Announcing DEE-1111 Expert – PowerMax and VMAX All Flash Solutions Exam Retirement

The **Expert – PowerMax and VMAX All Flash Solutions** certification (DEE-1111) will be retired on February 2, 2024.

How will this impact you?

This exam is no longer available. We recommend you consider other Dell Proven Professional Certifications to meet your training and certifications needs. We can help you achieve and validate critical skills for integrating and managing technology aligned with customer outcomes.

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Expert – PowerMax and VMAX All Flash Solutions

Certification Description

Proven Professional Website

Education Services Community

Certification Overview

Benefits any professional responsible for performance analysis of PowerMax and VMAX All Flash arrays, design and implementation of VMAX security, multi-site SRDF, SRDF/Metro and Non-disruptive Migrations (NDM).

Certification Requirements

To complete the requirements for this certification you must:

1. Achieve one of the following Specialist level certifications
   - Specialist – Implementation Engineer, VMAX All Flash and VMAX3 Solutions Version 2.0
   - Specialist – Systems Administrator, VMAX All Flash and VMAX3 Solutions Version 2.0
   - Specialist – Implementation Engineer, PowerMax and VMAX Family Solutions Version 1.0
   - Specialist – Technology Architect, PowerMax and VMAX All Flash Solutions Version 1.0

2. Pass the following Expert exam on or after June 25, 2021:
   - DEE-1111 Expert – PowerMax and VMAX All Flash Solutions Exam

Note: These details reflect certification requirements as of **June 25, 2021.**

Certification Validity

This Dell Technologies Expert certification has a three-year validity. Within that three-year window, the credential is considered active. Please refer to the Policies and Procedures document on the Dell EMC Proven Professional website for more information.

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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DEE-1111 Expert – PowerMax and VMAX All Flash Solutions Exam

Exam Description

Part 1:
Duration
90 Minutes
(54 Questions)
Passing Score
60%

Part 2:
Duration
30 Minutes
(6 Simulations)
Passing Score
66%

A passing score is required on **both** parts of this exam.

Practice Test
Exam – DEE-1111

Simulator Demo

Dell Inc.
Hopkinton
Massachusetts
01748-9103
1-508-435-1000
In North America
1-866-464-7381

Overview

This exam assesses the knowledge and skills required to analyze and understand the performance of PowerMax and VMAX All Flash arrays, articulate PowerMax and VMAX All Flash Security Concepts, use SRDF for three-site remote replication and Metro solutions and Non-disruptive migrations to PowerMax and VMAX All Flash arrays.

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:

- PowerMax OS 5978
- SRDF
- Unisphere for PowerMax 9.2
- Solutions Enabler 9.1
- VMAX All Flash
- TimeFinder SnapVX
- SYMCLI
- Non-disruptive Migration

Exam Topics

Topics likely to be covered on this exam include:

PowerMax and VMAX All Flash Performance Workshop (39%)
- Describe the architecture of the PowerMax and VMAX All Flash arrays from a performance perspective
- Identify and explain PowerMax and VMAX All Flash array configuration best practices for optimal performance
- Identify performance analysis methodology and relate performance measurements to I/O operations
- Identify workload profiles and characterization and the implications of Little's Law
- Perform performance-related administration tasks: Monitor the performance of PowerMax and VMAX All Flash arrays, manage performance reports, and load data into offline performance viewer
- Performance analysis of frontend directors: Identify relevant metrics, investigate, and solve performance issues
- Performance analysis of cache and backend directors: Identify relevant metrics, investigate, and solve performance issues
- Identify and describe TimeFinder SnapVX and SRDF performance considerations

PowerMax and VMAX All Flash Security Concepts (18%)

- Describe how exposure to data security vulnerabilities and the prevention of unauthorized change control operations are addressed in PowerMax and VMAX All Flash arrays
- Describe how data that resides on the PowerMax and VMAX All Flash arrays can be secured using Data at Rest Encryption (D@RE) and how this impacts system operations and management
- Plan, implement, and manage user authentication and role-based permissions for Solutions Enabler and Unisphere for PowerMax
- Plan, implement, and manage host-based access controls for PowerMax and VMAX All Flash arrays

PowerMax and VMAX All Flash Multi-site SRDF Solutions (20%)
- Provide an overview of multi-site SRDF solutions
- Describe dual personality RDF devices and configure Concurrent SRDF, Cascaded SRDF, and R22 devices
- Identify and describe the SRDF technologies that support SRDF/Star - SRDF/S consistency, SRDF/A multi-session consistency, and special SDDF and SRDF features
- Describe Concurrent and Cascaded SRDF/Star failure scenarios and manage operations under normal and fault conditions

PowerMax and VMAX All Flash SRDF/Metro Solutions (13%)
- Describe SRDF/Metro and its benefits
- Implement SRDF/Metro
- Explain SRDF/Metro device access operations
- Describe SRDF/Metro Smart DR and its benefits

Non-Disruptive Migration (NDM) to PowerMax and VMAX Family (10%)
- Describe Non-Disruptive Migration from VMAX to a PowerMax or VMAX All Flash array
- Perform Metro-based mode Non-Disruptive Migration when using Unisphere for PowerMax and/or using the SYMCLI
- Perform Non-Disruptive Migration when using Unisphere for VMAX and/or using the SYMCLI

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

Recommended prior hands-on experience
Candidates taking this exam are preferred to have experience in deploying and/or managing PowerMax and VMAX All Flash hardware and software for at least one year. The candidate should have an understanding of fundamental storage technologies, storage management, security concepts and SRDF. It is also recommended they be able to perform administrative tasks within supported PowerMax and HYPERMAX operating systems.

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

Please complete all of the following courses

Course Title	Course Number	Mode	Available
PowerMax and VMAX All Flash Security Concepts	ESSTGD02753	On-Demand Course	4/22/21
PowerMax and VMAX All	ESSTGD02754	On-Demand	4/22/21

Flash Multi-Site SRDF Solutions		Course	
PowerMax and VMAX All Flash SRDF Metro Solutions	ESSTGD02755	On-Demand Course	4/22/21
PowerMax and VMAX All Flash Non-Disruptive Migration (NDM) Administration	ES132STG00364	On-Demand Course	4/22/21
PowerMax and VMAX All Flash Performance	ESSTGS02756	Classroom / Virtual Classroom	5/21/21

Note: These exam description details reflect contents as of **June 25, 2021.**

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