Enterprise Computing Solutions - Education Services

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Freistädterstraße 236, A-4040 Linz

Email: education.ecs.at@arrow.com
Phone: +43 1 370 94 40 - 34

VMware vSAN: Install, Configure, Manage [V8]

CODE:	LÄNGE:	PREIS:
VMW_VSANICM8	32 Hours (4 Tage)	€2,760.00

Description

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.
Product Alignment
• VMware ESXi™ 8.0
• VMware vCenter Server® 8.0
• VMware vSAN 8.0

Lernziel

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

Inhalt

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 ManagerTM
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

Kurstermine

Auf Anfrage. Bitte kontaktieren Sie uns

Zusätzliche Information

Diese Schulung ist auch als Vor-Ort-Schulung verfügbar. Bitte kontaktieren Sie uns, um mehr zu erfahren.