

# VMware vSAN v7 – Management and Operations

## Description

In this three-day course, you learn about managing and operating VMware vSAN™ 7. This course focuses on building the required skills for common Day-2 vSAN administrator tasks such as, vSAN node management, cluster maintenance, security operations and advanced vSAN cluster operations. You also gain practical experience through the completion of instructor-led activities and hands-on lab exercises.

### Classroom Registration Price (CHF)

2790

### Virtual Classroom Registration Price (CHF)

2790

### Course Content

#### Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

#### Module 2: vSAN Node Management

- 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
- Use vSphere Lifecycle Manager to perform upgrades

#### Module 3: vSAN Resilience and 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 managing snapshot utilization in a vSAN cluster
- Configure the vSAN fault domains

#### Module 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
- Use best practices for boot devices
- Replace vSAN nodes

#### Module 5: vSAN Storage Space Efficiency

- Discuss deduplication and compression techniques
- Understand deduplication and compression overhead
- Discuss compression only mode
- Configure erasure coding

- Configure swap object thin provisioning
- Discuss reclaiming storage space with SCSI UNMAP
- Configure TRIM/UNMAP

#### Module 6: vSAN Cluster Performance Monitoring

- Describe how the Customer Experience Improvement Program (CEIP) enables VMware to improve products and services
- Use vSphere Skyline Health for monitoring vSAN cluster health
- Manage alerts, alarms, and notifications related to vSAN in VMware vSphere® Client™
- Create and configure custom alarms to trigger vSAN health issues
- Use IO Insight metrics for monitoring vSAN performance
- Analyse vsantop performance metrics
- Use a vSAN proactive test to detect and diagnose cluster issues

#### Module 7: vSAN Security Operations

- Identify differences between VM encryption and vSAN encryption
- Perform ongoing operations to maintain data security
- Describe the workflow of data-in transit encryption
- Identify the steps involved in replacing Key Management Server (KMS)

#### Module 8: vSAN Direct

- Discuss the use cases for vSAN Direct
- Understand the overall architecture of vSAN Direct
- Describe the workflow of vSAN Direct datastore creation
- Explore how vSAN Direct works with storage policy tagging

#### Module 9: Remote vSAN

- Discuss the use cases for remote vSAN
- Understand the high-level architecture
- Describe remote datastore operations
- Discuss the network requirement
- Interoperability between remote vSAN and VMware vSphere® High Availability

#### Module 10: vSAN Native File Service

- Discuss the use cases for vSAN file service
- Understand the high-level architecture of vSAN file service
- Discuss the authentication model
- Configure file shares
- Monitor file share health and capacity utilization

#### Module 11: Manage Advanced vSAN Cluster Operations

- Describe the architecture for stretched clusters and two-node clusters
- Understand the importance of witness node
- Describe how stretched cluster storage policies affect vSAN objects
- Create and apply a vSAN stretched cluster policy to meet specific needs
- Discuss stretched cluster failure scenarios and responses

### Lab / Exercises

Official VMware Labs and exercises

### Documentation

Official VMware courseware

### Participant profiles

- Storage and virtual infrastructure administrators who are responsible for production support and administration of VMware vSAN 7

**Prerequisites**

Completion of the following courses or equivalent knowledge is required:

**Objectives**

- Define the tasks involved in vSAN node management
- Updating and upgrading vSAN using VMware vSphere Lifecycle Manager™
- Explain vSAN resilience and data availability features
- Reconfigure vSAN storage policies and observe the cluster-wide impact
- Perform vSAN cluster scale-out and scale-up operations
- Describe common vSAN cluster maintenance operations
- Control vSAN resync operations
- Configure vSAN storage efficiency and reclamation features
- Use VMware Skyline™ Health to monitor cluster health, performance, and storage capacity
- Describe vSAN security operations
- Configure vSAN Direct for cloud native applications
- Configure remote vSAN datastore and vSAN native file services
- Manage two-node cluster and stretched cluster advance operations

**Niveau**

Intermédiaire

**Duration (in Days)**

3

**Reference**

VMW-VSANMO