Associate - Information Storage and Management Version 4.0

Certification Description

[Proven Professional Website]

[Education Services Community]

Certification Overview

This certification validates the learner's comprehensive understanding of various storage infrastructure components in traditional, virtualized, and software-defined data center environments. It tests the learner's knowledge of storage-related technologies in an increasingly complex IT environment, which is fast changing with the adoption of third platform technologies (cloud, Big Data, social, and mobile technologies). It provides a strong understanding of storage technologies and prepares participants for advanced concepts, technologies, and processes.

Certification Requirements

To complete the requirements for this certification you must:

Pass the following Associate level exam on or after April 26, 2019.

- DEA-1TT4 Associate - Information Storage and Management Version 4 Exam

Note: These details reflect certification requirements as of **4/26/19.**

Other Certification Recommendations

This certification will qualify towards most of the below-mentioned Specialist level certification tracks in the Dell EMC Proven Professional program

- Cloud Architect (DCS-CA)
- Systems Administrator (DCS-SA)
- Technology Architect (DCS-TA)
- Implementation Engineer (DCS-CE)
- Platform Engineer (DCS-PE)
- Security (DCS)

Please refer to the Certification Framework for more details about individual certifications.

The Proven Professional Program periodically updates certification requirements. *Please check the Proven Professional CertTracker website regularly for the latest information and for other options to meet the Associate level requirement.

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DEA-1TT4 Associate - Information Storage and Management Version 4 Exam

Exam Description

Duration
90 Minutes
(60 Questions)

Pass Score: 60

Practice Test
Exam – DEA-1TT4

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Overview
This exam is a qualifying exam for the **Associate - Information Storage and Management (DCA-ISM)** certification.

This exam focuses on information storage and management in a data center. It includes third platform technologies, intelligent storage systems, software-defined storage, storage networking technologies, and various business continuity options – along with security and management of a storage infrastructure. A limited number of questions refer to product examples that are used in the training to reinforce the knowledge of technologies and concepts.

Dell Technologies provides free practice tests to assess your knowledge in preparation for the exam. Practice tests allow you to become familiar with the topics and question types you will find on the proctored exam. Your results on a practice test offer one indication of how prepared you are for the proctored exam and can highlight topics on which you need to study and train further. A passing score on the practice test does not guarantee a passing score on the certification exam.

Exam Topics
Topics likely to be covered on this exam include:

Modern Data Center Infrastructure (15%)
- Describe the data classification, elements of a data center, key characteristics of a data center, and key technologies driving digital transformation
- Explain the cloud characteristics, cloud service models, and cloud deployment models
- Explain the key characteristics of big data, components of a big data analytics solution, Internet of Things (IoT), machine learning, and artificial intelligence (AI)
- Describe the building blocks of a modern data center
- Describe a compute system, storage, connectivity in a data center, application, and options to build a modern data center

Storage Networking Technologies (20%)
- Describe Storage Area Network (SAN), FC architecture, FC topologies, zoning, and virtualization in FC SAN
- Describe TCP/IP, IP SAN, iSCSI protocol, components, connectivity, addressing, discovery domains, and VLAN
- Explain the components and connectivities of FCIP and FCoE

Storage Systems (26%)
- Explain the components of an intelligent storage system, RAID, erasure coding, data access methods, scale-up and scale-out architectures
- Explain the components of block-based storage system, storage provisioning, and storage tiering mechanisms
- Explain the NAS components and architecture, NAS file sharing methods,

and file-level virtualization and tiering
- Describe object-based storage device components, functions, operations, and unified storage architecture
- Describe software-defined storage attributes, architecture, functions of the control plane, software-defined extensibility, and software-defined networking functionalities

Backup, Archive, and Replication (24%)
- Describe the information availability measurements and key fault tolerance techniques
- Explain backup granularity, architecture, backup targets, operations, and backup methods
- Describe data deduplication and data archiving solutions architecture
- Describe replication uses, and replication and migration techniques

Security and Management (16%)
- Describe the information security goals, terminologies, various security domains, and threats to a storage infrastructure
- Explain key security controls to protect the storage infrastructure
- Describe the storage infrastructure management functions and processes

The percentages after each topic above reflects the approximate distribution of the total question set across the exam.

Recommended Training

The following curriculum is recommended for candidates preparing to take this exam.

Please complete [one] of the following courses

Course Title	Course Number	Mode	Available
Information Storage Management (ISM) V4 - On-Demand Course	ES131STG00799	On-Demand	3/26/19
Information Storage Management V4 -Classroom	ES111STG00802	Classroom	May 2019

Note: These exam description details reflect contents as of **April 26, 2019.**

The Proven Professional Program periodically updates exams to reflect technical currency and relevance. Please check the Proven Professional website regularly for the latest information.

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
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Information Storage and Management Version 4

Course Description

Course Duration
5 Days

Course Objectives

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

- Describe data center infrastructure and its elements
- Describe modern datacenter technologies - cloud, big data, IoT, and machine learning
- Evaluate various types of intelligent storage systems and their deployment
- Describe software-defined storage
- Evaluate various storage networking technologies and their deployment
- Articulate business continuity and archiving solutions
- Describe various security threats and controls in a storage infrastructure
- Describe key processes for managing a storage infrastructure

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
  - Modern data center infrastructure architecture
  - Application services
  - Compute, storage, and networking
  - Options to build a modern data center
- 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: File-based and Object-based Storage System
  - File-based storage - NAS
  - Object-based storage
  - Unified storage
- Module 7: Software Defined Storage
  - Software defined storage architecture
  - Key functionality of SDS
  - Storage and retrieval process in OSD system
  - Unified storage architecture
- Module 8: Fibre Channel SAN
  - FC architecture
  - FC topology and zoning
  - Virtualization in FC SAN
- Module 9: IP SAN and FCoE
  - IP SAN overview
  - iSCSI
  - FCIP
  - FCoE
- Module 10: Software Defined Networking
  - What and Why SDN?
  - SDN architecture
  - Difference between network virtualization and SDN
- Module 11: Introduction to Business Continuity
  - Business availability
  - Information availability
  - RPO and RTO
  - Business continuity technology solutions
  - Fault tolerance in IT infrastructure
- Module 12: Data Protection Solutions
  - Backup architecture
  - Backup targets and methods
  - Data deduplication
  - Data migration
  - Data archive
- Module 13: Storage Infrastructure Security
  - Storage security domains and threats
  - Key security controls
- Module 14: Storage Infrastructure Management
  - Operations management
  - Performance, Capacity, Availability and Security

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Information Storage and Management Version 4

Course Description

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

Course Duration

5 Days

Course Delivery Modes and Product Version Information

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.
- **ES111STG00802** : 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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