



Simplified Private Cloud

for
dummies[®]
A Wiley Brand

As organizations continue to evolve and mature their cloud strategy, they're increasingly matching individual workloads with the cloud environment — public or private — that best meets their unique requirements. Many organizations are now migrating a growing number of workloads back from the public cloud to private cloud to address performance issues, compliance and security requirements, and unexpected costs associated with cloud sprawl. The Broadcom Private Cloud Outlook 2025 report found that 92 percent of organizations trust private cloud to address these challenges.

VMware Cloud Foundation (VCF) is the private cloud platform that delivers public cloud scale and agility with

private cloud security, resilience, and performance while lowering total cost of ownership (TCO). VCF supports digital innovation with faster infrastructure modernization, a unified cloud experience to accelerate developer velocity, and robust cyber resiliency and platform security capabilities.

Here, you'll discover how VCF helps organizations streamline their private cloud operations and management.

Operating and Managing Your Private Cloud

Private cloud extends infrastructure and operations consistently to provide a single operating model that manages application workloads across private and public clouds, edge, cloud service

providers, and hyperscale cloud environments, allowing for seamless migration of workloads between these environments, as business needs dictate.

Private cloud offers a single, seamless pool of resources that support modern application strategies and an organization's digital transformation initiatives. Key capabilities to look for in a full-stack, private cloud solution include the following:

- **Full visibility:** To effectively manage and operate private cloud infrastructure, you need full-stack visibility — including compute, storage, and network resources — to provide accurate, up-to-date views and quick, actionable insights across highly dynamic environments.
- **Performance and uptime:** IT cloud and infrastructure teams are under constant pressure to optimize performance and reduce downtime. A unified private cloud solution provides the tools these teams need to boost performance, proactively address potential bottlenecks and gaps, and accelerate mean time to repair (MTTR).

- **Capacity management:** Ensuring sufficient capacity to run applications and services is essential — but overprovisioning leads to unnecessary costs with minimal benefit. Striking the right balance is complex, especially in the face of rapid change and sprawling infrastructure.
- **Fleet management:** Common infrastructure deployment and management processes — including license management, configuration management, identity management, and certificate lifecycle management, among others — often require tedious and error-prone manual efforts. Fleet management streamlines these processes with orchestration to enhance security and ensure consistent, repeatable deployments.
- **Chargeback and showback:** Many organizations allocate technology costs to different departments for the actual resources they consume to improve financial transparency and accountability in IT spending. The cloud operating model supports chargeback and showback

with potential savings and spending per group.



REMEMBER

The challenge for organizations pursuing private cloud is to find an operating model that simplifies operations, reduces management complexity, allows interoperability to enhance flexibility, and addresses the requirements of a wide range of application architectures and digital business objectives.

Introducing VMware Cloud Foundation?

VCF is a full-stack, private cloud solution that integrates software-defined compute, storage, and networking along with cloud automation and management. VCF leverages automation, application programming interface (API) integration, and other capabilities to significantly boost operational efficiency and increase scale across your private cloud infrastructure. VMware Cloud Foundation Operations is the component within VCF that simplifies the operations and management of the private cloud.

Figure 1 shows the core components of VCF.

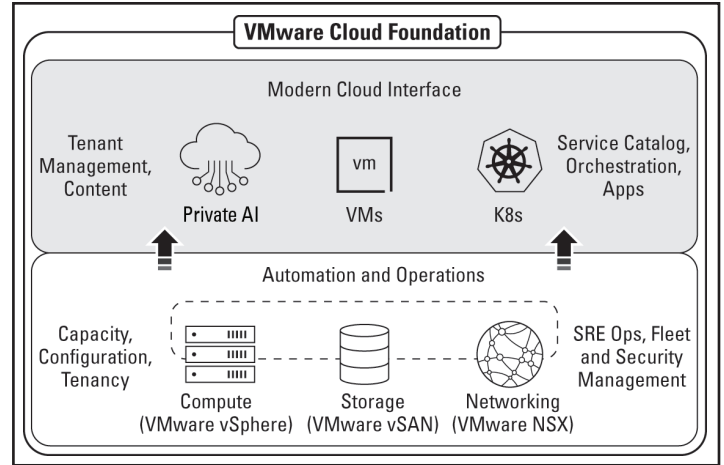


Figure 1: VCF core components.

VCF delivers the following key private cloud capabilities:

- **Full private cloud visibility for quick insights:** VCF provides full-stack visibility of your global inventory from apps to infrastructure using out-of-the-box dashboards and reports allowing IT teams to quickly analyze logs, metrics, and flows; meet service level objectives (SLOs); and deliver actionable insights.
- **Performance optimization and intelligent troubleshooting for faster MTTR:** VCF centralizes log data and uses artificial intelligence (AI) and machine learning (ML) to predict and prevent issues, correlate events, and analyze anomalous metrics, enabling proactive performance

optimization and accelerated issue resolution.

- **Capacity management optimization for better cost savings:** TVCF helps organizations improve the efficiency and performance of their private cloud infrastructure, thereby reducing capital expenditures (CapEx) and operating expenditures (OpEx), improving capacity planning, and supporting data-driven decisions on infrastructure purchases. VCF Operations workload mobility simplifies application migration, workload rebalancing, and business continuity across data centers and clouds, enabling migration planning with risk mitigation.
- **Fleet management for easy operations and management with consistency across workloads:** VCF Operations fleet management delivers password management (monitoring compliance, enforcing policies, and enabling password rotations for VCF components), license management (centralized and simplified license management via the VCF Operations console using a single license file across the VCF fleet), certificate operations

(actively managing and replacing certificates for VCF components to maintain secure infrastructure), and more.

- **Chargeback and showback for improved cost management, return on investment (ROI), and TCO metrics:** Built into VCF, chargeback, showback, and budget planning tools support financial operations (FinOps) to help organizations track infrastructure costs; allocate expenses by department, cost center, or project; and predict expenses.



REMEMBER

TVCF streamlines the deployment of a fully integrated infrastructure as a service (IaaS) stack through a unified, automated platform. By delivering consistent, repeatable, secure, and agile operations across both private and public clouds, VCF enables organizations to scale infrastructure seamlessly in response to evolving business demands. Consolidating diverse functions into a single, integrated solution, it dramatically reduces the complexity and overhead

traditionally associated with private cloud deployments.

VCF provides comprehensive visibility and unified control across the entire infrastructure stack, reducing complexity and operational overhead. Through advanced analytics and centralized fleet management, VCF Operations enhances resilience by enabling IT teams to identify issues early, accelerate troubleshooting, and simplify critical lifecycle processes such as patching and upgrades. The platform further optimizes efficiency and performance with simplified capacity planning and automated resource reclamation. By combining the agility of public cloud with the security and governance of private cloud, VCF Operations empowers organizations to establish a seamless, adaptive cloud operating model.



TIP

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