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VMware Cloud Foundation: Planning, Management, Operations [V4.3]

CODE:	LENGTH:	PRICE:
VMW_VCFPMO43	40 Hours (5 days)	kr43,000.00

Description

This five-day course includes instruction on the capabilities of VMware Cloud Foundation™ and how to successfully plan, deploy, manage, and operate hybrid and cloud infrastructures, including customization. The course explains the architecture of VMware Cloud Foundation and explains licensing, certificates, and storage and network management. The course also covers workload domains, availability, life cycle management, and troubleshooting.

Objectives

By the end of the course, you should be able to meet the following objectives:
- Describe design implications of VMware Cloud Foundation standard or consolidated architecture
- List requirements for VMware Cloud Foundation deployment
- Describe the VMware Cloud Foundation bring-up process and the VMware Cloud Foundation architecture
- Perform VMware Cloud Foundation bring-up
- Describe physical and virtual networking considerations
- Outline VMware Cloud Foundation storage options
- Use the VMware Imaging Appliance to image ESXi hosts
- Describe VMware Cloud Foundation multi-instance federation
- Use VMware Cloud Foundation™ SDDC Manager™ to perform operational tasks
- Describe user roles in VMware Cloud Foundation and VMware vSphere®
- Manage users and passwords using VMware Cloud Foundation
- Manage certificate rotation for VMware Cloud Foundation components
- Use Active Directory integration to automate certificate generation and rotation
- Describe workload domains
- Manage workload domains in VMware Cloud Foundation
- Manage VMware NSX-T™ for VMware Cloud Foundation
- Describe use cases for Application Virtual Networks (AVNs)
- Meet vSphere with VMware Tanzu™ requirements
- Deploy a vSphere with Tanzu enabled workload domain
- Manage VMware vSAN™ storage in a workload domain
- Create vSAN storage policies
- Describe Cloud Native storage
- Describe the importance of business continuity measures in VMware Cloud Foundation
- Plan appropriate backup and restore workflows for VMware Cloud Foundation components
- Implement stretched clusters in VMware Cloud Foundation workload domains

Audience

Experienced system administrators, system integrators, and consultants responsible for implementing and managing VMware Cloud Foundation

Prerequisites

This class requires system administration experience with vSphere deployments and completion of the following courses:
- VMware vSphere: Install, Configure, Manage
- VMware NSX-T Data Center: Install, Configure, Manage
- VMware vSAN: Management and Operations

Programme

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
- Define VMware Cloud Foundation terminology

3 Day Zero Tasks
- Identify the requirements for deploying VMware Cloud Foundation
- Identify management domain sizing considerations
- Identify workload domain sizing considerations
- Detail design considerations for ESXi in management and VI workload domains
- Detail design considerations for vCenter in management and VI workload domains
- Detail the VMware Cloud Foundation bring-up process
- Identify information required for the Planning and Preparation Workbook
- Identify information required for the Deployment Parameter Workbook
- Describe how VMware Cloud Builder automates the deployment process
- Explain how the Deployment Parameter Workbook is imported into VMware Cloud Builder
- Recognize the configuration validation process performed by VMware Cloud Builder
- Detail the deployment of the management domain
- Recognize the options to image a host
- Identify the key capabilities of VIA
- Recognize how to use VIA for imaging the ESXi Nodes

4 Post Deployment Operations
- 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 in vSphere to use with VMware Cloud Foundation
- Manage passwords in VMware Cloud Foundation
- Explain the importance of using VMware Cloud Foundation to manage passwords for vSphere components
- Detail the best practices for password management for VMware Cloud Foundation
- Retrieve and secure the password list
- Describe the process for rotating passwords not managed by VMware Cloud Foundation

5 VMware Cloud Foundation License Management
- Describe how to add license keys to the VMware Cloud Foundation inventory
- Describe how to view license keys in SDDC Manager
- Describe how to assign license keys
- Describe how to remove license keys
- Describe how to replace expiring licenses

6 VMware Cloud Foundation Networking with NSX-T
- Describe NSX Management plane and Control planes
- Detail design considerations for workload domains with shared NSX Manager instances
- Detail design considerations for workload domains with dedicated NSX Manager instances
- Describe the spine-and-leaf design
- Describe the addressing scheme for the underlay
- Recognize possible variations of the spine-and-leaf design
- Describe the multi-NIC design
- Describe NSX Edge node design and BGP peering with the physical network
- Describe cluster design and rack design
- Explain dynamic routing with BGP
- Explain virtual IP addressing
- Describe logical switching
- Detail NSX Edge functions
- Define application virtual networks
- Describe management domain rack options
- List NSX Edge cluster requirements for vSphere with Tanzu
- Discuss NSX Edge cluster placement considerations
- Describe NSX-T Data Center deployment in VMware Cloud Foundation
- Explain how logical routing works in NSX-T Data Center
- Identify NSX Edge functions
- Describe data plane preparation for NSX-T Data Center Edge nodes in a workload domain
- Recognize Tier-0 and Tier-1 gateway topologies
- Recognize features of NSX distributed firewalls
- Describe the benefits of NSX Federation in VMware Cloud Foundation
- Identify NSX Federation Use Cases
- Explain NSX Federation Components and Architecture
- Discuss NSX Federation configuration basics

