Cloud Infrastructure and Services - Version 2

Course Description

Course Duration

5 Days

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 comprimising technologies, components, processes, and mechanisms. This course takes an open-approach to describe the concepts and technologies, which are further illustrated and reinforced with Dell Technologies-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 Dell Technologies Cloud Associate certificate

Email Questions to:
Education@emc.com

Dell Technologies

Hopkinton
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ACADEMIC
ASSOCIATE

DELLTechnologies
Proven Professional

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

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

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Module 4: Virtual Layer

- Virtual layer function
- 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 reiliency

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

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Course Delivery Modes

This course is currently available in the following formats:

MR-1CP-CISV2: Instructor led -- inlcludes exercises and concepts in practice that reinforce the concepts covered in lectures.

MR-1VP-CISV2-0815: Video ILT - USB Flash Drive video provides a recording of an instructor-delivered course align with the online quizzes and additional content.

MR-1TP-CISV2-0815: Video ILT - Streaming Video provides a recording of an instructor delivered course along with online quizzes and additional content

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