Course Overview

This training course focuses on preparing you to deploy and manage a software-defined storage solution with VMware® Virtual SAN™ 6. VMware Virtual SAN 6: Deploy and Manage looks at how Virtual SAN is used as an important component in the VMware Software-Defined Data Center (SDDC). Students gain practical experience with these concepts through the completion of hands-on labs. The course is based on the VMware® ESXi™ 6, VMware® vCenter Server™ 6 and VMware Virtual SAN 6.

Course Objectives

By the end of the course, you should be able to meet the following objectives:

- Outline the tasks for upgrading from Virtual SAN 5 to Virtual SAN 6.
- Identify the different Virtual SAN features.
- Configure the Virtual SAN networking components.
- Plan, Design and Configure a Virtual SAN cluster.
- Identify benefits of storage policies.
- Configure virtual machine storage policies.
- Deploy virtual machines on a Virtual SAN datastore.
- Identify Storage Area Network (SAN) performance factors.
- Identify storage architectures.
- Describe the Virtual SAN architecture.
- Identify Virtual SAN use cases.
- Perform ongoing Virtual SAN management tasks.
- Use the Ruby vSphere Console (RVC).
- Monitor Virtual SAN with Virtual SAN Observer.
## Course Modules

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<th>Module</th>
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<tr>
<td><strong>1 Course Introduction</strong></td>
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| • Describe the software-defined enterprise  
• Describe the software-defined data center  
• Describe the Virtual SAN architecture  
• Configure the Virtual SAN networking  
• Configure Virtual SAN  
• Manage and monitor Virtual SAN  
• Deploy virtual machines on a Virtual SAN datastore  
• Identify benefits of storage policy-based management |
| **2 Storage Fundamentals** |  |
| • Define common storage terminologies  
• Identify common SAN architectures  
• Identify characteristics of storage devices: magnetic and flash-based devices  
• Identify and explain the differences between file, block, and object-oriented storage architectures  
• Identify SAN performance factors  
• Compare and contrast local, centralized, and distributed storage architectures |
| **3 Introduction to Virtual SAN** |  |
| • Describe Virtual SAN 6  
• Describe the differences between the Virtual SAN 6 hybrid and all-flash architectures  
• Identify the available options to build a Virtual SAN 6 cluster |
| **4 Virtual SAN Configuration** |  |
| • Identify physical network configuration requirements  
• Configure the Virtual SAN virtual network  
• Configure a Virtual SAN 6 cluster  
• Test and validate the Virtual SAN 6 configuration and functionality |
| **5 Virtual SAN Policies and Virtual Machines** |  |
| • Explain how storage policies work with Virtual SAN 6  
• Calculate storage requirements while defining a virtual machine storage policy  
• Define the purpose of virtual machine storage policies and their attributes  
• 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  
• Describe how vsanSparse snapshots work  
• Explain the considerations for vsanSparse snapshots  
• Discuss the vsanSparse snapshot format |
| **6 Managing and Operating Virtual SAN** |  |
| • Manage hardware storage devices  
• Manage hardware device failures  
• Identify and configure VMware vCenter Server™ alarms for Virtual SAN events  
• Describe and configure fault domains  
• Upgrade from Virtual SAN 5.5 to Virtual SAN 6 |
| **7 Interoperability with vSphere Features** |  |
| • Identify VMware vSphere® features and VMware products that interoperate with Virtual SAN 6  
• Describe how Virtual SAN 6 interoperates with VMware vSphere® Enterprise Edition™ features  
• Describe how Virtual SAN 6 interoperates with third-party products and solutions |
| **8 Monitoring and Troubleshooting Virtual SAN** |  |
| • Identify tools to troubleshoot Virtual SAN 6  
• Use the Virtual SAN 6 health check plug-in  
• Monitor and troubleshoot Virtual SAN 6  
• Troubleshoot Virtual SAN 6 upgrades |
| **9 Designing a Virtual SAN Deployment** |  |
| • Understand the Virtual SAN design basics  
• Plan and design the Virtual SAN clusters  
• Consider the Virtual SAN hybrid and all-flash designs  
• Describe the Virtual SAN use case design considerations  
• Identify the design and sizing tools for Virtual SAN |
| **10 Interoperability with Other Technologies** |  |
| • Describe how Virtual SAN 6 interoperates with 3rd-party storage and networking solutions  
• Identify and configure 3rd-party storage arrays for Virtual SAN 6  
• Troubleshoot Virtual SAN 6 upgrades for 3rd-party storage and networking solutions |
| **11 Performance Optimization** |  |
| • Identify performance bottlenecks in Virtual SAN 6  
• Optimize Virtual SAN 6 performance  
• Use performance monitoring tools to troubleshoot Virtual SAN 6 performance |
| **12 Advanced Topics** |  |
| • Explore additional topics in Virtual SAN 6 management and administration  
• Discuss emerging trends and technologies in Virtual SAN 6  
• Identify best practices for Virtual SAN 6 deployment and operation |

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