7 Managing Workload Domains
- Define workload domains
- Detail design considerations for vSphere networking in management and VI workload domains
- Detail design considerations for storage in management and VI workload domains
- Recognize design choices for a consolidated design or standard design
- List the types of workload domains
- State scale limits for workload domains
- Identify use cases for multiple clusters in a workload domain
- List workload domain prerequisites
- Explain how to create a workload domain
- Describe how to scale a workload domain
- Explain how to delete a workload domain
- Describe host decommissioning

8 vSphere with Tanzu in VMware Could Foundation
- Discuss the vSphere with Tanzu solution
- Define the role of Spherelet
- Describe the supervisor cluster control plane
- Define vSphere with Tanzu namespaces
- Describe the role of NSX-T networking components
- Discuss vSphere with Tanzu networking topology
- Describe VMware Container Networking with Antrea
- 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 vSphere with Kubernetes
- Create a vSphere namespace
- Configure limits and permissions for a vSphere namespace
- Enabling Harbor Image Registry

9 VMware Cloud Foundation Storage Management
- Identify vSAN architecture and components
- Recognize storage options for VMware Cloud Foundation
- Recognize the supported storage options for each domain
- Recognize the connectivity options for supplemental storage
- Explain why vSAN is the best option for VMware Cloud Foundation storage
- Recognize vSAN design considerations
- Identify sizing and performance considerations that impact the storage design
- 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
- Explain storage policy failure tolerance rules
- Identify a VM storage policy compliance status
- Relate storage policies to Kubernetes storage classes
- Describe persistent volumes
- Monitor Cloud Native Storage in the vSphere Client

10 Availability and Business Continuity
- Identify steps in the SDDC Manager backup and restore process
- Recognize the importance of external service availability
- Describe native vSphere availability options
- Identify steps in the NSX backup and restore process
- 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
- Describe public key infrastructure (PKI)
- Explain the purpose of certificate signing requests (CSRs)
- List the available CA options in SDDC Manager
- Describe how to view certificates
- Explain how to generate a CSR
- Describe how to replace and install certificates for VMware Cloud Foundation components
- List the available CA options in SDDC Manager
- Explain how to configure the Microsoft CA server
- Describe how to install certificates issued by the Microsoft CA server
- Explain how to add OpenSSL CA in SDDC Manager
- Describe how to install certificates issued by OpenSSL CA
- Explain how to install certificates issued by third-party CAs

12 VMware Cloud Foundation Life Cycle Management
- Describe Life Cycle Management
- List products that you can upgrade using VMware Cloud Foundation Lifecycle Manager
- Describe the available options for online and offline bundle download using VMware Cloud Foundation Lifecycle Manager
- Describe the role of vSphere Lifecycle Management in VMware Cloud Foundation
- Describe vSphere Lifecycle Manager Baseline-based and Image-based Clusters
- Detail how and when to use cluster images
- Explain how to import a cluster image
- Explain how to extract a cluster image
- 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
- Explain how to upgrade VMware Cloud Foundation software and components

13 VMware Imaging Appliance
- Identify the requirements for starting a deployment
- List the options to image a host
- Identify the key capabilities of the VMware Imaging Appliance
- Explain how to use the VMware Imaging Appliance to image hosts

14 VMware Cloud Foundation Multisite Instance Federation
- Recognize the benefits of the federation feature in VMware Cloud Foundation
- Describe the federation feature and multisite management
- Recognize ways a federation helps manage resources and provide visibility in a multi-instance implementation of VMware Cloud Foundation
- Describe how to create, join, leave, and dismantle a federation
- Recognize the design considerations for a federation

15 VMware Cloud Foundation Troubleshooting
- Explain how to perform checks and create log bundles with the SoS tool
- List VMware Cloud Foundation services
- Identify VMware Cloud Foundation log files
- Describe the use of reference token IDs to troubleshoot failed workflows

Session Dates

På begäran, kontakta oss

Ytterligare information

Denna utbildning finns också som utbildning på plats. Kontakta oss för mer information.