# VMware vSAN: Install, Configure, Manage [V8]

**Category:** Infrastructure & IT Operations | **Vendor:** VMware

**Duration:** 32.00 hours (4 days) **26.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

## Course Information

**Delivery Format:** Instructor Led - Online

## Course Overview

During this four-day course, you gain the knowledge, skills, and tools to plan and deploy a VMware vSAN™ cluster. You learn how to manage and operate vSAN. This course focuses on building the required skills for common Day-2 vSAN administrator tasks. Administrator tasks include vSAN node management, cluster maintenance, security operations, troubleshooting, and advanced vSAN cluster operations. You acquire the course skills through the completion of instructor-led activities and hands-on lab exercises.

Product Alignment

- VMware ESXi™ 8.0
- VMware vCenter Server® 8.0
- VMware vSAN 8.0

## About This Course

- Course Introduction
- Introduction to vSAN
- Planning a vSAN Cluster
- Deploying a vSAN Cluster
- vSAN Storage Policies
- vSAN Resilience and Data Availability
- Managing vSAN Storage Space Efficiency
- vSAN Security Operations
- vSAN HCI Mesh
- vSAN File Services
- vSAN Stretched and Two Node Clusters
- vSAN Cluster Maintenance
- vSAN Cluster Monitoring
- vSAN Troubleshooting
- vSAN Express Storage Architecture

## Who Should Attend

Storage and virtual infrastructure consultants, solution architects, and administrators who are responsible for production support and administration of VMware vSAN 8.0.

### Prerequisites & Entry Requirements

**General Prerequisites:**

Equivalent knowledge or completion of the following course is required:

- VMware vSphere: Install, Configure, Manage [V8] (VSICM8)

# Learning Outcomes

**Upon successful completion of this course, participants will be able to:**

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

- Describe vSAN concepts
- Detail the underlying vSAN architecture and components
- Explain the key features and use cases for vSAN
- Identify requirements and planning considerations for vSAN clusters
- Explain the importance vSAN node hardware compatibility
- Describe the different vSAN deployment options
- Explain how to configure vSAN fault domains
- Detail how to define and create a VM storage policy
- Discuss the impact of vSAN storage policy changes
- Detail vSAN resilience and data availability
- Describe vSAN storage space efficiency
- Explain how vSAN encryption works
- Detail VMware HCI Mesh™ technology and architecture
- Detail vSAN File Service architecture and configuration
- Describe how to setup a stretched and a two-node vSAN cluster
- Describe vSAN maintenance mode and data evacuation options
- Define the steps to shut down a vSAN cluster for maintenance
- Explain how to use proactive tests to check the integrity of a vSAN cluster
- Use VMware Skyline Health™ for monitoring vSAN health
- Use VMware Skyline Health to investigate and help determine failure conditions
- Discuss vSAN troubleshooting best practices
- Describe vSAN Express Storage Architecture concepts

# Detailed Course Outline

Course Introduction

- Introduction and course logistics

- Course objectives

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

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

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

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

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

Managing 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

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

vSAN HCI Mesh

- Understand the purpose of vSAN HCI Mesh
- Detail vSAN HCI Mesh technology and architecture
- Perform mount and unmount of a remote datastore

vSAN File Services

- Understand the purpose of vSAN File Services
- Detail vSAN File Services architecture
- Configure vSAN File Shares

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 storage policies for vSAN stretched cluster

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

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
- Use a vSAN proactive test to detect and diagnose cluster issues

vSAN Troubleshooting

- Use a structured approach to solve configuration and operational problems
- Apply troubleshooting methodology to logically diagnose faults and optimize troubleshooting efficiency
- Use VMware Skyline Health to investigate and help determine failure conditions
- Explain which log files are useful for vSAN troubleshooting

vSAN Express Storage Architecture

- Understand the purpose of vSAN Express Storage Architecture
- Describe the vSAN Express Storage Architecture components
- Identify Storage Policy differences
- Understand compression and encryption operation differences

**Skills You Will Learn:**

By the end of the course, you should be able to meet the following objectives:<br><br><br>- Describe vSAN concepts<br>- Detail the underlying vSAN architecture and components<br>- Explain the key features and use cases for vSAN<br>- Identify requirements and planning considerations for vSAN clusters<br>- Explain the importance vSAN node hardware compatibility<br>- Describe the different vSAN deployment options<br>- Explain how to configure vSAN fault domains<br>- Detail how to define and create a VM storage policy<br>- Discuss the impact of vSAN storage policy changes<br>- Detail vSAN resilience and data availability<br>- Describe vSAN storage space efficiency<br>- Explain how vSAN encryption works<br>- Detail VMware HCI Mesh™ technology and architecture<br>- Detail vSAN File Service architecture and configuration<br>- Describe how to setup a stretched and a two-node vSAN cluster<br>- Describe vSAN maintenance mode and data evacuation options<br>- Define the steps to shut down a vSAN cluster for maintenance<br>- Explain how to use proactive tests to check the integrity of a vSAN cluster<br>- Use VMware Skyline Health™ for monitoring vSAN health<br>- Use VMware Skyline Health to investigate and help determine failure conditions<br>- Discuss vSAN troubleshooting best practices<br>- Describe vSAN Express Storage Architecture concepts

# Frequently Asked Questions

### Q: What delivery options are available for VMware vSAN: Install, Configure, Manage [V8]?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

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### Q: How many CPD hours does this course provide?

The 4-day VMware vSAN: Install, Configure, Manage [V8] course provides up to 26.0 CPD hours of structured learning. CPD certificates can be provided upon request.

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### Q: What is the duration of the VMware vSAN: Install, Configure, Manage [V8] training?

The training takes place over 4 day(s), with each day lasting approximately 32.00 hours including breaks for lunch and refreshments.

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### Q: Do you provide corporate training for VMware vSAN: Install, Configure, Manage [V8]?

Yes, we provide corporate training, dedicated training, and closed classes for VMware vSAN: Install, Configure, Manage [V8]. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

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### Q: What related terms do people search for?

Popular related searches include: VMware vSAN: Install, Configure, Manage [V8], VMware vSAN & SRM, VSANICM8

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## Q: Why choose Nexus Human for VMware vSAN: Install, Configure, Manage [V8]?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

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## Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your VMware vSAN: Install, Configure, Manage [V8] training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.


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