



CLOUD  
CREDENTIAL  
COUNCIL



CLOUD  
TECHNOLOGY  
ASSOCIATE

# CLOUD TECHNOLOGY ASSOCIATE

## Syllabus

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COMPONENT	DESCRIPTION
Course Title	Cloud Technology Associate (CTA)
Course Duration (classroom course)	2 days
Audience Profile	Suitable for IT professionals with: <ul style="list-style-type: none"> <li>• 6+ months of experience in Internet/Web technologies</li> <li>• Some basic knowledge of storage, servers and network technologies (preferred)</li> </ul>

## COURSE INTRODUCTION

The CCC Cloud Technology Associate™ certification demonstrates that participants have the basic skill set and knowledge associated with cloud and virtualization. This 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 cloud key concepts and its relevant terminology. Furthermore, it provides the foundation needed to successfully complete subsequent vendor-specific training/certification programs and also provides a baseline for the subsequent CCC Professional level certifications.

## TARGET 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.)

## QUALIFICATION OBJECTIVES

When you have acquired the required knowledge from this course, 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.
- Understand the latest digitization trends associated with cloud computing.
- Define cloud security and identify the risks involved in cloud computing as well as the risk mitigation measures.
- List the steps to successfully adopt cloud services.

## COURSE LEVEL

The course should include the following:

- Presentation material
- Every concept explanation to be followed by suitable example(s)
- Module End Questions at the end of each module
- Activities based on concepts explained in each module
- Mock exam (preparation for certification)

## CERTIFICATION REQUIREMENTS

You will receive the required certification from CCC on successful completion of the Cloud Technology Associate exam.

## WEIGHTAGE

Requisite virtualization basics, terminologies and concepts are seamlessly blended with cloud aspects and benefits and latest digitization trends/ 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.
- Understand the latest digitization trends associated with cloud computing.
- Define cloud security and identify the risks involved in cloud computing as well as the risk mitigation measures.
- List the steps to successfully adopt cloud services.

### **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 and Gartner's definition of cloud computing.
- Explain the evolution of cloud computing and list the cloud's essential characteristics, service models, and deployment models.
- Define NIST's cloud Taxonomy (service provider versus consumer responsibility model) and Cloud Actors (service providers, consumers, auditors, carriers, brokers).
- Distinguish between traditional and cloud computing models in terms of business value.
- List the cloud computing benefits and its challenges.
- Define the various common cloud terminologies used in cloud computing.

## **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, application).

## **MODULE 4: THE ROLE OF CLOUD AND OTHER TECHNOLOGIES IN DIGITAL TRANSFORMATION**

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

- Understand the concepts of Big Data and Big Data Analytics, Hadoop, NoSQL databases, and their characteristics and types.
- Explain what is Internet of Things (IoT) and its types.
- Explain how cloud computing and DevOps fit together.
- Understand the latest digitization trends in Artificial Intelligence (AI) and Machine Learning (ML).

## 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, cloud service models, 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 appropriate 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.

## LEARNING OUTCOMES

A classification widely used when creating assessments for certification and education is the Bloom’s Taxonomy of Educational Objectives. This classifies learning objectives into six ascending learning levels, each defining a higher degree of competencies and skills. (Bloom et al, 1956, Taxonomy of Educational Objectives).

This structured approach helps to ensure:

- A clear segregation in learning level content between the different qualification levels.
- Learning outcomes are documented consistently across different areas of the program.
- Exam questions and papers are consistent and are created to a similar level of difficulty.

The Foundation qualification examines learning outcomes at levels 1 (knowledge) and 2 (comprehension).

CCC CLOUD TECHNOLOGY ASSOCIATE LEARNING OUTCOMES				
	1. Knowledge	2. Comprehension	3. Application	4. Analysis
<b>Generic Definition from Learning Outcomes</b>	Know key facts, terms and concepts from the guidance.	Understand the key concepts from the guidance.	Be able to apply the concepts related to the syllabus area for a given situation.	Be able to analyze and distinguish between appropriate and inappropriate use of the method for a given situation.
<b>Qualification Learning Outcomes</b>	Know key facts, including terms, concepts, principles, and techniques from the CCC Cloud Technology Associate. program.	Understand the concepts, latest digitization trends, and virtualization in cloud computing and can explain how these are applied.		

## EXAM DETAILS

ASPECT	DETAILS
Exam Type	Multiple Choice Questions (MCQs)
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% (26 out of 40)
Delivery	Online