

VMware Cloud Foundation : Deploy, Configure, Manage (V5.0)

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 VMware Cloud Foundation topology

3. VMware Cloud Foundation+ and VMware Cloud Connectivity

- Describe the VMware Cloud Foundation+™ architecture
- Identify the pre-requisites for VCF+
- Describe the VCF+ value-added features
- Describe subscription-based licensing parameters
- Describe the subscription process
- Describe the VMware Cloud Gateway™ functionality
- Identify the VMware Cloud Gateway components
- Describe the VMware Cloud Gateway architecture
- Describe VMware Cloud Gateway connectivity to VMware Cloud
- Describe the VMware Cloud platform
- Describe the vSphere+ services used in VCF+
- Demonstrate the capabilities of the cloud UI for VCF+

4. Day Zero Tasks

- Identify the requirements for deploying VMware Cloud Foundation
- Describe the VMware Cloud Foundation bring-up process
- Identify the information required for the Planning and Preparation Workbook
- Complete the Deployment Parameter Workbook
- Describe how VMware Cloud Builder™ automates the deployment process
- Identify the configuration validation process performed by VMware Cloud Builder
- Describe the deployment of the management domain

5. Post-Deployment Operations

- Complete the onboarding wizard
- Understand VMware Cloud Foundation integration with VMware Single Sign-On
- Configure user access to VMware Cloud Foundation
- Describe the importance of user roles in vSphere
- Configure identity sources for VMware Cloud Foundation
- Perform the SDDC Manager backup and restore process
- Identify steps in the NSX backup and restore process
- Manage passwords in VMware Cloud Foundation
- Explain the importance of using VMware Cloud Foundation to manage passwords

- for vSphere components
- Manage and secure a primary password list
- Describe the process for rotating passwords not managed by VMware Cloud Foundation

6. VMware Cloud Foundation Networking with NSX

- Describe network virtualization with NSX
- Recognize NSX operational planes
- Identify NSX components
- Describe logical switching
- Describe NSX Data Center deployment in VMware Cloud Foundation
- Explain how logical routing works in NSX
- Identify VMware NSX® Edge™ functions
- Describe data plane preparation for NSX Edge nodes in a workload domain
- Recognize tier-0 and tier-1 gateway topologies
- Define application virtual networks
- Describe management domain rack options
- List NSX Edge cluster requirements for vSphere with Tanzu
- Discuss NSX Edge cluster placement considerations

7. Managing Workload Domains

- Define workload domains
- List the types of workload domains
- State scale limits for workload domains
- Identify use cases for multiple clusters in a workload domain
- Define network pools
- Size network pools
- Create network pools
- Commission hosts
- Identify workload domain prerequisites
- Create a workload domain
- Scale a workload domain
- Delete a workload domain
- Decommission hosts
- Describe distinctive design decisions for VMware Cloud Foundation components

8. vSphere with Tanzu in VMware Cloud Foundation

- Explain vSphere with Tanzu
- Define the role of Spherelet
- Describe the supervisor cluster control plane
- Define vSphere with Tanzu namespaces
- Describe the role of NSX networking components
- Discuss vSphere with Tanzu networking topology
- Describe control plane VM management networking requirements
- Plan appropriate IP address CIDR ranges for pod, ingress, and egress networking
- Describe prerequisites for vSphere with Tanzu cluster compatibility
- Deploy VMware vSphere® Add-on for Kubernetes

- Create a vSphere namespace
- Configure limits and permissions for a vSphere namespace

9. VMware Cloud Foundation Storage Management

- Identify storage use cases in VMware Cloud Foundation
- Determine the most appropriate storage option for a workload domain
- Describe different vSphere-native storage design options
- Identify VMware vSAN architecture and components
- Describe vSAN requirements for the management and workload domains
- Define deduplication and compression
- Discuss how to scale vSAN clusters in VMware Cloud Foundation
- Explain how storage policies work with VMware Cloud Foundation vSAN clusters
- Configure storage policies for vSAN
- Explain storage policy failure tolerance rules
- Identify a virtual machine storage policy compliance status

10. Availability and Business Continuity

- Recognize the importance of external service availability
- Describe native vSphere availability options
- Identify stretched cluster use cases
- Identify stretched cluster components
- Recognize stretched cluster requirements in VMware Cloud Foundation
- Prepare and deploy a vSAN stretched cluster using APIs

11. VMware Cloud Foundation Certificate Management

- Learn basics of public key infrastructure (PKI)
- Describe the purpose of certificate signing requests (CSRs)
- Describe the use of subject alternative names (SAN)
- Describe available options in SDDC Manager for certificate authorities
- View certificates
- Generate a CSR
- Replace and install certificates for VMware Cloud Foundation components
- Know the available CA options in SDDC Manager
- Configure the Microsoft CA server
- Add OpenSSL CA in SDDC Manager
- Install certificates issued by Microsoft, OpenSSL, and third-party certificate authorities

12. VMware Cloud Foundation Lifecycle Management

- Describe VMware Cloud Foundation Life Cycle Management
- List the products you can upgrade using VMware Cloud Foundation Lifecycle Management
- Use online and offline bundle downloads using VMware Cloud Foundation Lifecycle Management
- Understand the role of vSphere Lifecycle Management in VMware Cloud Foundation
- Understand vSphere Lifecycle Manager baseline-based and image-based clusters

- Understand how and when to use cluster images
- Describe the importance of Hardware Support Managers
- Describe the upgrade prerequisites
- Outline the upgrade precheck process
- Describe the order of upgrade for VMware Cloud Foundation components
- Upgrade VMware Cloud Foundation software and components

13. VMware Cloud Foundation Troubleshooting

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