



VMware Cloud Foundation Operations

Infrastructure Modernization

Key Benefits

- Unified Visibility
- Lower costs
- Increased operational efficiency
- Faster time to value
- Reduced risk

Key Features

Single console with integrated compute, storage and network operations along with component and feature level diagnostics

Fleet level licensing, identity management and SSO, certificates, tags, passwords, configurations with drift detection and lifecycle

Real-time, predictive capacity and cost analytics and continuous performance optimization

Traditional and modern VM based, container, and AI workloads monitoring

Enhanced Troubleshooting experience with consolidated diagnostics, metrics, logs, events and network insights

Integrated security and compliance features enable organizations to reduce risks and ensure regulatory standards

Outcomes¹

- 20% reduction in mean time to resolution
- 77% improved operational efficiency

Organizations can take the private cloud route as part of an overhaul of their IT infrastructure setup. A streamlined modernized setup helps ensure improved performance and efficiency, increased reliability, a better overall security posture and optimized costs.¹

But setting up a private cloud and being an efficient infrastructure provider has its own set of challenges:

- Customers are struggling to meet business needs while having a high performing infrastructure.
- Horizontally scaling the infrastructure leads to a visibility issue, slowing the troubleshooting process to take quick decisions.
- Resource utilization is not optimum when a customer thinks of infrastructure modernization or consolidation projects
- Modern AI-based applications which use containers, microservices and Kubernetes lead to an increased infrastructure management cost.
- Compliance and audit issues affecting the overall security posture

VMware Cloud Foundation Operations helps organizations build, operate and protect their private cloud infrastructure by deploying and maintaining its fleet level components, providing unified visibility and enhanced performance across the workload and infrastructure stack, and helping stay compliant with regulatory and organizational norms.

Capabilities

Fleet Management: Helps you get better scalability, consistency and resource management across your VCF infrastructure.

- Centralized Licensing: Manage all license keys across VCF deployments with in-depth visibility and insights into consumption and usage trends.
- Certificate Management: View and replace certificates across Private Cloud Infrastructure along with management components.
- Password Management: Overview representing password status distribution, connection status, password management distribution across various VCF Components.
- Identity Management: Single-Sign On for Enterprise IT/Provider Admins between VCF components with extended support to legacy and additional modern identity solutions.
- Tag Management: Create and manage categories and tags from a single pane of glass.
- Lifecycle Management: Automated process for applying software updates and upgrades to ensure consistent software version deployment across all environments.

Operations Management: Provides full-stack visibility of your private cloud and helps you with hassle-free infrastructure operations

- Continuous Performance Optimization: Ensure optimal performance across your private cloud environment by leveraging real-time predictive analytics and AI-driven insights. GPU monitoring also helps optimize infrastructure resources. By automatically balancing workloads and avoiding contention, continuously optimize your infrastructure to meet operational and business objectives.

¹ A FORRESTER TOTAL ECONOMIC IMPACT™ STUDY COMMISSIONED BY VMWARE, APRIL 2024

“Infrastructure issues don’t just go away, but the difference with VMware Cloud Foundation Operations is getting notified ahead of time instead of being woken up at night and having to worry about those fires without any predictability.”

DIRECTOR OF SYSTEMS ENGINEERING,
FINANCIAL SERVICES

“The more we learned about VMware Cloud Foundation, the more we saw it could address all our problems. It was the desired single pane-of-glass, and a route to new levels of automation. With VMware Cloud Foundation, we've been able to really start understanding the technology more. This has changed a lot, and now we can utilize it to the best of its ability.”

