# VMware VCF 9.0: Build,Manage and Secure Training

Duration: **5 Day**

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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.

## Prerequisites

Participants should have:

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

### Target Audience

This course is designed for: System Administrators, Solution Engineers, Consultants, Architects, and Support Personnel

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## What You Will Learn

By the end of this course, learners will be able to:

- 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.

## Training Outline

**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

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- 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

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- 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**

- 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

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- 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

## Exams and Assessments

The VMware Cloud Foundation 9.0 Administrator (2V0-17.25) exam for the VMware Certified Professional - VMware Cloud Foundation Administrator is available separately.

## Hands-On Learning

- This course is delivered through a combination of presentations, demonstrations and practical learner labs