked system attacks
- Cloud Service Provider Risks
- Privacy Issues: Cloud Computing
  - Data life cycle
  - Storage
  - Retention
  - Destruction
  - Auditing, monitoring and risk management
  - Privacy breaches
  - Who is responsible for protecting privacy?
- Security in Cloud
  - Security Breaches
  - Security management
  - Multi Level Cloud Security
  - Stakeholder Perspective
  - Case Study
- Information Classification
  - Integrity of information stored in cloud
- Amazon EC2 outage

## **Cloud Computing: Economics and ROI**

- New Economics of IT
- Measuring the Cloud's value

- The Ten laws of Cloudeconomics
- The Ten laws of Behavioral Cloudeconomics
- Cost of Cloud Computing
- Avoiding capital expenditures
- Total cost of ownership (TCO)
- Identification of Company's Suitability for Cloud
- Cloud ROI

### **Case Studies: Cloud Computing**

- SaaS Case Study
- PaaS Case Study
- IaaS Case Study

### **WRITTEN EXAMINATION**

As part of the written examination, participant will be assessed individually on the last day of the training for their understanding of the subject matter and ability to evaluate, choose and apply them in specific context and also the ability to identify and manage risks.

This written examination will primarily consist of 20 multiple choice questions spanning various aspects as covered in the program. It is an individual, competency-based assessment.