

kod szkolenia: VVvSANICM8 / PL AA 4d

VMware vSAN: Install, Configure, Manage [V8]

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

Zobacz film: <https://youtu.be/medQzzid8I8>



Przeznaczenie szkolenia

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



Korzyści wynikające z ukończenia szkolenia

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



Oczekiwane przygotowanie słuchaczy

Equivalent knowledge or completion of the following course is required:

- VMware vSphere: Install, Configure, Manage



Język szkolenia

- Szkolenie: polski
- Materiały: angielski



Szkolenie obejmuje

- 4 days with instructor training
- Trainer's supervision
- Contact with community
- Coursebook
- Lab environment

Training method

- lecture
- workshops



Czas trwania

4 dni / 28 godzin

Agenda szkolenia

1. Course Introduction

- Introduction and course logistics
- Course objectives

2. 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

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

- 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 VMware 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
5. 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
6. 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
7. 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
8. 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
9. 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
10. vSAN File Service and iSCSI Target Service
- Understand the purpose of vSAN File Services
 - Detail vSAN File Services architecture
 - Configure vSAN File Shares
 - Describe vSAN iSCSI Target Service

11. 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

12. 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

13. 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

14. 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

15. 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