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)