# Cloud Technology Associate™ 4

Duration 2 Days

## COURSE DESCRIPTION

The CCC Cloud Technology Associate™ certification demonstrates that candidates have the basic skill set and knowledge associated with cloud computing and virtualization. It delves into the enhanced capabilities of cloud computing when combined with the latest digitization trends and emerging transformative technologies. The course highlights the important cloud challenges and risks, provides the corresponding measures to mitigate these, and addresses governance and compliance issues. The course ends with a roadmap and a set of strategies that organizations select for successful adoption of the cloud environment.

The CTA certification is a critical step to advance the candidate's 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 terminologies. It furthermore provides the foundation required to complete subsequent vendor-specific training/certification programs and also provides a baseline for the subsequent CCC Professional level certifications.

## COURSE OBJECTIVES

- Identify the fundamental concepts of cloud computing including business benefits and cloud terminologies.
- Identify the technical aspects (high-level) of virtualization including the role and benefits of hypervisors and containers and the different types of virtualization.
- Identify how emerging technologies (AI, IoT, 5G, RPA, Digital Twin, and others) enhance the capabilities of cloud computing, such as performance, security, and faster deployment.
- Define cloud security, governance, risk, and compliance and identify the risks/threats involved in cloud computing and the corresponding mitigation measures and best practices.
- List the strategies involved in the roadmap for cloud adoption and their implementation and migration for different cloud service and deployment models.

## COURSE OUTLINE

**Module 1: Course Introduction**
- Understand the overview and objectives of the course.
- Know the 2-day course agenda of the course.
- Know about the course structure and various items included in the course.
- Understand the requirements of the CCC certification exam for this course.

**Module 2: Introduction to Cloud Services Model**
- Overcome the challenges and concerns associated with traditional computing by moving to the Cloud environment.
- Describe the evolution of Cloud computing.
- Explain the NIST definition of Cloud computing, including its essential characteristics, service models, and deployment models.
- Define NIST's Cloud taxonomy and the reference architecture.
- List various benefits and challenges associated with Cloud computing.

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▪ Define common terminologies used in Cloud computing.

**Module 3: Introduction to Virtualization: The Backbone Technology of Cloud Computing**
▪ Define virtualization and explain the fundamental concepts.
▪ Relate virtualization and cloud computing.
▪ Discuss the benefits, challenges, risks, and suitability of virtualization to organizations.
▪ Explain the need for hypervisors and containers and their different types.
▪ Describe the role of hypervisors and containers in virtualization.
▪ Identify the leading manufacturers of hypervisors, containers as well as container orchestration systems.
▪ Explain the terminologies and different types of virtualization.

**Module 4: Cloud Computing – A Key Pillar of Digital Transformation**
▪ Relate cloud computing with emerging and enabling digital transformation technologies, such as:
  o Big Data Analytics
  o DevOps
  o Artificial Intelligence (AI), Machine Learning (ML), Robotics, Drones, and Cognitive Computing
  o Internet of Things (IoT), Edge and Fog Computing
  o Blockchain
  o Immersive Technologies – Augmented Reality (AR) / Virtual Reality (VR)
  o 5G
  o Digital Twin
  o Robotic Process Automation (RPA)
  o Quantum Computing
  o Additive Manufacturing (3D Printing)

**Module 5: Cloud Security**
▪ Define IT Security, Governance, Risk, and Compliance (GRC).
▪ Understand risk terminologies, top cloud risks, and the NIST Cyber Security Framework.
▪ Identify the impact of cloud essential characteristics, cloud service models, cloud deployment models on business value, and the associated risks.
▪ Discuss the role of IT compliance and audits.
▪ Identify important cloud security domains and general cloud security recommendations.

**Module 6: Preparing for Cloud Adoption**
▪ Explain typical steps for the successful adoption of cloud computing services.
▪ Describe appropriate solution architectures for various service and deployment models.
▪ Understand organizational capabilities relevant to realizing cloud benefits.
▪ Understand the roles and capabilities of cloud computing providers, vendors, and dependencies on vendors.
▪ Describe multiple approaches for migrating applications.

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## WHO SHOULD ATTEND

The following departments benefit from CCC Cloud Technology Associate-certified professionals:
- 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
- Others (Sales, Purchase, Audit, Legal, etc.)

CCC Cloud Technology Associate jobs include:
- CXO's, Board Members, & Business Operation Heads
- Database Administrators
- Developers
- IT Analysts
- IT Architects
- IT Managers
- IT Provisioning and Maintenance (Hardware, Network, Storage, etc.)
- Project Managers
- System Administrators
- Technology Enthusiasts & Entrepreneurs
- Testers
- Others (Audit, Purchase etc.)

## PREREQUISITES

There are no formal prerequisites; however, it is recommended that participants have:
- 6+ months of experience in Internet/web technologies
- Some basic knowledge of storage and network technologies (preferred)

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