

VMware vSAN: Production Operations

COURSE DETAILS

Course Code:	VM-vSANPO
Delivery Type:	Instructor-Led
Duration:	2 days

PREREQUISITES

This course has the following prerequisites:

- Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage [V6.x] course
- Storage administration experience with block or file storage devices

Completion of the VMware vSAN: Deploy and Manage [v6.x] course or equivalent experience with vSAN is desirable.

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

- 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] and VMware vSAN: Deploy and Manage [V6.x] courses before enrolling in VMware vSAN: Production Operations.

COURSE CONTENT

In this two-day course, you focus on building skills in configuring and performing common administrator and end-user tasks with VMware vSAN™ 6.7. You gain practical experience with vSAN production operations through the completion of instructor-led activities and hands-on lab exercises.

COURSE OBJECTIVES

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

- Describe vSAN host operations
 - Discuss vSAN networking requirements
 - Define the tasks involved in hardware replacement in a vSAN cluster
 - Perform vSAN cluster scale-out and scale-up operations
 - Describe common vSAN maintenance operations
 - Define the tasks required for updating and upgrading vSAN
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- Describe vSAN security operations
 - Configure a key management server (KMS) cluster
 - Configure vSAN storage policies and observe the effects of a cluster-wide change
 - Explain vSAN resilience and availability features
 - Perform ongoing vSAN management tasks
 - Use the vSAN health service to monitor health and performance
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COURSE OUTLINE

1 Course Introduction

- Introductions and course logistics
- Course objectives

2 vSAN Host and Hardware Operations

- Recognize the importance of hardware compatibility
- Ensure the compatibility of driver and firmware versioning
- Use tools to automate driver validation and installation
- Apply host hardware settings for optimum performance
- Recognize the benefits of using VMware vSphere® Distributed Switch™
- Compare the benefits of NIC teaming and Link Aggregation Control Protocol (LACP)
- Plan appropriately for networking configuration changes
- Identify ESXCLI commands and namespace options
- Recognize how to use ESXCLI commands for troubleshooting vSAN software and hardware issues
- Use Ruby vSphere Console (RVC) to get detailed information about the vSAN environment

3 vSAN Data Availability Operations

- Describe vSAN storage policies
- Recognize the impact of a vSAN storage policy change
- Describe and configure the Object Repair Timer advanced option
- Plan disk replacement in a vSAN cluster
- Plan maintenance tasks to avoid vSAN object failures
- Recognize the importance of backing up data in vSAN
- Describe the VMware vSphere® Storage APIs - Data Protection framework
- Recognize the importance of managing snapshot utilization in a vSAN cluster

4 vSAN Cluster Maintenance

- Perform typical vSAN maintenance operations
- Describe vSAN maintenance modes and data evacuation options
- Assess the impact on cluster objects of entering maintenance mode
- Determine the specific data actions required after exiting maintenance mode
- Define the steps to shut down and reboot hosts and vSAN clusters
- Migrate vSAN to a new vCenter Server instance
- Use best practices for boot devices
- Upgrade and update vSAN
- Replace vSAN hardware by using scale-in and scale-out strategies

5 vSAN Security Operations

- Identify differences between VM encryption and vSAN encryption
- Recognize how to perform ongoing operations to maintain data security
- Identify steps in adding an existing encrypted vSAN cluster to a new vCenter Server instance

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6 vSAN Monitoring and Performance

- Describe how the Customer Experience Improvement Program (CEIP) enables VMware to improve products and services
 - Identify the vSAN tools and health checks available for monitoring vSAN health
 - Manage alerts, alarms, and notifications related to vSAN in vSphere Client
 - Create and configure custom alarms to trigger vSAN health issues
 - Describe the vSAN tools and services that monitor vSAN performance
 - Use performance views to access metrics for monitoring vSAN clusters, hosts, and virtual machines
 - Explain how the writing of data generates I/O traffic and affects vSAN performance
 - Use performance metrics to analyze the vSAN environment
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WHO SHOULD ATTEND

Storage and virtual infrastructure administrators who are responsible for production support and administration of vSAN v6.x