



Enterprise Computing Solutions - Education Services

## OFERTA FORMATIVA

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# Symmetrix VMAX Performance Workshop

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| <b>CÓDIGO:</b>    | <b>DURACIÓN:</b>  | <b>Precio:</b> |
| EMC_MR-1CP-SPERET | 32 Hours (4 días) | €3,076.00      |

## Description

This course introduces participants to the methodology for analyzing performance of Symmetrix VMAX 1/2 arrays. Participants will learn to analyze Symmetrix VMAX performance using ControlCenter Performance Manager and Symmetrix Performance Analyzer tools. Metrics that are relevant for analysis of each of the components in a Symmetrix VMAX 1/2 array are presented. Participants will learn to identify bottlenecks for performance and provide recommendations to remedy the problem. Hands-on lab exercises using performance archives reinforce the concepts and methodology presented in the lecture.

## Objetivos

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

- Relate knowledge of the Symmetrix architecture and I/O handling processes to their performance benefits
- Identify the performance impact different types of workloads have on Symmetrix VMAX 1/2 architectural components
- Use key metrics to identify performance bottlenecks and components over utilization
- Make performance-oriented recommendations when allocating new storage or migrating applications

## Público

This course is intended for anyone responsible for operating, maintaining, and optimizing the performance of a Symmetrix storage environment.

## Requisitos Previos

To understand the content and successfully complete this course, a student must have a suitable knowledgebase/skill set. The student must have an understanding of basic Symmetrix DMX and VMAX 1/2 architecture and the use of ControlCenter Performance Manager. Some experience with Symmetrix Performance Analyzer will be helpful.

A list of specific prerequisite courses can be found in EMC Education Services Learning Management System.

## Programa

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

### **Module 1: Performance Management Overview Module 2: Tools for Analyzing Performance**

Lesson 1: Unisphere for VMAX Performance Overview

Lesson 2: Loading Data in Performance Viewer

Lesson 3: Navigating Performance Viewer

### **Module 3: Performance Analysis**

Lesson 1: Workload Profiles and Characterization

Lesson 2: Performance Analysis Roadmap

Lesson 3: Little's Law and its Impact on Response Time

### **Module 4: Analyzing Performance of the Symmetrix Front-end Adapters**

Lesson 1: Symmetrix Cache Architecture

Lesson 2: Cache Hit and Miss I/O Operations

Lesson 3: System and Device Write Pending Limits

Lesson 4: Dynamic Cache Partitions

Lesson 5: Alignment of I/Os with Cache Slots

Lesson 6: XtremSW Cache

**Module 5: Analyzing Symmetrix Cache Performance** Lesson 7: Roadmap and Analysis

### **Module 6: Analyzing Performance of Symmetrix VMAX Backend Adapters**

Lesson 1: Symmetrix Backend Architecture  
Lesson 2: Analyzing Symmetrix Backend Utilization  
Lesson 3: Analyzing I/O Imbalance  
Lesson 4: Symmetrix Backend Optimization Algorithms  
Lesson 5: Impact of RAID Protection on Backend Performance

**Module 7: Performance Considerations for Business Continuity Operations**

Lesson 1: TimeFinder Performance Considerations  
Lesson 2: SRDF Performance Considerations

In addition to lecture and demonstrations, this course includes labs designed to allow practical experience for the participant.

## **Fechas Programadas**

A petición. Gracias por [contactarnos](#).

## **Información Adicional**

[Esta formación también está disponible en modalidad presencial. Por favor contáctenos para más información.](#)