TECHNICAL ARCHITECT, MARY WASHINGTON
HEALTHCARE

For more information or to purchase VMware products

For more information on VMware Cloud Foundation, please visit: [here](#)

For more information on VMware Cloud Foundation Edge, please visit: [here](#)

Contact us: [here](#)

Visit VCF Operations page: [here](#)

Join the Cloud Foundation Community: [here](#)

For more information on Hands on Labs, please visit: [here](#)

- **Efficient Capacity and Cost Management:** Organizations can reduce costs and improve efficiency through real-time, predictive capacity and cost analytics. It forecasts future demand, provides actionable recommendations, and automates resource reclamation and rightsizing, optimizing utilization and minimizing expenses across VMware Cloud Foundation. As infrastructure providers, keep a tab of your tenant costs using Chargeback.
- **Enhanced Troubleshooting and Intelligent Remediation:** Enable proactive troubleshooting and remediation by correlating metrics, diagnostics, events, logs, and configuration data to detect anomalies across your private cloud. By providing actionable insights, accelerate problem resolution, enhanced visibility, and centralize IT operations management, ensuring smooth and uninterrupted operations.
- **Workload Migration Using VCF Operations HCX:** Simplify application migration, workload rebalancing, and business continuity across data centers.

Security Management:

- **SecOps:** Security Operations Dashboard provides a comprehensive, real-time view of user authentication, permissions, and infrastructure security, helping organizations proactively manage security across VCF deployments.
- **Integrated Compliance:** Organizations can also mitigate risks and ensure regulatory compliance with VCF Operations' integrated compliance features. By automating drift remediation and enforcing IT regulatory standards (PCI, HIPAA or custom standards), it reduces the likelihood of security breaches and compliance violations.
- **Event Auditing:** Track user events across the vCenter resources improving visibility into platform interaction changes and improving user accountability
- **Security Advisory and Vulnerability:** Be on top of potential security threats with proactive defense and early identification and remediation of risks

VCF Operations Orchestration:

VCF Operations Orchestrator is a workflow solution designed to simplify the automation of complex IT tasks with the ability to build and trigger orchestrator workflows.

It helps improve service delivery efficiency, operational management, and IT agility. VCF Operations Orchestrator is built with an open and flexible architecture that system administrators and IT operations staff can use to streamline tasks and integrate functions with third-party software through workflows.

VCF Operations Orchestrator can be used to create and run workflows and actions on the infrastructure objects to remediate them after an event or alert. This orchestrator workflow can be mapped to alerts and it will automatically run if an alert appears on some objects. This is based on the VCF Operations Management Pack for Orchestrator.

Plug-in SDK

The VCF Operations Orchestrator Plug-in SDK jump-starts those new to the VCF Operations Orchestrator plug-in development community. It also enables advanced developers to integrate key SDK features into their existing development environments. The SDK provides an Eclipse add-on for plug-in development. Please visit the VCF Solutions Catalog <https://vcf.broadcom.com/vsc/> for examples.

Performance and scalability within VCF Operations Orchestrator enable the execution of hundreds or even thousands of concurrent workflows on single or distributed architectures.

Feature Comparison			
VCF Operations Features	VMware vSphere Foundation	VMware Cloud Foundation (Edge)	VMware Cloud Foundation
Platform			
Single-Sign On	Yes	Yes	Yes
Lifecycle Management (Previously Aria Lifecycle Manager)	No	Yes	Yes
License Management	Yes	Yes	Yes
Certificate Management	No	Yes	Yes
Password Management	No	Yes	Yes
Configuration Drift Management	No	Yes	Yes
Tag Management	No	Yes	Yes
Built-In High Availability (Automated Failover of Platform Nodes)	Yes	Yes	Yes
Continuous Availability	Yes	Yes	Yes
VMware Score for Energy Efficiency	Yes	Yes	Yes
Visualizations			
Out of the box and customizable dashboards	Yes	Yes	Yes
Reports	Yes	Yes	Yes
Views	Yes	Yes	Yes
Heat maps	Yes	Yes	Yes
Performance charts	Yes	Yes	Yes
Alerts	Yes	Yes	Yes
Metrics, Events, Logs, Traces and Flows	Yes	Yes	Yes
Custom webhook payload templates	Yes	Yes	Yes
Custom email notification templates	Yes	Yes	Yes
Super Metrics, Metric Correlation and Event Mapping	Yes	Yes	Yes
Performance			
Performance Monitoring and Analytics	Yes	Yes	Yes

