VMware vSAN: Plan and Deploy [V7]

Course 4475 – 16 Hours

Overview

This two-day, hands-on training course provides you with the knowledge, skills, and tools to plan and deploy a VMware vSAN™ cluster. In this course, you are taught the many considerations that the vSAN configuration has on the initial planning of the vSAN datastore. You also manually configure a vSAN cluster.

On Completion, Delegates will be able to

- Explain the key features and use cases for vSAN
- Detail the underlying vSAN architecture and components
- Describe the different vSAN deployment options
- Detail vSAN cluster requirements and considerations
- Apply recommended vSAN design considerations and capacity sizing practices
- Explain the influence of vSAN objects and components on the initial cluster plan
- Determine and plan for storage consumption by data growth and failure tolerance
- Design vSAN hosts for operational needs
- Explain Maintenance Mode use and its impacts on vSAN
- Apply best practices for vSAN network configurations
- Manually configure a vSAN cluster using VMware vSphere® Client™
- Explain and configure vSAN fault domains
- Understand and apply vSAN storage policies
- Define encryption in the vSAN cluster
- Describe the architecture and use cases for stretched clusters
- Configure a stretched cluster
- Understand the steps involved in creating the vSAN iSCSI target services

Who Should Attend

Experienced system administrators

Prerequisites

You should have the following understanding or knowledge:

- Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage course
- Knowledge of basic storage concepts
- Experience using vSphere Client to perform administrative tasks on vSphere clusters

Course Contents

1 Course Introduction

- Introductions and course logistics

- Course objectives

2 vRealize Automation Overview and Architecture

- Describe the purpose and functionality of vRealize Automation
- Describe the vRealize Automation architecture
- Describe the use of VMware Workspace ONE® AccessTM
- Describe the relationship between Kubernetes clusters, containers, and vRealize Automation services
- Describe CLI commands for vRealize Automation 8 cluster management
- Describe Cloud Assembly
- Describe Service Broker
- Describe Code Streamv

2 Introduction to vSAN

- Describe vSAN architecture
- 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
- Identify vSAN objects and components
- 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

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

- Deploy and configure a vSAN cluster using the Cluster QuickStart wizard
- Manually configure a vSAN cluster using 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

- Explain how storage policies work with vSAN
- Explain the role of storage policies in planning a vSAN cluster

- Define and create virtual machine storage policies
- Apply and modify virtual machine storage policies
- Change virtual machine storage policies dynamically
- Identify virtual machine storage policy compliance status

6 Introduction to Advanced vSAN Configurations

- Define and configure compression and deduplication in the vSAN cluster
- Define and configure encryption in the vSAN cluster
- Understand the remote vSAN datastore topology
- Identify the operations involved in managing the remote vSAN datastore
- Configure the vSAN iSCSI target service

7 vSAN Stretched and Two-Node Clusters

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