

HK364S: HP StoreVirtual 4000 Storage Administration and Configuration

Course Summary

Description

The HP StoreVirtual 4000 course is a comprehensive technical-based training course that teaches the skills needed for planning, installing, configuring, and managing HP 4000 storage area networks (SANs). Learning concepts are reinforced through a series of comprehensive labs.

Objectives

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

- Explain the architecture of HP StoreVirtual 4000 SAN solution
- Plan and install networks of Storage Systems, including multi-site installations providing High Availability / Disaster Recovery
- Configure Storage Systems for initial connection
- Install and use the HP StoreVirtual Consolidated Management Console (CMC) for Windows
- Configure and manage the 4000 SAN
- Mount the SAN Volumes from Windows 2003, Windows 2012, or VMware vSphere 5.1i

Topics

- Storage Product Suite Overview
- Centralized Management Console
- Basic Configuration
- Management Group and Clusters
- Working with Volumes
- Connecting the Volume via iSCSI
- HP StoreVirtual 4000 SAN & Microsoft MPIO support
- LeftHand OS Snapshots
- SmartClone Volumes
- Remote Copy
- Using HP Storage LeftHand OS with VMware vSphere
- HP LeftHand OS Multi-Site HR/DR Solution Pack
- Onboard Performance Monitoring
- Performance Tuning and iSCSI SAN for Applications
- Best Practices
- Appendix

Audience

- Storage Administrators

Prerequisites

- Basic networking
- Advanced knowledge of Windows Servers

Duration

Two days

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Course Outline

- I. Storage Product Suite Overview**
 - A. List the components of the HP StoreVirtual 4000 suite
 - B. Discuss the function of the HP StoreVirtual 4000 suite components
 - C. Describe Left Hand OS Software
- II. Centralized Management Console**
 - A. Install the Centralized Management Console
 - B. Understand Management Console user interface
 - C. Use the Content Pane to verify the status of modules
- III. Basic Configuration**
 - A. Install and set IP/hostname
 - B. Configure storage systems
 - C. Manage the Networks settings
 - D. Understand how to configure and use SNMP
- IV. Management Group and Clusters**
 - A. Explain the purpose of Managers and Management Groups
 - B. How to create, edit, and delete Management Groups
 - C. How to create local administrative groups and users
 - D. Identify the purpose and requirements for a virtual Manager
 - E. Understand the purpose of Managers
 - F. Explain the purpose of Clusters
 - G. How to create, edit, delete, and view Clusters
 - H. Understand the virtual IP address and its use
 - I. Understand other Cluster-related configuration functions
- V. Working with Volumes**
 - A. Planning Volumes
 - B. Prerequisites for Volumes
 - C. Volume growth capacity
 - D. Create and view Volumes
 - E. Edit/delete Volumes
 - F. Left Hand OS network RAID
- VI. Connecting the Volume via iSCSI**
 - A. Understanding iSCSI
 - B. Installing the initiator
 - C. Creating "Server Profiles"
 - D. Connecting the Volume
 - E. Formatting the drive
- VII. HP StoreVirtual 4000 SAN & Microsoft MPIO support**
 - A. HP Storage DSM for MPIO
 - B. HP Storage MPIO
 - C. Configure NICs for failover
- VIII. LeftHand OS Snapshots**
 - A. Snapshot Overview
 - B. Snapshot Architecture
 - C. Using a Snapshot
 - D. Creating a Snapshot Single
 - E. Rolling back a Snapshot
 - F. Scripting Snapshot operations
- IX. SmartClone Volumes**
 - A. StoreVirtual 4000 SAN SmartClone
- X. Remote Copy**
 - A. Remote copy software
 - B. Remote copy planning
 - C. Create, edit, delete, view, or cancel a remote copy operation
 - D. Remote copy workarounds

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Course Outline (con't)

- XI. Using HP Storage LeftHand OS with VMware vSphere**
 - A. HP Storage and VMware advantages
- XII. HP LeftHand OS Multi-Site HA/DR Solution Pack**
 - A. Purpose of LeftHand OS Multi-Site HA/DR Solution Pack
- XIII. Onboard Performance Monitoring**
 - A. Understanding performance statistics
 - B. Adding, removing statistics
 - C. Exporting data
 - D. Statistics log
- XIV. Performance Tuning and ISCSI SAN for Applications**
 - A. Important performance factors
 - B. Use HP Storage performance guidelines when planning and implementing an IP SAN solution
- XV. Best Practices**
 - A. Recognize and use best practices
 - B. Practices to avoid
- XVI. Appendix**
 - A. LeftHand OS 11 Additional Enhancements