



# Cloud Infrastructure and Services – V2

## Overview

This course educates participants on building cloud infrastructure based on a cloud computing reference model. The reference model includes five fundamental layers (physical, virtual, control, orchestration, and service) and three cross-layer functions (business continuity, security, and service management) for building a cloud infrastructure. For each layer and cross-layer function, this course covers the comprising technologies, components, processes, and mechanisms. This course takes an open-approach to describe the concepts and technologies, which are further illustrated and reinforced with EMC-related product examples. The course follows the U.S. National Institute of Standards and Technology as a guide for all definitions of cloud computing. Upon completing this course, participants will have the knowledge to make informed decisions on technologies, processes, and mechanisms required to build a cloud infrastructure..

## Who Should Attend?

Experienced IT professionals, who may not have had exposure to cloud computing

- IT professionals responsible for architecting and managing cloud infrastructure
- Individuals who are seeking EMC Cloud Associate (EMCCIS) certification

## Course Outcome

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

- Describe cloud computing, its deployment and service models
- Describe the cloud computing reference model and the key considerations to build a cloud infrastructure
- Describe the key components and processes required to build physical, virtual, control, and service layers of a cloud infrastructure
- Describe the service orchestration, business continuity, security, and service management functions for a cloud infrastructure

## Duration

5 days

## Certificate

EMC Cloud Associate (EMC-CIS)

## Certification Body

Dell Technologies, US

## Course Outline

The content of this course is designed to support the course objectives.

### Module 1: Introduction to Cloud Computing

- Essential characteristics of cloud computing
- Cloud service models and cloud service brokerage
- Cloud deployment models

### Module 2: Building the Cloud Infrastructure

- Cloud computing reference model
- Deployment options and solutions for building cloud infrastructure
- Considerations for building cloud infrastructure

### Module 3: Physical Layer

- Compute system
- Storage system architectures
- Network connectivity

### Module 4: Virtual Layer

- Virtual layer functions
- Virtualization software
- Resource pool and virtual resources

### Module 5: Control Layer

- Control layer functions
- Control software
- Software-defined approach for managing IT infrastructure
- Resource optimization techniques

### Module 6: Service and Orchestration Layers

- Service layer functions
- Cloud portal
- Cloud interface standards
- Protocols for accessing cloud services
- Service orchestration
- Cloud service lifecycle

### Module 7: Business Continuity

- Business continuity and service availability
- Fault tolerance mechanisms
- Backup and replication
- Cloud application resiliency

### Module 8: Security

- Cloud security threats
- Cloud security mechanisms
- Governance, risk, and compliance

### • Module 9: Service Management

- Service portfolio management processes
- Service operation management processes