# VMware Cloud Foundation: Automate and Operate [V9.1 Training

Duration: **5 Day**

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## What Can You Achieve with This Training?

- Build the skills to **automate, operate, and administer VMware Cloud Foundation (VCF) 9.1** Private Cloud environments.
- Use **VCF Automation** to configure cloud provider infrastructure, regions, organizations, networking resources, and access permissions.
- Standardize virtual machine and application provisioning through**blueprints, catalogs, and content libraries**.
- Monitor infrastructure performance and health using**VCF Operations metrics, alerts, reports, dashboards, and policies**.
- Improve operational visibility through **log analysis, troubleshooting, service discovery, and application monitoring**.

The **VMware Cloud Foundation: Automate and Operate [V9.1] Training** is a comprehensive **five-day technical course** focused on the automation and operational management of VMware Cloud Foundation Private Cloud infrastructure.

The course develops the knowledge and practical capabilities required to configure, automate, administer, and monitor private cloud environments using **VMware Cloud Foundation Automation** and **VCF Operations**.

The automation modules examine **VCF Automation architecture, provider and organization administration, identity management, networking, content libraries, blueprints, and catalogs**. Participants also explore Supervisor management, infrastructure resource provisioning, and workload deployment.

The operations modules focus on the monitoring and management features of**VCF Operations**. Topics include **alerts, metrics, views, reports, dashboards, policies, and log management**, enabling participants to assess infrastructure performance and operational conditions.

The programme also addresses **storage health, diagnostics, service discovery, application monitoring, and VKS cluster observability** to support effective infrastructure operations.

Designed for technical professionals responsible for VMware Cloud Foundation environments, this course helps develop the skills needed to **streamline automation, simplify resource administration, and improve operational visibility**.

## Exams and Certification

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

**The certification exam is offered separately from the training course.**

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## Prerequisites

Participants are expected to have completed the following course:

- **VMware Cloud Foundation: Build, Manage and Secure [v9.1]**

## 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 the **VCF Automation architecture** and explain the functions of its primary components.
- Discover, validate, and administer **infrastructure resources as a cloud provider**.
- Create and manage **VCF Automation regions and organizations**.
- Configure networking at both provider and organization levels using **VCF Automation 9.1 Network Architecture**.
- Administer **content libraries** at provider and organization levels, including the **MSRQ enhancements introduced in VCF 9.1**.
- Manage organizational **access control and permissions** through users, groups, and roles.
- Create and maintain **YAML-based infrastructure blueprints and catalogs** for resource provisioning.
- Explain workload and virtual machine deployment workflows using **vSphere Namespace, Supervisor, and IaaS services**.
- Create and manage **custom metric views, reports, and dashboards** in VCF Operations.
- Configure **policies, symptoms, and alerts** to meet infrastructure monitoring requirements.
- Use **VCF Health, Diagnostics, and Troubleshooting Workbench** to investigate operational issues.
- Evaluate workload conditions through **log management, storage health monitoring, service discovery, and application monitoring**.
- Explain the configuration and use of **VKS cluster monitoring and enhanced observability** capabilities.

## Training Outline

### 1. Course Introduction

- Introducing the course structure and logistical information
- Reviewing the learning objectives and providing an overview of **VMware Cloud Foundation 9.1**

### 2. VCF Automation Overview

- Explaining commonly used terminology within **VCF deployments**
- Examining **fleet-wide identity providers** in VCF Operations

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- Reviewing the main features and advantages of **VCF Automation**
- Exploring the architecture and foundational components of VCF Automation
- Introducing the **VCF Management Service Platform**

### 3. Provider Infrastructure Management

- Exploring the **Provider Management Portal** and its administrative capabilities
- Discovering infrastructure resources and validating **vCenter, VCF Instance, NSX Manager, and Edge clusters**
- Examining **infrastructure policies** within VCF Automation

### 4. Provider Identity Management

- Enabling and configuring **VCF Single Sign-On** for the Automation Appliance
- Reviewing supported identity providers, including **OpenID, LDAP, and SAML**
- Understanding predefined roles, **rights bundles**, and access control mechanisms
- Managing **service accounts and API tokens**

