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VMware vSphere: Operate, Scale, and Secure [V8]

Duration: 5 Days

Course Description:

The VMware vSphere: Operate, Scale and Secure [V8] course is designed to provide learners with an in-depth understanding of how to manage, optimize, and secure a vSphere V8 infrastructure, which is a cornerstone of modern cloud computing environments. By taking this course, learners will be able to perform advanced Virtual machine operations, manage vSphere clusters, and carry out Network and storage operations with proficiency. Participants will gain knowledge on creating robust Backup solutions, deploying vSphere Replication, and Recovering VMs, as well as mastering Resource pool management and vSphere cluster operations. The course also covers the configuration and management of Advanced network features, including vSphere Distributed Switches and Control.

In addition, the course delves into storage operations, teaching the use of technologies such as NVMe and vSAN, and emphasizes the importance of Storage policy-based management. Learners will also learn to maintain vCenter and ESXi operations, including backup schedules and high availability configurations, while also managing ESXi configuration compliance and certificates. The course ensures that students are well-versed in vSphere monitoring tools, Custom alarms, and the benefits of VMware Skyline, along with vSphere security, Access control, Identity federation, VM encryption, and the configuration of vSphere Trust Authority. Overall, this course is an essential step for IT professionals looking to enhance their virtualization skillset and ensure their infrastructure is both performant and secure.

Target Audience:

- Experienced system administrators, system engineers, and system integrators

Prerequisites:

Attending this course meets the training requirement to achieve the following certification:

- Attend VMware vSphere: Install, Configure, Manage [V8]
- Equivalent knowledge and administration experience with ESXi and vCenter Experience with working at the command line is highly recommended.

Course Objectives:

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

- Configure and manage a VMware Tools Repository
- Configure vSphere Replication and recover replicated VMs
- Manage VM resource usage with resource pools
- Configure and manage vSphere networking and storage for a large and sophisticated enterprise
- Configure vCenter High Availability
- Use host profiles to manage VMware ESXi host compliance
- Use the vSphere Client to manage certificates
- Monitor the vCenter, ESXi, and VMs performance in the vSphere client
- Secure vCenter, ESXi, and VMs in your vSphere environment
- Use VMware vSphere Trust Authority to secure the infrastructure for encrypted VMs
- Use Identity Federation to configure the vCenter to use external identity sources

Course Outlines:

1 Course Introduction
- ➢ Introductions and course logistics
- ➢ Course objectives

2 Virtual Machine Operations
- ➢ Recognize the role of a VMware Tools Repository
- ➢ Configure a VMware Tools Repository
- ➢ Recognize the backup and restore solution for VMs
- ➢ Identify the components in the vSphere Replication architecture
- ➢ Deploy and configure vSphere Replication
- ➢ Recover replicated VMs

3 vSphere Cluster Operations
- ➢ Create and manage resource pools in a cluster
- ➢ Describe how scalable shares work
- ➢ Describe the function of the vCLS
- ➢ Recognize operations that might disrupt the healthy functioning of vCLS VMs

4 Network Operations
- ➢ Configure and manage vSphere distributed switches
- ➢ Describe how VMware vSphere Network I/O
- ➢ Control enhances performance
- ➢ Explain distributed switch features such as port mirroring and NetFlow
- ➢ Define vSphere Distributed Services Engine
- ➢ Describe the use cases and benefits of vSphere Distributed Services Engine

5 Storage Operations
- ➢ Discuss vSphere support for NVMe and iSER technologies
- ➢ Describe the architecture and requirements of vSAN configuration
- ➢ Describe storage policy-based management
- ➢ Recognize components in the vSphere Virtual Volumes architecture
- ➢ Configure Storage I/O Control

6 vCenter and ESXi Operations
- ➢ Create a vCenter backup schedule
- ➢ Recognize the importance of vCenter High Availability
- ➢ Explain how vCenter High Availability works
- ➢ Use host profiles to manage ESXi configuration compliance
- ➢ Use the vSphere client to manage vSphere certificates

7 vSphere Monitoring
- ➢ Monitor the key factors that can affect a virtual
- ➢ machine's performance
- ➢ Describe the factors that influence vCenter performance
- ➢ Use vCenter tools to monitor resource use
- ➢ Create custom alarms in vCenter
- ➢ Describe the benefits and capabilities of VMware Skyline
- ➢ Recognize uses for Skyline Advisor Pro

8 vSphere Security and Access Control
- ➢ Recognize strategies for securing vSphere
- ➢ components, such as vCenter, ESXi hosts, and virtual machines
- ➢ Describe vSphere support for security standards and protocols
- ➢ Describe identity federation and recognize its use cases
- ➢ Configure identity federation to allow vCenter to use an external identity provider

9 vSphere Trusted Environments and VM Encryption
- ➢ Configure ESXi Host Access and Authentication
- ➢ Describe virtual machine security features
- ➢ Describe the components of a VM encryption architecture
- ➢ Create, manage, and migrate encrypted VMs
- ➢ List VM encryption events and alarms
- ➢ Describe the benefits and use cases of vSphere Trust Authority
- ➢ Configure vSphere Trust Authority

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