

AIX Storage Management Course Summary

Description

This course describes the functionality, configuration and management of many data storage solutions for IBM's AIX operating system. It teaches the participant how to manage various disk storage configurations, as well as troubleshoot problems associated with the LVM, file systems and the Object Data Manager (ODM.)

Objectives

At the end of this course, students will be able to:

- Describe the differences in the wide range of SCSI options, and RAID configurations.
- Set up LVM, RAID and the IBM Data Storage Server utility
- Tune SCSI parameters and perform various types of data backups
- Edit the ODM files and data associated with the LVM and other aspects of mass data storage

Topics

- Managing SCSI Devices in AIX
- SAN Management
- RAID
- IBM's DS Products
- The Logical Volume Manager
- The JFS 2
- Clustering and Virtualization

Audience

This course is designed for system administrators who need a more detailed understanding of disk storage devices and data storage services available for the AIX operating system, their capabilities and configuration methods.

Prerequisites

Students must have basic experience with AIX system administration, including familiarity with the System Management Interface Tool (SMIT) and basic LVM terminology and commands.

Duration

Four days

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Course Outline

I. Managing SCSI Devices in AIX

- A. SCSI Technologies
- B. AIX SCSI Parameters
- C. I/O Slots and System Partitions
- D. Adding and Removing SCSI Devices

II. SAN Management

- A. Fabric and SAN Zoning
- B. SAN and NAS (Network Attached Storage)
- C. Managing SAN in AIX

III. RAID

- A. Understanding RAID Levels
- B. RAID Solutions for AIX
- C. Redundant Disk Array Controller (RDAC)
- D. Managing RAID in AIX

IV. IBM's DS Products

- A. What is the Data Storage Server?
- B. DS4000 and Disk Connectivity
- C. DS4000 and SAN
- D. DS4000 Firmware Update Defining Hot Spare Drives
- E. Configuring Logical Unit Numbers (LUNs)
- F. DS Copy Services
- G. The Storage Management Console (SMC)
- H. Multipath Components

V. The Logical Volume Manager

- A. LVM Terminology Review
- B. The VGDA
- C. Details of Mirroring
- D. The LV Device Driver (LVDD)
- E. The LVM and the ODM
- F. Undocumented AIX Commands
- G. Troubleshooting the LVM/ODM
- H. Mirror Write Consistency
- I. Quorums
- J. Replacing Drives in the LVM
- K. Split Mirror Backups

VI. The JFS 2

- A. File System Basics Review
- B. Aggregates, File Sets and Inodes
- C. Extents and Extent Descriptors

VII. Clustering and Virtualization

- A. A Simple Virtualization Example
- B. Sharing Optical Devices
- C. The General Parallel File System (GPFS)
- D. Performance Issues