VMAX3 Performance Workshop

Duration: 2 Days   Course Code: VMAXPW

Overview:

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.

Target Audience:

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

Objectives:

- 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

Prerequisites:

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.

Content:

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

Module 5: Analyzing Symmetrix Cache Performance

- 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
- 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

Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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