VMWA-33 - VMWARE VSAN: INSTALL, CONFIGURE, MANAGE [V8]

Categoria: **VMware**

INFORMAZIONI SUL CORSO

Durata:	Categoria:	Qualifica Istruttore:	Dedicato a:	Produttore:
4 Giorni	VMware	VMware Certified Instructor	Professionista IT	VMware

OBIETTIVI

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

PREREQUISITI

Equivalent knowledge or completion of the following course is required:

- -VMware vSphere: Install, Configure, Manage

CONTENUTI

1 Course Introduction

- -Introductions 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

INFO

Materiale didattico: Materiale didattico ufficiale VMware in formato digitale
Costo materiale didattico: incluso nel prezzo del corso a Calendario
Natura del corso: Operativo (previsti lab su PC)