



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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VMware vSAN: Deploy and Manage plus VMware vSAN: Troubleshooting Workshop [V6.7]

CODE:	LENGTH:	PRICE:
VM-VSAN-DM-VMVSAN-TW-V6.7	40 Hours (5 days)	\$4,625.00

Description

Overview:

In this five-day course, you will focus on deploying and managing a software-defined storage solution with VMware vSAN™ 6.7. You will learn how vSAN functions as an important component in the VMware software-defined data center. You will gain practical experience with vSAN concepts and troubleshooting methodology and diagnostic tools through the completion of hands-on lab exercises.

Product Alignment

- ESXi 6.7
- vCenter Server 6.7
- vSAN 6.6 and vSAN 6.7

Objectives

By the end of the course, you should be able to meet the following objectives:

- Describe the vSAN architecture
- Identify vSAN features and use cases
- Configure vSAN networking components
- Configure a vSAN cluster
- Deploy virtual machines on a vSAN datastore
- Configure virtual machine storage policies
- Perform ongoing vSAN management tasks
- Configure vSAN encryption
- Control vSAN resynchronization tasks
- Create and manage nested fault domains
- Use the vSAN health service to monitor health and performance
- Configure a stretched cluster and observe failover scenarios
- Describe vSAN interoperability with VMware vSphere® features and other products
- Plan and design a vSAN cluster
- Use diagnostic and troubleshooting tools to resolve vSAN 6.6 deployment and architectural issues

Audience

Storage and virtual infrastructure administrators who want to use software-defined storage with vSAN

Prerequisites

This course requires completion of one of the following prerequisites:

- Storage administration experience on block or file storage devices
 - Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage [V6.x] course
- Experience working at the command line is helpful.

The course material presumes that a student can perform the following tasks with no assistance or guidance before enrolling in this course:

- Use VMware vSphere® Web Client
- Create and manage VMware vCenter Server® objects, such as data centers, clusters, hosts, and virtual machines
- Create and modify a standard switch
- Connect a VMware ESXi™ host to NAS, iSCSI, or Fibre Channel storage
- Create a VMware vSphere® VMFS datastore
- Use a wizard or a template to create a virtual machine
- Migrate a virtual machine with VMware vSphere® vMotion®
- Migrate a virtual machine with VMware vSphere® Storage vMotion®

If you cannot complete all of these tasks, VMware recommends that you complete the VMware vSphere: Install, Configure, Manage [V6.x] course before enrolling in VMware vSAN: Deploy and Manage

Programme

- 1 Course Introduction
 - Introductions and course logistics
 - Course objectives
 - Describe the software-defined data center
- 2 Introduction to vSAN
 - Describe basic vSAN architecture and components
 - Describe the differences between file, block, and object storage
 - Explain the advantages of object-based storage
 - Detail the configuration of a vSAN cluster
 - Install and validate the initial vSAN installation and configuration
- 3 vSAN Configuration
 - Apply vSAN design considerations
 - Detail the expansion of a vSAN cluster
 - Configure vSAN disk groups manually
 - Identify physical network configuration requirements
 - Describe the configuration of vSAN networking
 - Test and validate the vSAN configuration and functionality
 - Describe the vSAN architecture and components
 - Describe the differences between the vSAN hybrid and all-flash architectures
 - Describe the advantages of all-flash architecture
 - Describe the space-efficiency features of vSAN
 - Describe the different vSAN assessment tools
 - Explain vSAN License Details
- 4 vSAN Policies and Virtual Machines
 - Explain how storage policies work with vSAN
 - Define and create a virtual machine storage policy
 - Apply and modify virtual machine storage policies
 - Change virtual machine storage policies dynamically
 - Identify virtual machine storage policy compliance status
- 5 Managing and Operating vSAN
 - Explain how to configure encryption in the vSAN cluster
 - Explain the management of hardware storage devices
 - Identify alarms for vSAN events
 - Describe and configure fault domains
 - Describe the configuration of the vSAN iSCSI service, iSCSI targets, and LUNS
- 6 Stretched Clusters and Two-Node Clusters
 - Describe the architecture for stretched clusters and two-node clusters
 - Create a stretched cluster
 - Describe how stretched cluster storage policies affect vSAN objects
 - Create and apply a vSAN stretched cluster policy to meet specific needs
 - Discuss the behavior of a stretched cluster when various types of failures occur
- 7 Monitoring and Troubleshooting vSAN
 - Discuss hardware failure scenarios
 - Describe the process of resynchronization
 - Explain the possible reasons for resynchronization
 - Describe the use of vSphere Client to detect issues
 - Explain the use of the health service to monitor vSAN health
 - Explain the use of the performance service to monitor vSAN performance.
 - Monitor and test the vSAN environment
 - Describe vSAN architecture components and the PNOMA OSI model.

8 vSAN Software Architecture

- Describe the vSAN architecture and components
- Describe the policy-driven, object-based vSAN storage environment
- Describe the vSAN software components: CLOM, DOM, LSOM, CMMDS, and RDT
- Explain the relationships between the vSAN software components
- Explain the relationship between objects and components
- Determine how specific storage policies affect components
- Describe component placement

9 Troubleshooting Methodology

- Use a structured approach to solve configuration and operational problems
- Apply troubleshooting methodology to logically diagnose faults and optimize troubleshooting efficiency

10 Troubleshooting Tools

- Replace a failed witness appliance
- Discuss the ways to run various command-line tools
- Discuss the ways to access VMware vSphere® ESXi™ Shell
- Use commands to view, configure, and manage your VMware vSphere® environment
- Explain which log files are useful for vSAN troubleshooting
- Use log files to help troubleshoot vSAN problems
- Discuss the esxcli vsan namespace commands
- Discuss how to use Ruby vSphere Console commands

Session Dates

On request. Please [contact us](#)

Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)