VMware Cloud Foundation: Build, Manage, and Secure 9.1 Training

Duration: **5 Day**

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info@bilginc.com
bilginc.com

What Can You Achieve with This Training?

- Develop the skills to **deploy, configure, administer, and secure VMware Cloud Foundation (VCF) 9.1** Private Cloud environments.
- Understand **VCF fleet and instance architectures** and manage the deployment and operation of enterprise private cloud infrastructure.
- Configure **VMware NSX networking and vSAN storage** while administering workload domains and infrastructure resources.
- Perform **VCF lifecycle management**, including software updates, patching, upgrades, backup, and recovery operations.
- Strengthen private cloud security through **identity management, role-based access control (RBAC), certificate management, and security posture assessment**.

The **VMware Cloud Foundation: Build, Manage, and Secure 9.1 Training** is a comprehensive **five-day technical course** focused on deploying, operating, and securing a VMware Cloud Foundation Private Cloud environment.

Participants examine **VCF architecture, licensing models, and Private Cloud components** at both the fleet and instance levels. The course provides an end-to-end understanding of VCF fleet deployment, initial configuration, post-deployment operations, and ongoing infrastructure administration.

Key topics include **VCF fleet management, workload domain administration, VMware NSX networking, and vSAN storage management**. Participants also explore identity services, access control, and certificate management to support secure private cloud operations.

The programme addresses **software lifecycle management, patching, upgrades, backup and restore procedures**, along with supported migration and upgrade paths to**VCF 9.1** from existing VMware environments.

Designed for technical professionals responsible for enterprise private cloud infrastructure, this course develops the practical knowledge needed to **build, manage, maintain, and secure VMware Cloud Foundation 9.1 environments**.

Exams and Certification

This course helps participants prepare for the**VMware Certified Professional – VMware Cloud Foundation Administrator** certification exam.

The certification exam is available separately and is not included as part of the course.

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Prerequisites

Participants should meet the following requirements:

- Completion of **Learning Path Stage-1 Training**, including:
  - **Introduction to VCF**
  - **VMware Cloud Foundation: Compute Fundamentals**
  - **VMware Cloud Foundation: Storage Fundamentals**
  - **VMware Cloud Foundation: Network Fundamentals**
- Practical experience and working knowledge of**VMware vSphere, VMware NSX, and vSAN** environments

Who Should Attend

This course is intended for:

- **System Administrators**
- **Solution Engineers**
- **Technical Consultants**
- **Infrastructure and Solution Architects**
- **Technical Support Personnel**

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What You Will Learn

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

- Describe **VMware Cloud Foundation 9.1 architecture** and explain the responsibilities of Private Cloud components at fleet and instance levels.
- Deploy and configure a **VCF Private Cloud environment** using the **VCF Installer**, including networking, storage, and post-deployment configuration.
- Manage **Single Sign-On, role-based access control, and identity federation** to support secure user access and administration.
- Create and administer **workload domains** and understand the process of importing existing vCenter environments into VCF.
- Configure and manage **VMware NSX networking and vSAN storage**, applying appropriate network and storage configurations.
- Use the **software depot** to manage software packages and perform **patching and upgrades** for VCF components.
- Configure and execute **backup and restore procedures** for fleet-level and management components.
- Apply **PKI and certificate management** practices to support secure VCF operations.
- Assess security and compliance using **Security Posture Management** and the **Security Operations Dashboard**.
- Identify supported **upgrade paths to VCF 9.1** and explain the prerequisites and sequence of operations for different VMware environments.

Training Outline

1. Course Introduction

- Introducing **VMware Cloud Foundation components**, architecture, and supported Private Cloud use cases
- Exploring the **VCF licensing model** and available license types
- Reviewing the course structure and key subject areas

2. VCF Private Cloud: Overview and Architecture

- Examining the primary features, use cases, and **integrated security capabilities** of VCF Private Cloud

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- Exploring advanced services and operational management functions
- Understanding **Private Cloud architecture at fleet and instance levels**
- Identifying administrative roles and capabilities within a VCF Private Cloud environment

3. VCF Private Cloud Deployment

- Identifying planning requirements and considerations for **VCF fleet deployment**
- Reviewing the deployment sequence and configuration of core infrastructure components
- Preparing deployment configurations for **instance and fleet management components**
- Deploying a new VCF fleet through the **VCF Installer wizard or a JSON configuration file**

4. VCF Post-Deployment Tasks

- Exploring deployment models for **VCF Operations for Networks, VCF Operations for Logs, and Identity Broker**
- Evaluating deployment requirements and considerations for VCF Operations components
- Navigating **VCF Operations management interfaces** and performing post-deployment administration tasks

5. VCF Fleet Management

- Understanding the **VCF licensing model**, including capacity pooling and license assignment procedures
- Configuring **Single Sign-On (SSO)** and reviewing Identity Broker deployment models
- Identifying supported directories and identity providers and enabling SSO
- Administering **role-based access control (RBAC)**, users, user groups, and credentials
- Exploring password management workflows and **API-based credential management** options

6. VCF Workload Domain

- Understanding **workload domains** and their associated vSphere, networking, and storage design considerations
- Identifying design prerequisites and creating workload domains
- Configuring **vCenter linked groups** and managing host and cluster additions
- Importing an existing **vCenter environment as a workload domain**

7. VCF Networking

- Examining the core components of **VMware NSX architecture**

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- Understanding **NSX overlay networking** concepts and functionality
- Exploring **Virtual Private Cloud (VPC)** constructs and subnet configuration
- Reviewing network connectivity requirements during fleet deployment and the role of **Transit Gateways**

8. VCF Storage Management

- Comparing storage models, including **principal and supplemental storage** options
- Identifying **vSAN networking and hardware requirements**
- Configuring **vSAN clusters and storage policies**
- Understanding **vSAN fault domains** and cluster management operations
- Analysing vSAN performance and generating **storage reports**

9. VCF Certificate Management

- Reviewing **Public Key Infrastructure (PKI)** concepts and **Certificate Signing Request (CSR)** procedures
- Understanding certificate management workflows in **SDDC Manager**
- Integrating **Microsoft CA and OpenSSL CA** for certificate issuance
- Installing and administering certificates issued by **Microsoft CA, OpenSSL CA, or third-party Certificate Authorities**

10. VCF Lifecycle Management

- Understanding the purpose and configuration of the **software depot**
- Managing software depot content, storage resources, and **bundle assignments**
- Performing **upgrades and patching** for management and fleet components
- Configuring **backup and restore procedures**
- Executing backup and recovery operations for **fleet-level and management components**

11. VCF Security

- Reviewing fundamental **security, compliance, and resilience** principles
- Examining **integrated security capabilities** across VCF infrastructure layers
- Assessing compliance requirements and managing **security posture**
- Monitoring security health and analysing **audit trail events**

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- Orchestrating **Protection and Recovery workflows**

12. VCF Upgrade Paths

- Reviewing supported **upgrade paths to VCF 9.1** and performing compatibility assessments
- Understanding the upgrade process from **vSphere 8.0 to VCF 9.1**
- Examining upgrade stages for **vSphere 8.0 environments with Aria components**
- Identifying prerequisites and upgrade sequences for **VCF 5.2 environments with Aria components**
- Distinguishing between the **vSphere upgrade path** and the **vCenter import process**