VMware Cloud Foundation™

Accelerating Business Outcomes

VMware Cloud Foundation

- VMware Cloud Foundation provides a flexible and simplified private cloud platform with public cloud extensibility that integrates leading products including vSphere (compute), vSAN (storage), NSX (networking), VCF Operations and VCF Automation into a single solution.
- VMware Cloud Foundation is a platform that enables you to modernize infrastructure, accelerate developer productivity and provide greater resilience and security.
- Access to high-value advanced services for Application and Network Security, App Platforms, Ransomware Recovery and Private AI.

A Platform for Digital Transformation

Private cloud is an environment where agility and reliability are becoming increasingly important. Integrating advanced software-defined compute, storage, and networking with a full suite of automation and orchestration enables efficient, reliable, and agile digital operations.

VMware Cloud Foundation is a full-stack, private cloud solution that supports these digital transformation initiatives by enabling organizations to accelerate developer productivity, embracing cloud native and AI technologies to deliver apps and services to market faster.

Offering a robust and reliable solution for private cloud deployment, VMware Cloud Foundation streamlines resource management and accelerates innovation, reducing technological debt and increasing operational efficiency for customers.

VMware Cloud Foundation

When deploying Private Cloud Infrastructure, driving higher degrees of efficiency and flexibility are core to delivering the highest value at the lowest cost. This includes integrating key data center technologies - compute, storage, networking, and security - all managed through automation and orchestration deeply embedded in the platform to lower operational costs.



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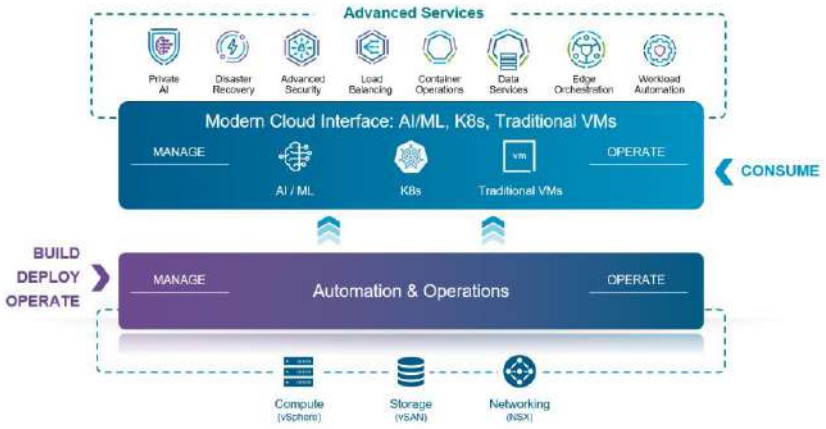
Core Platform Components

- **VMware Cloud Foundation Infrastructure Stack:** Incorporates VMware's industry-leading solutions – virtualization and compute through vSphere for compute, storage through vSAN, and networking by NSX.
- **VCF Operations Fleet Management:** Automate the installation, operations, and lifecycle management of the VCF stack, streamlining deployment, configuration, and updating processes.
- **Management and Orchestration:** Deliver comprehensive operations, automation, and analysis, across the full stack infrastructure platform.
- **VCF Operations HCX:** Enable seamless migration, workload rebalancing, and disaster recovery across private and public clouds.



How the Platform Works

- **Workload Compute Platform:** At its core, VMware Cloud Foundation leverages vSphere to create and manage virtual machines and containers, providing a flexible, secure, and scalable compute platform.
- **Storage Optimization:** By integrating vSAN into the platform, VMware Cloud Foundation offers integrated, secure, scalable storage solutions that enhance resource efficiency and reduce operational complexity.
- **Network Integration:** Leverages NSX to provide a secure, software-defined networking layer capable of handling the dynamic needs of modern cloud-based applications using virtual private clouds (VPCs) to isolate apps and users.
- **Automated Provisioning and Management:** VMware Cloud Foundation automates key operational tasks in a cloud operating model, reducing the time and complexity associated with deploying, managing, and maintaining private cloud environments.

VMware Cloud Foundation Deployment Options

VMware Cloud Foundation can be consumed in multiple ways:

- **VMware Cloud Foundation:** A Private Cloud IaaS Platform with integrated enterprise-class compute, storage, networking, management, and security.
- **Advanced Services:** A portfolio of available services that expand the versatility of the VMware Cloud Foundation Platform in the following Advanced Services categories:
  - Application and Network Security
  - Application Platform by Tanzu
  - Ransomware/Disaster Recovery
  - VMware Private AI

VMware Cloud Foundation delivers a unified and automated platform, simplifying the deployment of a fully integrated infrastructure-as-a-service (IaaS) stack. Enabling consistent, secure, and agile operations across private and public clouds, VMware Cloud Foundation ensures that organizations can flexibly scale their infrastructure to meet evolving business needs. By consolidating disparate functions into a single, integrated platform, significantly reducing the complexity and overhead typically associated with private cloud deployments.

Modern Infrastructure

VMware Cloud Foundation plays a crucial role in transforming traditional IT infrastructures into a more agile and adaptable private cloud environment. This transformation is key to enabling organizations to deploy core Private Cloud use cases that deliver strategic outcomes that lower Total Cost of Ownership (TCO) and higher productivity. VMware Cloud Foundation employs automation and orchestration to standardize and simplify the entire infrastructure lifecycle, including Day 0 deployment, Day 1 provisioning, and Day 2 patching and updates.

