Overview
This Proven Professional certification provides specialist level certification encompassing a strong understanding of Dell EMC Unity, SC Series and PowerStore midrange storage solutions. This will be a desired certification for those engaged in designing solutions around Dell EMC midrange storage arrays.

This exam focuses on the knowledge needed for the positioning, sizing and designing of Dell EMC midrange storage solutions in a customer environment. This includes a detailed understanding of Dell EMC Unity, SC Series and PowerStore product configurations, features, functionality, best practices and design considerations.

Certification Requirements
To complete the requirements for this certification you must:

1. Achieve one of the following Associate level certifications*
   - Associate - Information Storage and Management Version 2.0
   - Associate - Information Storage and Management Version 3.0
   - Associate - Information Storage and Management Version 4.0

2. Pass the following Specialist exam on or after June 05, 2020:
   - DES-1D12 Specialist - Technology Architect, Midrange Storage Solutions Exam

Note: These details reflect certification requirements as of June 05, 2020.

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 Specialist - Technology Architect, Midrange Storage (DCS-TA) track.

This exam tests the candidate’s knowledge to architect and size solutions for Dell EMC Unity, SC Series and PowerStore systems. This exam also tests the candidate’s knowledge of key product features of these storage systems.

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.

Products
Products likely to be referred to on this exam include but are not limited to:

- Dell EMC Unity
- Dell EMC SC Series
- Dell EMC PowerStore

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

**Dell EMC Midrange Architectures (25%)**
- Describe the Unity and Unity XT hardware (e.g., enclosures, I/O components, storage media options)
- Explain Unity and Unity XT storage resources and features (e.g., dynamic pools, RAID functions)
- Describe SC Series storage resources, connectivity options (e.g., RAID, Consistency Groups, SSD, HDD options)
- Describe the controller options available in the SC Series models and related use cases
- Describe the PowerStore hardware components and their functions (e.g., controller and expansion enclosures models, I/O expansion modules, internal components)
- Describe the PowerStore resources and features (e.g., caching and data reduction mechanisms, NVMe and SSD options, PowerStore manager GUI)

**Dell EMC Midrange Product Solutions (43%)**
- Describe how to provision and access Unity storage, including Block, Files, and VMware datastores
- Identify Unity advanced features for Block storage (e.g. FAST Suite, D@RE, host I/O limit availability, thin clones)
- Identify Unity advanced features for File storage (e.g. IP Multi-tenancy, Advanced Static Routing, IP Packet Reflect)
- Describe Unity Data Protection (e.g., Snapshots, Replication, and Snapshot Replication architecture) solutions and use cases
- Describe Unity Data Mobility features, requirements, and use cases
- Identify key features of the SC Series operating system
- Describe SC Series cross-platform replication functionality and use cases
- Describe PowerStore Data Services and how to provision and access storage via block, files, and VMware datastores
- Describe the PowerStore load and resource balancing capabilities and PowerStore replication capabilities
- Describe PowerStore Data Protection and Data Security (e.g., Snapshots, Consistency Groups, Thin Clones) features and use cases
- Describe PowerStore HA features, non-disruptive upgrades and migration options requirements and use cases
- Compare and contrast similar features between Unity, SC Series and PowerStore solutions

Dell EMC Midrange Best Practices, Sizing, and Design (32%)
- Apply Dell EMC midrange best practice recommendations for data service, system, storage, and host application configurations
- Describe sizing and design considerations for Unity, SC Series, and PowerStore
- Describe how to size and design an SC or Unity solution for performance, capacity, security, and resilience
- Describe the data gathering methods to size and design an SC Series solution
- Describe the tools and resources available to size and design Unity and SC Series solutions
- Explain how to size an SC Series solution that includes Tiers 1-3, storage requirements, front-end and back-end connections, and common use cases

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.

Dell Technologies Employees: Please complete the following course

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Dell Technologies Partner and Customer audiences:
Please complete one of the following courses

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Note: These exam description details reflect contents as of June 05, 2020.

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