



TODD LAMMLE

Advanced Network Training

VMware Virtual SAN: Deploy and Manage [V6.7]

Prerequisites

This course requires meeting 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® Client™

- Create and manage VMware vCenter Server® objects, such as data centers, clusters, hosts, and virtual machines
- Create and modify a standard switch
- Create and modify a distributed 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 [V6.7] course before enrolling in VMware vSAN: Deploy and Manage.

Course Objectives

Upon completing this course, the learner will be able to meet these overall 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

Module 1: Course Introduction

- Introductions and course logistics
- Course objectives
- Describe the software-defined data center

Module 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

Module 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

Module 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

Module 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

Module 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

Module 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

