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.*
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

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<th>Course Title</th>
<th>Course Number</th>
<th>Mode</th>
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<td>On-Demand</td>
<td>3/26/19</td>
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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.