



VMware Cloud Foundation Operations: Advanced Design and Deploy [v9.1]

Course Overview

This four-day course provides you with the knowledge, skills, and abilities to achieve competence in designing, deploying, and operating VMware Cloud Foundation Operations. You will learn about the VCF Operations architecture, deployment models, and load balancing options, as well as Day 1 configuration including licensing, password and certificate management, VCF Single Sign-On, and Unified Cloud Proxy design. In addition, the course covers super metrics, custom dashboard configurations, capacity management, what-if scenarios, and workload placement. In the cost and fleet management sections, you will learn about cost efficiency management, chargeback and billing, configuration drift detection, certificate and password management, tag management, and security posture and compliance.

Course Objectives

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

- Describe the architecture, deployment models, and load balancing options for VCF Operations.
- Outline the VCF Operations load balancing options
- Configure day-1 settings including licensing, passwords, certificates, VCF SSO, and Unified Cloud Proxy.
- Design and implement super metrics,
- Design and implement custom dashboards
- Outline the various custom dashboard and widget configurations
- List and define the primary capacity definitions used in capacity management
- Describe what-if analysis and capacity management strategies.
- Describe Workload Placement
- Define the operational and business intents for a data center
- Recognize the options for rightsizing VMs
- Access the cost management capabilities in the VCF Operations console
- Describe the concept of cost drivers and price calculation framework
- Explain the process of enabling upfront price estimate for new projects in VCF Automation
- Manage workload placement, cost efficiency, fleet configuration, and security compliance across the VCF fleet.
- Explain the capabilities and benefits of management packs
- Describe the Security Posture architecture
- Apply troubleshooting methodologies to diagnose and resolve VCF Operations issues using alerts, metrics, and logs.

Target Audience

- Solution Architects, Cloud Administrator, VI Administrator, System Administrators, Consultants and Support Personnel

Prerequisites

This course has the following prerequisites:

- VMware Cloud Foundation: Solution Architecture & Design.
- VMware Cloud Foundation: Build, Manage & Secure.
- VMware Cloud Foundation: Automate and Operate.

Course Modules

Module 1: Course Introduction

- Describe the scope and objectives of the VCF Operations Advanced Design and Deploy course
- Outline the course structure and the modules covered in the curriculum
- Identify the target audience and prerequisites for the course

Module 2: VCF Operations Architecture and Design

- List the key features and main functional pillars of VCF Operations
- Describe the VCF Management Services components and high availability mechanisms
- Outline the deployment models and network locations available for VCF Operations
- Compare the VCF Operations load balancing options including NSX Edge and Avi

Module 3: VCF Operations Deployment and Day 1 Configuration

- Explain the VCF deployment paths and components using the VCF Installer
- Compare legacy and VCF 9.1 licensing models for connected and air-gapped deployments
- Describe day-1 configurations including password, certificate, and VCF SSO management
- Determine Unified Cloud Proxy sizing and collector group placement considerations

Module 4: VCF Operations Day 2 Business Requirement Analysis

- Identify the steps to define and document customer problem statements
- Recognize how mapping problem statements to capabilities builds better Day 2 outcomes
- Define critical business integration requirements and gap analysis for super metrics

Module 5: Super Metrics

- Describe the concept, components, and benefits of super metrics
- Define the types of super metrics and their design considerations
- Manage super metrics using the Super Metric Editor and creation wizard

Module 6: Advanced and Custom Dashboards Configurations

- Outline the various custom dashboard and widget configurations
- Configure data inputs, input transformations, and output filters for widgets
- Design and configure widget interactions within and between dashboards
- List dashboard and widget design considerations

Module 7: Capacity Management

- List and define the primary capacity definitions and terminology in capacity management
- Discuss the capacity engine and capacity planning models
- Assess overall data center capacity and identify optimization recommendations
- Describe new capacity management and workload optimization capabilities in VCF Operations 9.1

Module 8: What-If Scenarios

- Describe what-if analysis and its role in capacity planning
- Assess what-if scenarios for adding and removing VM workloads to a private cloud
- Assess what-if scenarios for Network Assessment and Value Analysis

Module 9: Workload Placement

- Describe Workload Placement and assess environment performance for optimization
- Define operational and business intents for a data center
- Assess the process of optimizing and balancing workloads in data centers
- Recognize the options for rightsizing virtual machines

Module 10: Cost Efficiency Management

- Describe how VCF Operations helps organizations achieve cost efficiency for IT infrastructure
- Describe cost drivers, price calculation framework, and base rate calculation models
- Create a cost analysis and explain the Showback dashboard capabilities
- Outline the steps for creating a pricing policy and managing chargeback and bills

Module 11: Fleet Management

- Explain configuration drift detection and create custom configuration templates for clusters
- Discuss certificate management capabilities and generate certificate signing requests
- Describe password management capabilities and create password policies for the VCF fleet
- Manage tags and categories across VCF Operations and vCenter

Module 12: VCF Security and Compliance

- Outline the security monitoring capabilities and Security Operations dashboard
- View audit records and use the Audit Trail feature to analyze audit events
- Describe the Security Posture architecture and Salt-based components
- Demonstrate the workflow for continuous compliance assessment using standard benchmarks

Module 13: Solutions Catalog and Management Pack Builder

- Describe the new Solutions Catalog experience and management pack capabilities
- Describe the main capabilities of Management Pack Builder
- Outline the steps to connect a data source and create a management pack

Module 14: Troubleshooting Methodologies

- Explain the process flow of troubleshooting private cloud infrastructure issues
- Describe the role of alerts, metrics, dynamic thresholds, and real-time metrics in the troubleshooting process
- Describe the role of Troubleshooting Workbench in identifying and resolving issues

Module 15: Troubleshooting VCF Operations

- Explain the troubleshooting framework and log analysis methodologies for VCF Operations
- Troubleshoot licensing management issues for connected and disconnected deployments
- Troubleshoot configuration drift detection and capacity management issues
- Outline the logs available to troubleshoot capacity and cost management issues