Enterprise Computing Solutions - Education Services

# TRAINING OFFERING

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# VMware vSAN: Deploy and Manage plus VMware vSAN: Troubleshooting Workshop [V6.6]

| CODE: | LENGTH: | PRICE: |
|---|---|---|
| VM-VSAN-DM+VSAN-TSW-V6.6 | 40 Hours (5 days) | $4,625.00 |

## Description

In this five-day course, you will focus on deploying and managing a software-defined storage solution with VMware vSAN™ 6.6. You will learn how vSAN functions as an important component in the VMware software-defined data center.
You will gain practical experience with vSAN concepts and troubleshooting methodology and diagnostic tools through the completion of hands-on lab exercises

## Objectives

By the end of the course, you should be able to meet the following 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
• Outline the tasks for upgrading to vSAN 6.6
• 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
• Use diagnostic and troubleshooting tools to resolve vSAN deployment and architectural issues

## Audience

Storage and virtual infrastructure administrators who want to use software-defined storage with vSAN

## Programme

**1 Course Introduction**
• Introductions and course logistics
• Course objectives
• Describe the software-defined data center

**2 Storage Fundamentals**
• Define common storage technologies
• Identify characteristics of storage devices: magnetic and flash-based devices
• Identify and explain various types of storage architectures
• Identify SAN performance factors

**3 Introduction to vSAN**
• Describe the vSAN architecture and components
• Describe the differences between the vSAN hybrid and all-flash architectures
• Describe the space-efficiency features of vSAN

**4 vSAN Configuration**
• Identify physical network configuration requirements
• Configure vSAN networking
• Configure a vSAN cluster
• Test and validate the vSAN configuration and functionality

**5 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
• Discuss the vsanSparse snapshot format
• Explain the considerations for vsanSparse snapshots

**6 Managing and Operating vSAN**
• Manage hardware storage devices
• Manage hardware device failures
• Identify vCenter Server alarms for vSAN events
• Configure fault domains
• Upgrade to vSAN 6.6
**7 Stretched Clusters and Two-Node Clusters**
• Describe the architecture for stretched clusters and two-node clusters
• Create a stretched cluster using a two-node configuration
• Configure VMware vSphere® High Availability and VMware vSphere® Distributed Resource Scheduler™ for a stretched cluster
• Demonstrate stretched cluster failover scenarios
**8 Monitoring vSAN**
• Use vSphere Web Client to detect issues
• Use the vSAN health service to monitor health and performance
• Monitor vSAN with VMware vRealize® Operations Manager™
• Use ESXi commands to monitor the vSAN environment
• Monitor vSAN with Ruby vSphere Console
**9 Interoperability with vSphere Features**
• Identify vSphere features and VMware products that interoperate with vSAN
• Describe how vSAN interoperates with third-party products and solutions
**10 Designing a vSAN Deployment**
• Understand vSAN design considerations
• Plan and design vSAN clusters
• Identify the design and sizing tools for vSAN
• Describe vSAN use cases
**11 vSAN Architecture for Troubleshooting Methodology**
• Discuss vSAN architecture as it relates to troubleshooting
• Describe vSAN specific troubleshooting methodology
• Stretched Clusters ( 2 node clusters)
**12 vSAN Troubleshooting Tools**
• Use esxcli commands and the Ruby vSphere Console to diagnose and troubleshoot issues
• Use vSphere Web Client and the vSAN Health Monitor to diagnose and troubleshoot issues

## Test and Certification

This course requires completion of 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 [V6.5] 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® 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®

## Session Dates

On request. Please Contact Us

## Additional Information

This training is also available as onsite training. Please contact us to find out more.