Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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VMware Cloud Foundation: Build, Manage, and Secure [V9.0]

CODE:	LENGTH:	PRICE:
EDU-VMW-VCFBMS9	40 Hours (5 days)	$4,850.00

Description

This five-day course provides you with the knowledge, skills, and abilities to achieve competence in deploying, managing, operating and securing private cloud using VMware Cloud Foundation® (VCF). You will learn about the architecture of VCF, storage and network management, licensing, and certificates. In addition to workload domains, availability, and life cycle management, the course also covers upgrade scenarios.

Objectives

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

- Define VCF and its key features
- Describe the use cases of VCF
- Explain the architecture of the VCF private cloud
- Recognize the components of the VCF private cloud
- Outline the sequence for deploying the VCF private cloud
- Describe the deployment configuration of VCF instance core components
- Explain the deployment configuration of VCF fleet management components
- Deploy VMware Cloud Foundation® Operations for networks, VMware Cloud Foundation® Operations for logs, and VMware Cloud Foundation® Identity Broker
- Describe the VCF licensing model
- Describe the single sign-on architecture in VCF
- Identify the steps to configure single sign-on in VCF
- Manage users and user groups in VCF
- Outline the steps to manage passwords in VCF
- Outline the steps to create a workload domain
- Configure VMware® vCenter® linked groups
- Import vCenter as a workload domain using VCF Operations
- Describe the process for configuring Fibre Channel storage
- Identify the components of an iSCSI storage system
- Outline the process of provisioning NFS storage to VMware® ESX hosts
- Identify and use built-in tools to validate a successful VMware® vSAN deployment
- Compare the various tools used to monitor a vSAN cluster
- Explain the types of vSAN reports available in VMware Cloud Foundation® Operations
- Explain Virtual Private Cloud concepts and constructs
- Differentiate between Centralized and Distributed Network Connectivity
- Identify the steps to configure virtual private cloud
- Manage certificates in VCF
- Explain the life cycle management of VCF components
- Identify the supported upgrade paths to VCF 9.0
- Define security, compliance and resilience in VCF
- Describe the integrated security features across all layers in VCF
- Discuss and perform VCF upgrade paths

Audience

System Administrators, Solution Engineers, Consultants, Architects, and Support Personnel

Prerequisites

This Course has the following Prerequisites:

- Working experience and knowledge of VMware vSphere, VMware NSX and vSAN environments

Program

1. Course Introduction
Introduction and course logistics
Course objectives
2. VCF Private Cloud: Overview and Architecture
Define VCF and its key features
Describe the use cases of VCF
Explain the capabilities of VCF
Describe the integrated security across all layers in VCF
Explain the advanced services of VCF
Explain the architecture of the VCF private cloud
Recognize the components of the VCF private cloud
Distinguish between VCF fleet-level components and VCF instance-level components
Describe the various roles in VCF private cloud
3. VCF Private Cloud Deployment
Identify the VCF fleet deployment considerations
Describe the process for planning and preparing a VCF deployment
Identify the information required for the Planning and Preparation Workbook
Explain the high-level steps to deploy VCF private cloud
Outline the sequence for deploying the VCF private cloud
Describe the deployment configuration of VCF instance core components
Explain the deployment configuration of VCF fleet management components
Use the VCF Installer deployment wizard to deploy a new VCF fleet
Use a deployment specification JSON file to deploy a new VCF fleet
4. VCF Post-deployment Tasks
Navigate the VCF Operations user interface
Navigate the VMware Cloud Foundation® Automation user interface
Navigate the vSphere Client user interface
Explain VCF Operations for networks, VCF Operations for logs, and VCF Identity Broker
Deploy VCF Operations for networks, VCF Operations for logs, and VCF Identity Broker
5. VCF Fleet Management
Describe the VCF licensing model
Assign and manage VCF licenses
Identify key log files to troubleshoot licensing issues
Discuss single sign-on in VCF
Describe the single sign-on architecture in VCF
Discuss VCF Identity Broker in VCF
Identify the steps to configure single sign-on in VCF
List the supported directories and IDPs in VCF
Configure SSO and enablement for all components in a VCF Instance
Manage users and user groups in VCF
Outline the steps to manage passwords
6. VCF Workload Domain
Explain VCF domains
Describe the management of the workload domains
List design considerations for workload domains
Describe design prerequisites for a workload domain
Outline the steps to create a workload domain
Describe vCenter Groups
Configure vCenter linked groups
Import vCenter as a workload domain using VCF Operations
7. VCF Networking
Describe the role of VMware NSX in VCF
Describe the default NSX objects that are created during the VCF deployment
Discuss the Workload domain networking options
Describe the networking constructs in NSX
Explain Virtual Private Cloud concepts and constructs
Differentiate between Centralized and Distributed Network Connectivity
Configure Distributed Network Connectivity
Configure Centralized Network Connectivity