### 5. VCF Automation Regions

- Defining a **region** and identifying the prerequisites for region creation
- Understanding the relationship between a **region, Supervisor, and NSX Manager**
- Examining **VM Classes, reserved VM Classes, and storage classes**
- Reviewing the features and capabilities of the **provider content library**

### 6. VCF Automation Organizations

- Identifying the different **organization types** available in VCF Automation
- Reviewing **region quota enhancements** introduced in VCF 9.1 compared with VCF 9.0
- Designing **Multi-Supervisor Region (MSRQ)** environments
- Exploring **automatic expansion and shrinkage** of content libraries within MSRQ
- Understanding changes to **tenant content library placement** introduced in VCF 9.1
- Creating an **All Apps Organization**

### 7. VCF Automation Networking

- Exploring **VCF Automation 9.1 Network Architecture** and user interface improvements

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- Understanding **Provider Networking, External IP Blocks, and shared Subnets**
- Reviewing the **Infoblox IPAM integration** introduced in VCF Automation 9.1
- Examining **Regional Networking**
- Configuring organization networking, including **VPC, Transit Gateway, and VLAN Extended Subnet**
- Configuring **Workload Networking** and **VM Load Balancer Service**

## 8. Organization Management

- Creating and administering **projects, vSphere namespaces, and namespace classes**
- Exploring **Namespace Self-Service** and binding workflows
- Reviewing namespace update procedures
- Applying **VCF Automation infrastructure policies** to organizational resources

## 9. Organization Content Management

- Identifying and managing resources available through **Content Hub**
- Creating and deploying **VCF Automation Blueprints using YAML**
- Exploring the **Supervisor Namespace Capture** feature
- Configuring and working with **Custom Forms**
- Reviewing **Embedded Orchestrator** capabilities and workflows

## 10. Deploy Modern Apps

- Examining cloud services deployed through **vSphere Supervisor**
- Understanding **self-service infrastructure consumption** using IaaS services in VCF 9.1
- Comparing **Direct Mode and Linked Mode** within IaaS
- Reviewing the complete workflow for deploying **Virtual Machine instances**
- Defining a **Container Service** in VCF Automation

## 11. VCF Operations Overview

- Reviewing the primary capabilities and use cases of **VCF Operations**
- Understanding the components of a **VCF Operations node and cluster**
- Exploring **Availability Zones**

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- Learning basic navigation within the VCF Operations console

### 12. VCF Metrics, Views, and Reports

- Understanding the role of **metrics and views** in VCF Operations
- Creating a basic **custom view** and adjusting its configuration settings
- Creating a basic **report** and configuring reporting options

### 13. Dashboards

- Exploring the functions and purposes of **dashboards**
- Building dashboards with predefined and **custom widgets**
- Organizing dashboards into groups and sharing them with users

### 14. VCF Operations Policies

- Explaining the purpose of **VCF Operations policies**
- Configuring policies and associated components

### 15. Symptoms and Alerts

- Understanding the purpose of **alerts** and the elements of an alert definition
- Creating **static symptom definitions** and configuring threshold types
- Building custom alerts through the **Create Alert Definition** workflow

### 16. VCF Health, Findings, and Workbench

- Understanding the functions of **VCF Health and Diagnostics**
- Monitoring the operational status of **VCF Instances**
- Exploring the troubleshooting capabilities of **Troubleshooting Workbench**
- Using **Log Assist** to provide support teams with detailed operational context

### 17. VCF Logs and Storage

- Examining the **log management capabilities** available in VCF Operations
- Identifying **performance and health issues** affecting storage clusters

### 18. Workload Monitoring

- Exploring **infrastructure service and application monitoring** capabilities
- Enabling **Service Discovery** within a VCF deployment

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- Reviewing **VKS cluster monitoring** capabilities introduced in VCF Operations 9.1
- Configuring **vCenter and VCF Operations** to enable enhanced VKS observability