

40 HORAS

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.

AUDIENCE

This course is intended for:

- Experienced IT professionals, who may not have had exposure to cloud computing
- IT professionals responsible for architecting and managing cloud infrastructure
- Students and professionals who are looking to pursue career in cloud computing
- Individuals who are seeking EMC Cloud Associate (EMCCIS) certification

PREREQUISITE KNOWLEDGE/SKILLS

- Basic understanding of computer architecture, operating system, and database
- Experience in compute system, storage and network infrastructure will be an added advantage

COURSE OBJECTIVES

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

COURSE OUTLINE

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