Identify key CLI commands to determine the NSX Edge cluster status and BGP peering
Create a Virtual Private Cloud
Create subnets within a virtual private cloud
8. VCF Storage Management
Define the key components involved in Fibre Channel storage systems
Describe the process for configuring Fibre Channel storage
Identify the components of an iSCSI storage system
Explain how iSCSI addressing works
Describe the benefits and considerations of using multipathing with iSCSI storage
List the requirements to use NFS as principal and supplemental storage
Outline the process of provisioning NFS storage to ESX hosts
Describe the steps involved in deploying a vSAN cluster
Identify and use built-in tools to validate a successful vSAN deployment
Apply a custom storage policy to an individual virtual machine or virtual disk
Compare the various tools used to monitor a vSAN cluster
Explain the types of vSAN reports available in VCF Operations
Compare different maintenance mode options and their impact on object health
Summarize the steps to power down a vSAN cluster in a workload domain
9. VCF Certificate Management
Describe public key infrastructure
Explain the purpose of certificate signing requests
Outline the steps to integrate certificates in VCF
List the available CA options in SDDC Manager
Integrate VCF Operations with Microsoft CA and OpenSSL CA
Manage certificates in VCF
10. VCF Life Cycle Management
Discuss life cycle management in VCF
Explain the life cycle management of VCF fleet management
Describe how to configure software depots
Describe how to upgrade and patch fleet management components
Explain the life cycle management of VCF components
Describe how to upgrade and patch the VCF management components
Explain the process for backing up and restoring fleet-level management components
Explain the process for backing up and restoring VCF management components
11. VCF Security
Define security, compliance and resilience in VCF
Describe the integrated security features across all layers in VCF
Explain the advanced networking and security capabilities of VCF
Outline the steps to monitor User and Infrastructure Security
Explain how Compliance Benchmark works
Outline the steps to monitor Configuration Drift
12. VCF Upgrade Paths
Identify the supported upgrade paths to VCF 9.0
Explain the upgrade key consideration
Evaluate both existing and future compatibility assessments
Explain the upgrade sequence to the VCF 9 fleet using the existing vSphere
Explain the upgrade sequence to the VCF 9 fleet using the existing vSphere and VCF Operations
Explain the upgrade sequence to the VCF 9 fleet using the existing VCF 5.2 with multiple Aria components

Lab Outline

- Lab 1 Case Study
- Lab 2 Accessing the Lab Environment
- Lab 3 (Simulation) Deploying VMware Cloud Foundation with Quick Installer
- Lab 4 Managing the VCF Environment with the User Interface
- Lab 5 Verifying the VCF Operation Integration with the Management Domain
- Lab 6 Deploying the VCF Operations for Logs Appliance
- Lab 7 (Simulation) Registering and Activating Licenses for VCF
- Lab 8 Configuring VCF Single Sign-On for the Management Domain
- Lab 9 Assigning Permissions to VCF SSO Users
- Lab 10 Adding Open LDAP as an Identity Source51
- Lab 11 Managing Passwords
- Lab 12 Commissioning Hosts
- Lab 13 Creating Workload Domain
- Lab 14 (Simulation) Creating a Workload Domain with the Supervisor Cluster
- Lab 15 Verifying the Workload Domain Components Integration with VCF Operations
- Lab 16 Configuring VCF Single Sign-On for Workload Domain vCenter and NSX Manager
- Lab 17 Assigning Permissions to VCF SSO Users in the Workload Domain
- Lab 18 Creating vCenter Group
- Lab 19 Assigning a License to the Workload Domain vCenter

• Lab 20 Adding an ESX Host to the Workload Domain
• Lab 21 Creating Virtual Private Cloud (Distributed)
• Lab 22 Deploying an NSX Edge Cluster in a Workload Domain Using the vSphere Client
• Lab 23 Creating Centralized Virtual Private Cloud
• Lab 24 Reviewing the Workload Domain vSAN Cluster Details
• Lab 25 Analyzing the Placement of VM Objects and Components in the vSAN Cluster
• Lab 26 Running vSAN Tests
• Lab 27 Creating and Applying a vSAN Storage Policy
• Lab 28 Implementing Certificates
• Lab 29 Configuring Backup
• Lab 30 (Optional) Using APIs
• Lab 31 (Optional) Using SoS Commands

Session Dates

On request. Please Contact Us

Additional Information

This training is also available as onsite training. Please contact us to find out more.