

# Information Storage and Management v5

## Course Description

### Course Duration

5 Days

### Overview

This unique course provides a comprehensive mastery of the various storage infrastructure components and options in a modern data center environment. Participants will learn to apply storage-related technologies in a fast changing and complex IT environment due to the adoption of new technologies such as cloud, edge computing, Big Data, IoT, AI/ML, and 5G.

This course covers intelligent storage systems, networking technologies business continuity solutions, information security, and storage infrastructure management. The course content takes an open-approach to describe all the concepts and technologies, which are further illustrated and reinforced with Dell product examples.

### Audience

This course is intended for:

- Experienced IT professionals directly managing storage infrastructure
- IT professionals seeking to better understand the role of storage infrastructure in the modern data center
- Students and professionals considering a career in the storage industry
- Organization-wide IT teams responsible for planning, designing, deploying, managing, or leveraging storage infrastructure

### Prerequisite Knowledge/Skills

To successfully complete this course, a student should have:

- A basic understanding of computer architecture, operating systems, and networking
- Participants with experience in specific segments of storage infrastructure would also be able to assimilate the course material

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### Course Objectives

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

- Describe business drivers of digital transformation.
- Describe modern data center infrastructure and its elements.
- Explain intelligent storage systems and their types.
- Evaluate various storage networking technologies and approaches.
- Describe software-defined storage and networking.
- Articulate business continuity and data protection solutions (replication, backup, migration, and archiving).
- Describe storage infrastructure security and management processes.

### Course Outline

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

- Introduction to Information Storage
  - Data and information
  - Key characteristics of a data center
  - Business drivers of digital transformation
- Business Drivers of Digital Transformation
  - Cloud Computing
  - Big Data and AI/ML
  - IoT, Edge Computing, and 5G
- Modern Data Center Environment
  - Types of compute system, hypervisor, VM, and containers
  - Applications, types of storage and network
  - Software-defined Data Center
  - Modern Data Center Architecture, CI/HCI
- Intelligent Storage Systems
  - Types and components of intelligent storage systems
  - RAID
  - Storage provisioning and tiering
- Block, File, and Object-based Storage System
  - Block storage system components
  - Scale-up and Scale-out NAS
  - Features and components of Object storage system
  - Unified storage system

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- Storage Area Network – FC SAN
  - FC SAN Architecture
  - FC topologies and zoning
  - SAN virtualization
- IP SAN, FCoE, and NVMe-oF
  - iSCSI components, protocol stack, and VLAN
  - FCIP connectivity, protocol stack, and FCoE
  - NVMe-oF
- Software Defined Storage and Network
  - Key attributes of SDS, SDS architecture
  - SDN architecture, benefits
- Business Continuity
  - Business continuity overview
  - Fault tolerant IT infrastructure
- Data Protection
  - Data replication
  - Backup and recovery
  - Data deduplication
  - Data archiving and migration
- Storage Infrastructure Security
  - Introduction to information security
  - Storage security domains and threats
  - Key security controls
- Storage Infrastructure Management
  - Introduction to storage management
  - Operations management



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Course Delivery Modes

Course Number	Delivery Mode
ESOCMS03293	Classroom / Virtual Classroom
ESOCMD03294	On-demand Course – Self Paced

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