VMware Cloud Foundation: Deploy, Configure, Manage V5.2

Duration: 5 days

COURSE DESCRIPTION

This five-day course provides you with the knowledge, skills, and abilities to achieve competence in deploying, managing, and operating VMware® Cloud Foundation. You will learn about the architecture of VMware Cloud Foundation, storage and network management, licensing, and certificates. In addition to workload domains, availability, life cycle management, and troubleshooting, the course also covers VMware® Aria Suite™ integration and VMware Private AI Foundation with NVIDIA architecture and components.

COURSE OBJECTIVES

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

- Plan a deployment for VMware Cloud Foundation
- Understand VMware Cloud Foundation and supporting architecture
- Configure VMware Cloud Foundation for VMware Cloud Connectivity
- Understand the VMware Cloud Foundation subscription licensing model
- Perform Day-Zero tasks
- Perform VMware Cloud Foundation platform onboarding
- Manage user credentials in VMware Cloud Foundation
- Configure NSX networking in VMware Cloud Foundation
- Deploy and manage Workload Domains
- Understand and implement storage solutions and related policies
- Perform maintenance tasks for the VMware Cloud Foundation platform
- Manage certificates for VMware Cloud Foundation and connected technologies
- Manage the lifecycle for VMware Cloud Foundation
- Deploy and manage VMware Aria Suite on VMware Cloud Foundation
- Understand the Private AI Foundation with NVIDIA architecture and components
- Engage with VMware Cloud Foundation Technical Support Services

COURSE OUTLINE

1 Course Introduction

- Introductions and course logistics
- Course objectives

2 VMware Cloud Foundation Overview

- Describe the VMware Cloud Foundation solution
- Describe VMware Cloud Foundation architecture
- Identify VMware Cloud Foundation components
- Describe vSphere and VMware Cloud Foundation licensing options

3 Day 0 Tasks

- Describe the process for planning and preparing a VMware Cloud Foundation design
- Identify the information required for the planning and preparation workbook
- Describe the fully automated deployment process of VMware SDDC components

4 Post-Deployment Operations

- Use the VMware Cloud Foundation onboarding wizard to complete preliminary SDDC Manager setup tasks

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- Configure user access to VMware Cloud Foundation
- Manage passwords in VMware Cloud Foundation
- Describe password management with SDDC Manager APIs

5 VMware Cloud Foundation Networking with NSX

- Describe NSX management and control planes
- Explain virtual IP addressing
- Describe logical switching
- Identify NSX Edge functions
- Describe NSX deployment in VMware Cloud Foundation
- Explain how logical routing works in NSX
- Recognize Tier-0 and Tier-1 gateway topologies
- Describe the spine-and-leaf design
- Describe the multi-NIC design
- Describe NSX Edge node design
- Discuss BGP and OSPF peering with the physical network
- Describe cluster design and rack design
- Define application virtual networks
- Recognize management domain rack options
- Recognize NSX Edge cluster placement considerations
- Use SDDC Manager to deploy an application virtual network

6 Managing Workload Domains

- Define the concept of workload domain
- Identify use cases for multiple clusters in a workload domain
- Describe the SSO domain architecture
- Define the concept of a network pool
- Explain how to create, edit, and delete a network pool
- Use SDDC Manager to commission hosts
- Describe workload domain design considerations
- Describe ESXi design considerations for a VI workload domain
- Describe vSphere design considerations for a VI workload domain
- Describe software-defined networking design considerations for a VI workload domain
- Describe shared storage design considerations for a VI workload domain
- Describe how to make workload domain design decisions
- Expand the workload domain
- Perform simultaneous cluster operations

7 VMware Cloud Foundation Storage Management

- Describe storage options in VMware Cloud Foundation
- Identify sizing and performance considerations that impact the storage design
- Recognize vSAN design principles
- Identify components in the vSAN architecture
- Recognize vSAN requirements for the management domain and workload domains
- Define the concepts of deduplication and compression
- Describe how to scale vSAN clusters in VMware Cloud Foundation

8 Availability and Business Continuity

- Explain the importance of external service availability
- Identify the steps in the SDDC Manager backup and restore process
- Identify the steps in the NSX backup and restore process
- Describe native vSphere availability options
- Describe the stretched cluster architecture and use cases
- List the stretched cluster requirements in VMware Cloud Foundation
- Describe the stretched cluster architecture and use cases
- List the stretched cluster requirements in VMware Cloud Foundation

9 VMware Cloud Foundation Certificate Management

- Describe public key infrastructure (PKI)
- Explain the purpose of certificate signing requests (CSRs)
- List the available certificate authority (CA) options in SDDC Manager
- Manage certificates in VMware Cloud Foundation
- Integrate SDDC Manager with Microsoft CA and OpenSSL CA
- Install certificates issued by Microsoft CA, OpenSSL CA, or third-party CA

10 VMware Cloud Foundation Life Cycle Management

- Describe life cycle management in VMware Cloud Foundation and the software components it supports
- Describe the role of vSphere Lifecycle Manager and ESXi host images in VMware Cloud Foundation
- Describe the role of NSX Upgrade Coordinator in VMware Cloud Foundation
- Describe VMware Aria Suite Lifecycle and its supported products
- Describe the types of bundles and download options available in VMware Cloud Foundation
- Configure SDDC Manager to download VCF online bundles
- Configure a proxy server to download VCF bundles
- Download VMware Cloud Foundation bundles using the Bundle Transfer utility
- Explain the workflow for using vSphere Lifecycle Manager Images in VMware Cloud Foundation
- Create a vSphere Lifecycle Manager image
- Make a vSphere Lifecycle Manager image available in VMware Cloud Foundation
- Configure custom ESXi ISO images and perform firmware upgrades using vSphere Lifecycle Manager
- Explain the upgrade considerations for VMware Cloud Foundation components
- Outline the upgrade precheck process
- Monitor VMware Cloud Foundation updates
- Use the Async Patch Tool to apply patches between BOM releases

11 VMware Aria Suite on VMware Cloud Foundation

- Describe the VMware Aria Suite architecture running on VMware Cloud Foundation
- Explain the networking prerequisites for deploying VMware Aria Suite on VMware Cloud Foundation
- Describe the steps to install and configure VMware Aria Suite Lifecycle and VMware Workspace ONE
- Explain the common operational tasks in VMware Aria Suite Lifecycle
- Identify the VMware validated solutions for VMware Aria Suite products
- Describe how to use VMware Aria Suite Lifecycle to deploy and manage VMware Aria Suite products

12 VMware Private AI Foundation with NVIDIA

- Describe the Private AI Foundation with NVIDIA solution
- Describe the Private AI Foundation with NVIDIA architecture
- Identify Private AI Foundation with NVIDIA components
- Describe VMware Cloud Foundation use cases for machine learning

13 VMware Cloud Foundation Troubleshooting

- Use the Support and Serviceability (SoS) command line tool to create log bundles, perform health checks, and check password validity
- List the VMware Cloud Foundation services
- Identify the VMware Cloud Foundation log files
- Use token IDs to troubleshoot failed workflows

PREREQUISITES

Before taking this course, you should have completed the following courses or have equivalent experience and knowledge:

- VMware vSphere: Install, Configure, Manage
- VMware NSX: Install, Configure, Manage
- VMware vSAN: Install, Configure, Manage

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WHO SHOULD ATTEND

This course is ideal for system architects and system administrators.

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