Information Storage and Management Version 4

Course Description

Course Duration
5 Days

Overview

Information Storage and Management (ISM) is a unique course that provides a comprehensive understanding of the various storage infrastructure components in a modern data center environment. Participants will learn the architectures, features, and benefits of intelligent storage systems including block-based, file-based, object-based, and unified storage; software-defined storage; storage networking technologies such as FC SAN, IP SAN, and FCoE SAN; business continuity solutions such as backup and replication; the highly-critical area of information security; and storage infrastructure management. This course takes an open-approach to describe all the concepts and technologies, which are further illustrated and reinforced with Dell products and based on real world use cases. This course aligns to the Associate level proven professional certification which serves as a baseline for a number of additional product specializations.

Audience

- Experienced IT professionals, who may not have had exposure to all of the segments of modern storage infrastructure
- Experienced IT professionals managing storage infrastructure and services
- Students and professionals who are looking to pursue a career in the storage industry
- Organization-wide IT teams directly or indirectly responsible for planning, designing, deploying, managing, or leveraging information infrastructure
- Individuals who are seeking Proven Professional Information Storage Associate certification

Prerequisite Knowledge/Skills

- To understand the content and successfully complete this course, a participant must have a basic understanding of computer architecture, operating systems, networking, and databases
- Participants with experience in specific segments of storage infrastructure would also be able to assimilate the course material

Support Contact
Education Services

DELL EMC Corporation
Hopkinton
Massachusetts
01748-9103
1-508-435-1000
In North America
1-866-464-7381

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Course Objectives

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

- Describe modern technologies driving digital transformation - cloud, big data, IoT, and machine learning
- Describe modern data center infrastructure and its elements
- Explain intelligent storage systems and their types (file, block, and object)
- Evaluate various storage networking technologies and their deployment
- Describe software-defined storage and networking
- Articulate business continuity and data protection solutions (replication, backup, and archiving)
- Describe storage infrastructure security and management processes

Course Outline

The content of this course is designed to support the course objectives. The following focus areas are included in this course:

- Module 1: Introduction to Information Storage
  - Digital data and its types
  - Information storage
  - Key characteristics of data center
  - Driving digital transformation
- Module 2: Modern Technologies Driving Digital Transformation
  - Cloud computing and its essential characteristics
  - Cloud services and cloud deployment models
  - Big data analytics
  - Internet of Things and mobile computing
  - Machine learning and artificial intelligence
- Module 3: Modern Data Center Environment
  - Compute, storage, and networking
  - Application services
  - Software-defined data center
  - Modern data center infrastructure architecture
- Module 4: Intelligent Storage Systems
  - Components of an intelligent storage system
  - RAID
  - Types of intelligent storage systems
  - Scale-up and scale-out storage architecture
- Module 5: Block-based Storage System
  - Components of block-based storage system
  - Storage provisioning and storage tiering

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- Module 6: Fibre Channel SAN
  - FC SAN Overview
  - FC architecture
  - FC topology and zoning
  - SAN Virtualization
- Module 7: IP and FCoE SAN
  - Overview of TCP/IP
  - IP SAN overview
  - iSCSI
  - FCIP
  - FCoE
- Module 8: File-based and Object-based Storage System
  - NAS components and architecture
  - File-level virtualization and tiering
  - Object-based and unified storage
- Module 9: Software-Defined Storage and Networking
  - Software-defined storage
  - Software-defined networking
- Module 10: Introduction to Business Continuity
  - Business continuity overview
  - Fault tolerance IT Infrastructure
- Module 11: Data Protection Solutions
  - Replication
  - Backup and recovery
  - Data deduplication
  - Data archiving
  - Migration
- Module 12: Storage Infrastructure Security
  - Introduction to Information Security
  - Storage security domains and threats
  - Key security controls
- Module 13: Storage Infrastructure Management
  - Introduction to storage infrastructure management
  - Operations management

In addition to lecture, this course includes scenario-based labs and product examples designed to reinforce the concepts covered in the lectures.

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Course Delivery Modes and Product Version Information

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This course is currently available in the following formats:

- **ES111STG00802** : Instructor led - includes exercises and concepts in practice that reinforce the concepts covered in lectures.

- **ES121STG00802** : Online ILT - Live course delivered via the Internet where participants attend virtual classroom interacting with instructors and other participants. A headset with microphone is REQUIRED to speak with the instructor and the rest of the class. Text communication is also available through the virtual classroom.

- **ES131STG00799** : On-Demand - A series of video presentations and eLearning exercises to walk you through all the content and verify comprehension.

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