



CLOUD
TECHNOLOGY
ASSOCIATE

Syllabus



CLOUD
CREDENTIAL
COUNCIL



Component	Description
Course Title	Cloud Technology Associate (CTA)
Course Duration (classroom course)	3 days
Audience Profile	Suitable for IT professionals with: <ul style="list-style-type: none">• 6+ months of experience in Internet / web technologies• Some basic knowledge of storage, servers and network technologies (preferred)

Course Introduction

The CCC Cloud Technology Associate™ certification demonstrates that candidates have the basic skill set and knowledge associated with cloud and virtualization. The certification is a critical step to advance your career as organizations look for qualified Cloud Technology Associates.

The certification allows IT professionals to operate effectively in a cloud environment as they can demonstrate an understanding of the key concepts and relevant terminology. It furthermore provides the foundation needed in order to successfully complete subsequent vendor-specific training/certification programs and also provides a baseline for the subsequent CCC Professional level certifications.

Expected Audience:

- IT Specialists (Analysts, Developers, Architects, Testing, etc.)
- IT Administrators (System, Database, etc.)
- IT Provisioning and Maintenance (Hardware, Network, Storage, etc.)
- IT Managers
- IT Project Managers and
- Others (Sales, Purchase, Audit, Legal, etc.)

Course Objectives

Upon successful completion of this course, participants will be able to:

- Identify the fundamental concepts of cloud computing and virtualization including business benefits of cloud computing and technical aspects (high-level) of virtualization
- Identify the technical challenges and the mitigation measures involved in cloud computing and virtualization
- Identify the characteristics of cloud applications
- Define cloud security and identify the risks involved in cloud computing as well as the risk mitigation measures
- List the factors involved for implementation of different cloud models



Course Level

The course should include the following:

- Presentation material and Exercise activities
- Hands-on labs where possible; else a couple of demos to be shown
- Case studies, recent events as examples
- Every concept explanation to be followed by suitable example(s)
- Reviews and Quiz(s) at the end of each module
- Scenario based exercises
- Mock exam (preparation for certification)

Weightage

Requisite virtualization basics, terminologies and concepts are seamlessly blended with cloud aspects and benefits and other related technologies into a holistic integrated course.

Module Objectives

Module 1: Course Introduction

At the end of this module, you will be able to:

- Identify the fundamental concepts of cloud computing and virtualization. This will also include business benefits of cloud computing and technical aspects (high-level) of virtualization
- Identify the technical challenges and the mitigation measures involved in cloud computing and virtualization
- Identify the characteristics of cloud applications
- List the steps to successfully adopt cloud services
- Define cloud security and identify the risks involved in cloud computing as well as the risk mitigation measures
- List the factors involved for implementation of different cloud models

Module 2: Introduction to Cloud Services Model

At the end of this module, you will be able to:

- List the challenges and concerns for traditional computing methodology
- Define NIST's, Gartner's and ISO's definition of cloud computing
- Explain the evolution of cloud computing and list some early examples
- List cloud's essential characteristics, service models and deployment models
- Define NIST's Cloud Taxonomy (service providers, consumers, auditors, carriers, brokers), service provider vs consumer responsibility model
- Distinguish between traditional and cloud computing models in terms of business value and challenges or limitations

- List cloud computing benefits and challenges
- Identify types of application profiles best or least suited for cloud computing
- List various common cloud terminologies with examples

Module 3: Introduction to Virtualization: The Backbone Technology of Cloud Computing

At the end of this module, you will be able to:

- Understand the definition, history, and fundamental concepts of virtualization including the relationship between virtualization and cloud computing
- Understand the benefits, challenges, risks, and suitability of virtualization to organizations
- Understand what a hypervisor is, its role in virtualization, and different types of hypervisors
- Identify leading hypervisor manufacturers and service providers who use them
- Understand various virtualization terminologies
- Understand briefly about various types of virtualization (server, storage, network, desktop)

Module 4: Overview of Cloud Technologies and Applications

At the end of this module, you will be able to:

- Understand the concepts, benefits, challenges and strategies of “Bring Your Own Device (BYOD)” at the work place including Mobile Device Management (MDM) and Enterprise Mobility Management (EMM)
- Understand the concepts, components, benefits, challenges along with a few scenarios of “Software Defined Networking (SDN)”, and its growth in the coming years
- Understand the concepts, approach and architecture of “Network Functions Virtualization (NFV)” and its relation to Software Defined Networking (SDN)
- Understand concepts of Big Data and Big Data Analytics as well as non-relational databases (NoSQL, NewSQL), their characteristics and types
- Understand what is Internet of Things (IoT) and its types

Module 5: Cloud Security, Risk, Compliance and Governance

At the end of this module, you will be able to:

- Understand general definitions of IT security, risk and risk management
- Understand the role of IT compliance and audits
- Understand the impact of cloud essential characteristics on business value and risk
- Understand the impact of cloud service models on business value and risk
- Understand the impact of cloud deployment models on business value and risk
- Identify common cloud attack vectors and remediating controls.



Module 6: Preparing for Cloud Adoption

At the end of this module, you will be able to:

- Explain typical steps that lead to successful adoption of cloud computing services
- Describe solution architectures for various service and deployment models
- Understand organizational capabilities that are relevant for realizing cloud benefits
- Understand the roles and capabilities of cloud computing providers, vendors and dependencies on vendors
- Describe multiple approaches for migrating applications

Module 7: Cloud Service Management

At the end of this module, you will be able to:

- Understand CSM fundamentals
- Define CSM reference architecture, lifecycle, and actors
- Understand CSM business support
- Understand CSM provisioning and configuration
- Understand CSM portability and interoperability
- Describe CSM products

Exam Details

Aspect	Details
Exam Type	Multiple Choice and Fill in the blanks
Number of Questions	40
Duration	60 minutes
Provisions for additional time relating to language	15 minutes of additional time for non-native speakers
Prerequisite	There are no formal prerequisites. However, it is recommended that you attain the Cloud Technology Associate Certification (or its equivalent) from the Cloud Credential Council, and/or that you are conversant with cloud concepts and vocabulary.
Supervised (Proctored)	Yes
Open Book	No
Pass Score	65%
Delivery	Online