Manual Workload Optimization	Yes	Yes	Yes
Predictive DRS	Yes	Yes	Yes
Business and Operational Intent-Based Automated and Schedulable Workload Balancing and Optimization	Yes	Yes	Yes
Host-Based Placement	Yes	Yes	Yes
Automation Central	Yes	Yes	Yes
Monitoring and Troubleshooting			
VCF Health	Yes	Yes	Yes
VCF Diagnostics	Yes	Yes	Yes
Physical Datacenter monitoring	Yes	Yes	Yes
Troubleshooting Workbench	Yes	Yes	Yes
Storage Operations	Yes	Yes	Yes
Network Operations	Yes	Yes	Yes
GPU and vGPU Monitoring	Yes	Yes	Yes
Log Query	Yes	Yes	Yes
Log Partitioning	Yes	Yes	Yes
Data Protection and Recovery (VMware Live Recovery)	Yes	Yes	Yes
Monitoring of OS Resources using Telegraf (CPU, Disk, Memory, Network)	Yes	Yes	Yes
Service and Process Monitoring (OS level only)	Yes	Yes	Yes
Physical OS Monitoring with Telegraf	Yes	Yes	Yes
Service-based Application Discovery	No	Yes	Yes
Rule-based Application Discovery	No	Yes	Yes
Application monitoring with Open-Source Telegraf	No	Yes	Yes
Curated Application monitoring with Telegraf Agent	No	Yes	Yes
Supervisor Cluster Monitoring (Metrics and Dashboards)	Yes	Yes	Yes
vSphere Kubernetes Service Cluster Monitoring (Telegraf agent)	Yes	Yes	Yes
Capacity and Cost			

Real-Time Predictive Capacity Management	Yes	Yes	Yes
Capacity Optimization: Rightsizing and Reclamation	Yes	Yes	Yes
Workload Optimization	Yes	Yes	Yes
What-If analysis (Workload, Infrastructure and Migration)	Yes	Yes	Yes
Total Cost of Ownership	Yes	Yes	Yes
Potential Savings	Yes	Yes	Yes
Chargeback (Tenant Operations and Metering)	No	Yes	Yes
Security and Compliance			
FIPS 140-2 Compliance	Yes	Yes	Yes
vSphere Security and Compliance, Including DISA, FISMA, ISO, CIS, PCI and HIPAA	Yes	Yes	Yes
Custom Compliance Templates	Yes	Yes	Yes
Automated Compliance Drift Remediation	Yes	Yes	Yes
VCF Compliance based on VCF Audit Guides	Yes	Yes	Yes
VMware Sovereign Cloud Compliance	Yes	Yes	Yes
vSAN Security Configuration Guide	Yes	Yes	Yes
NSX Security Configuration Guide	Yes	Yes	Yes
Audit events	Yes	Yes	Yes
Sec Ops Dashboards	No	Yes	Yes
Security Advisory Diagnostics	Yes	Yes	Yes
Integrations			
Management and Content Packs	Yes	Yes	Yes
Integration SDK	Yes	Yes	Yes
Management Pack Builder	Yes	Yes	Yes
VMware Marketplace	Yes	Yes	Yes
Advanced APIs: Resource/Data Addition, Report Generation and Automation	Yes	Yes	Yes
VMware Cloud Foundation Operations HCX	No	Yes	Yes

VMware Tanzu Application Service	No	Yes	Yes
Cisco UCS	Yes	Yes	Yes
Dell EMC PowerEdge	Yes	Yes	Yes
HPE ProLiant	Yes	Yes	Yes
Lenovo Compute	Yes	Yes	Yes
Microsoft SQL Server	No	Yes	Yes
Mongo DB	No	Yes	Yes
MySQL	No	Yes	Yes
Network Devices	No	Yes	Yes
Oracle Database	No	Yes	Yes
PostgreSQL	No	Yes	Yes
ServiceNow	Yes	Yes	Yes

