

VMware vSAN: Deploy and Manage plus VMware vSAN: Troubleshooting Workshop (VSDMVSTW)

ID VSDMVSTW Preis 3.750,- € (exkl. MwSt.) Dauer 5 Tage

Kursüberblick

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.

Zielgruppe

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

Voraussetzungen

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 \(VICM\)](#) 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®

Kursziele

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

Kursinhalt

- Course Introduction
- Storage Fundamentals

- Introduction to vSAN
- vSAN Configuration
- vSAN Policies and Virtual Machines
- Managing and Operating vSAN
- Stretched Clusters and Two-Node Clusters
- Monitoring vSAN
- Interoperability with vSphere Features
- Designing a vSAN Deployment
- vSAN Software Architecture
- Troubleshooting Methodology
- Troubleshooting Tools

- Apply and modify virtual machine storage policies
- Discuss the vsanSparse snapshot format
- Explain the considerations for vsanSparse snapshots

Detaillierter Kursinhalt

Course Introduction

- Introductions and course logistics
- Course objectives
- Describe the software-defined data center

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

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

vSAN Configuration

- Identify physical network configuration requirements
- Configure vSAN networking
- Configure a vSAN cluster
- Test and validate the vSAN configuration and functionality

vSAN Policies and Virtual Machines

- Explain how storage policies work with vSAN
- Define and create a virtual machine storage policy

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

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

Monitoring vSAN

- Use vSphere Web Client to detect problems
- 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

Interoperability with vSphere Features

- Identify vSphere features and VMware products that interoperate with vSAN
- Describe how vSAN interoperates with third-party products and solutions

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

vSAN Software Architecture

- Describe the software components
- Understand how the components relate to each other
- Understand vSAN object placement
- Understand the differences between object states
- Explain how storage policies affect object placement and states
- Predict how specific failures affect object states

Troubleshooting Methodology

- Characterize problems
- Determine the cause of problems
- Solve problems

Troubleshooting Tools

- Understand the use of various troubleshooting tools
- Use the tools provided to resolve problems with the lab environment