

# VMware vSAN: Install, Configure, Manage V8



In diesem fünftägigen Kurs erwerben Sie das Wissen, die Fähigkeiten und die Tools zur Planung und Bereitstellung eines VMware vSAN™-Clusters. Sie lernen, wie Sie vSAN verwalten und betreiben. Der Schwerpunkt dieses Kurses liegt auf dem Aufbau der erforderlichen Fähigkeiten für gängige Day-2-vSAN-Administrationsaufgaben. Zu den Aufgaben eines Administrators gehören die Verwaltung von vSAN-Knoten, die Wartung von Clustern, Sicherheitsoperationen, Fehlerbehebung und erweiterte vSAN-Cluster-Operationen. Sie erwerben die Kursfähigkeiten durch die Teilnahme an von Ausbildern geleiteten Aktivitäten und praktischen Laborübungen.

## Kursinhalt

- Course Introduction
- Introduction to vSAN
- Planning a vSAN Cluster
- Deploying a vSAN Cluster
- vSAN Storage Policies
- vSAN Resilience and Data Availability
- Configuring vSAN Storage Space Efficiency
- vSAN Security Operations
- Introduction to Advanced vSAN Configurations
- vSAN Cluster Maintenance
- vSAN Stretched and Two Node Clusters
- vSAN Cluster Monitoring

**E-Book** Sie erhalten englischsprachige Unterlagen von VMware als E-Book.

## Zielgruppe

Storage and virtual infrastructure consultants, solution architects, and administrators who are responsible for production support and administration of VMware vSAN.

## Voraussetzungen

Gleichwertige Kenntnisse oder der Abschluss des folgenden Kurses sind erforderlich:

- VMware vSphere: Install, Configure, Manage

## Dieser Kurs im Web



Alle tagesaktuellen Informationen und Möglichkeiten zur Bestellung finden Sie unter dem folgenden Link: [www.expertech.ch/go/VSIC](http://www.expertech.ch/go/VSIC)

## Vormerkung

Sie können auf unserer Website einen Platz kostenlos und unverbindlich für 7 Tage reservieren. Dies geht auch telefonisch unter 06074 4868-0.

## Garantierte Kurstermine

Für Ihre Planungssicherheit bieten wir stets eine große Auswahl garantierter Kurstermine an.

## Ihr Kurs maßgeschneidert

Diesen Kurs können wir für Ihr Projekt exakt an Ihre Anforderungen anpassen.

Stand 27.04.2024

Training		Preise zzgl. MwSt.
Termine in der Schweiz		4 Tage
Online Training		4 Tage CHF 3.075,-
Termin/Kursort	Kursprache Englisch 	
21.05.-24.05.24	 Online	18.11.-21.11.24
26.08.-29.08.24	 Online	 Online



# Inhaltsverzeichnis

## VMware vSAN: Install, Configure, Manage V8

### 1 Course Introduction

- Introductions and course logistics
- Course objectives

### 2 Introduction to vSAN

- Describe vSAN architecture
- Describe the vSAN software components: CLOM, DOM, LSOM, CMMDS, and RDT
- Identify vSAN objects and components
- Describe the advantages of object-based storage
- Describe the difference between All-Flash and Hybrid vSAN architecture
- Explain the key features and use cases for vSAN
- Discuss the vSAN integration and compatibility with other VMware technologies

### 3 Planning a vSAN Cluster

- Identify requirements and planning considerations for vSAN clusters
- Apply vSAN cluster planning and deployment best practices
- Determine and plan for storage consumption by data growth and failure tolerance
- Design vSAN hosts for operational needs
- Identify vSAN networking features and requirements
- Describe ways of controlling traffic in a vSAN environment
- Recognize best practices for vSAN network configurations

### 4 Deploying a vSAN Cluster

- 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
- Deploy and configure a vSAN Cluster using the Cluster QuickStart wizard
- Manually configure a vSAN Cluster using VMware vSphere® Client™
- Explain and configure vSAN fault domains
- Using VMware vSphere® High Availability with vSAN
- Understand vSAN Cluster maintenance capabilities
- Describe the difference between implicit and explicit

### fault domains

- Create explicit fault domains

### 5 vSAN Storage Policies

- Describe a vSAN object
- Describe how objects are split into components
- Explain the purpose of witness components
- Explain how vSAN stores large objects
- View object and component placement on the vSAN datastore
- 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

### 6 vSAN Resilience and Data Availability

- 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

### 7 Configuring 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

### 8 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

### 9 Introduction to Advanced vSAN Configurations

- Identify requirements to configure vSAN iSCSI target
- Detail VMware HCI Mesh technology and

### architecture

- Detail vSAN File Service architecture and configuration
- Explain the use cases of vSAN Direct Configuration

### 10 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

### 11 vSAN Stretched and Two Node Clusters

- Describe the architecture and uses case for stretched clusters
- Detail the deployment and replacement of a vSAN witness node
- Describe the architecture and uses case for two-node clusters
- Explain the benefits of vSphere HA and vSphere Site Recovery Manager in a vSAN stretched cluster
- Explain storage policies for vSAN stretched cluster

### 12 vSAN Cluster Monitoring

- Describe how the Customer Experience Improvement Program (CEIP) enables VMware to improve products and services
- Use VMware 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 IOInsight metrics for monitoring vSAN performance
- Analyse vsantop performance metrics
- Use a vSAN proactive test to detect and diagnose cluster issues

