Symmetrix Configuration Management

Course Description

Overview
The course provides participants with the information needed to Configure a Symmetrix and prepare it for host access. The course content will emphasize the use of the Symmetrix Command Line interface (SYMCLI) on the Symmetrix V-Max Series Array. Time will also be spent on managing configuration changes with the Symmetrix Management Console (SMC) GUI. The content will cover different types of devices and their functions. Creation, mapping and masking of devices will be included in lecture and lab material. Setting Symmetrix metrics and RDF group attributes will be covered. Other topics include Autoprovisioning, Virtual Provisioning, Virtual LUN migration for regular and thin devices, Fully Automated Storage Tiering (FAST) for disk groups and Virtual Pools. Lab exercises will cover operational details of all topics.

Audience
This course is intended for EMC personnel, customers and partners who configure and manage a Symmetrix in a Windows or UNIX environment.

Prerequisite Knowledge/Skills
To understand the content and successfully complete this course, the student must have an understanding of Symmetrix fundamentals.

Labs will be conducted on Unix and Windows systems. On Unix students must be familiar with the editor and user commands on at least one of the following Unix shells. They must:
- ksh
- sh
- csh
- bash
- tcsh

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

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

a) Provide an overview of Symmetrix Configuration and Device Masking
b) Create and Map Symmetrix Devices
c) Describe how to set Symmetrix Metrics and Device Attributes, manage Dynamic RDF and Device Pools
d) Map and Mask Devices using Autoprovisioning
e) Migrate devices non-disruptively using Virtual LUNs
f) Describe Virtual Provisioning Concepts
g) Manage Virtual Provisioning with Solutions Enabler
h) Monitor Virtual Pools
i) Use the Symmetrix Management Console to perform Configuration Management
j) Describe FAST architecture
k) Explain FAST theory of operations and recommended practices
l) Configure and Manage FAST using SYMCLI and SMC

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Course Outline
These modules are designed to support the course objectives. The following modules are included in this course:

Module 1 - Symmetrix Configuration and Device Masking Overview
- Lab 1 - Explore lab setup

Module 2 - Device Creation and Mapping
- Lab 2 - Create different devices and map them

Module 3 - Symmetrix and Device Attributes
- Lab 3 - RDF groups and Pairs

Module 4 - Auto-provisioning
- Lab 4 - Mapping and Masking

Module 5 - Virtual Provisioning Concepts and Planning
Module 6 - Virtual Provisioning with Solutions Enabler
- Lab 5 - Create Thin and Data Devices, Pools
- Lab 6 - Map and Mask Thin Devices
- Lab 7 - Miscellaneous Virtual Provisioning Concepts

Module 7 - Monitoring Thin Pools
- Lab 8 - Monitoring Thin Pool Usage

Module 8 - Virtual LUN Migration
- Lab 9 - Virtual LUN Migration DP and VP

Module 9 - FAST and FAST VP Concepts
Module 10 - Managing FAST and FAST VP using SYMCLI
- Lab 10 - Manage FAST and FAST VP using SYMCLI

Module 11 - Using SMC to do everything
- Lab 11 - Manage FAST and FAST VP with SMC
- Lab 12 - Symmetrix Configuration with SMC

Course Delivery Options
This course is currently available in the following formats:

MR-1CP-SYMCFG: Instructor led - includes hands-on lab exercises that reinforce the concepts covered in lectures.

MR-1LP-SYMCFG: Online ILT - Live course delivered via the internet where participants attend virtual classroom interacting with instructors and other participants. A headset with microphone is REQUIRED to speak with the instructor and the rest of the class. Text communication is also available through the virtual classroom.

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