- **Modernize an On-premises Private Cloud:** Build private cloud infrastructure that modernizes existing data center deployments with a cloud operating model for standardization, consistency, and scale. Leverage VMware Cloud Foundation Edge - an optimized configuration of VMware Cloud Foundation specifically tailored for edge use cases. It delivers elastic, scalable, and flexible infrastructure at the edge with automated deployment and lifecycle management, with consistent infrastructure and operations across private, public, and edge clouds for seamless integration and simplified management.
- **Automation to provide IaaS via a self-service catalog:** Build automation processes to deliver IaaS to DevOps engineers, platform engineers, data scientists, Line of Business owners etc. so that they can deploy and consume the infrastructure through the self-service model instead of going through a cumbersome, time-consuming ticketing process, while ensuring security and governance guardrails.
- **Extend your data center into the cloud:** Utilize the platform architecture and cloud operating model to extend private cloud infrastructures into supported public and partner cloud environments utilizing workload mobility for maximum efficiency and scale.

Unified Cloud Experience

To keep continuous development pipelines running at peak efficiencies, it is critical to ensure that developers have frictionless access to application code, infrastructure services, runtime environments, system tools, libraries, and registries. VMware Cloud Foundation Services consist of an upstream-

compliant Kubernetes runtime via VMware vSphere Kubernetes Service combined with a set of infrastructure and automation services, including infrastructure-as-code, software configuration management, and infrastructure pipelines.

- **Deliver Infrastructure-as-Code:** Developer Automation (Infrastructure as Code) capabilities allow developers to automate and manage infrastructure via code for more rapid and consistent deployments.
- **Implement Private AI:** Design and implement a robust foundation for Generative AI and Large Language Model workloads through integration with the leading AI platforms.
- **Run Business Critical and Modern Workloads:** Facilitate production-scale infrastructure optimized across traditional and modern cloud-native applications.

Secure and Resilient Platform

VMware Cloud Foundation provides a consistent, secure platform with the ability to extend the security architecture even further with intrusion detection and recovery, addressing key challenges such as ransomware threats, disaster scenarios, and the need for advanced security architectures.

- **Implement Ransomware Protection and Recovery:** Implement robust security measures to safeguard against ransomware attacks, minimizing vulnerabilities and providing rapid recovery capabilities, enabling businesses to quickly restore operations and data integrity in the event of a ransomware incident[1].
- **Implement Disaster Recovery:** Design and deploy a resilient disaster recovery framework, ensuring minimal service disruption and data loss during unforeseen events.
- **Integrate Security, Compliance, and Resilience:** Design and incorporate advanced security features like micro-segmentation, Intrusion Prevention and Detection (IPS/IDS), and Network Detection and Response (NDR) to proactively identify and respond to security threats across the network[2].

VMware Cloud Foundation ensures a comprehensive security posture, aligning with modern security requirements and providing a robust defense mechanism within the cloud environment.

VMware Cloud Foundation Support

The deployment of a full stack private cloud platform such as VMware Cloud Foundation is enhanced by a suite of support programs, assessment, and professional services for ongoing operations. VMware Cloud Foundation support includes cloud maturity and adoption assessments coupled with digital learning, in addition to Jumpstart Workshops that help customers understand

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

For more information on VMware Cloud Foundation feature comparison, please visit: here

For more information on Private Cloud Modernization Program, please visit: here

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VMware's recommended best practices for cloud maturity. These services provide a tailored implementation and adoption plan to help customers achieve their business outcomes.

How to get started

Getting started with VMware Cloud Foundation is simple. For a quick hands-on experience, try the VMware Cloud Foundation Hands-on Lab. When you are ready to purchase, there are four ways to purchase VMware Cloud Foundation:

(1) directly from VMware

(2) from VMware channel partners

(3) as part of an integrated system from OEM vendors

(4) as a subscription service from a public cloud service provider

VMware Cloud Foundation Import

Existing vSphere customers with vSAN, VMFS-FC, or NFS environments can now be imported directly into a VMware Cloud Foundation cluster, enabling centralized management, flexible networking options, operational automation, and life cycle management. There are two scenarios for VMware Cloud Foundation Imports:

(1) Customers with an existing VMware Cloud Foundation environment can import standard vSphere/vSAN clusters into their current VMware Cloud Foundation setup.

(2) Customers with VMware Cloud Foundation entitlements who are not using VMware Cloud Foundation can deploy VCF Operations fleet management onto their vSphere/vSAN clusters and manage them as VMware Cloud Foundation.

Take the Next Step

Deliver Private Cloud Infrastructure Across All Cloud Endpoints

VMware Cloud Foundation supports both traditional enterprise and modern, container-based apps delivering a complete set of highly secure software-defined services for compute, storage, network, security, Kubernetes, and cloud management.

[1] Ransomware Protection and Recovery is available with the Ransomware Add-on and is not part of the VMware Cloud Foundation core offering.
[2] VMware NSX Microsegmentation, IPS and NDR are available with the NSX Firewall and ATP Add-On and is not part of the VMware Cloud Foundation core offering.

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