VMware vSAN 7: Plan, Deploy and Management

Course Modules

1 Course Introduction
- Introductions and course logistics
- Course objectives

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

8 vSAN Cluster Monitoring

- Describe how the Customer Experience Improvement Program (CEIP) enables VMware to improve products and services
- Use vSphere Skyline Health for monitoring vSAN Cluster Health
- Manage alerts, alarms, and notifications related to vSAN in vSphere Client
- Create and configure custom alarms to trigger vSAN health issues
- Use IO Insight metrics for monitoring vSAN performance
- Analyse vsantop performance metrics
- Use vSAN Proactive Test to detect and diagnose cluster issues

9 Native vSAN File Service

- Discuss the use cases for vSAN file service
- Understand the high-level architecture of vSAN file service
- Discuss the authentication model
- Configure file shares
- Monitor file share health and capacity utilization

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