

MODERNIZE



VMware Cloud Foundation 4: The Hybrid Cloud Platform for the Future

Fuel Your Journey with the Modern Apps You Need to Grow Your Business

THE WWT & VMWARE PARTNERSHIP

WWT and VMware work together to help you accelerate your digital transformation journey. By combining WWT's IT consulting, solutions and other services with VMware's technology platforms, we develop the flexible, scalable, and secure multi-cloud solutions you need to achieve your business ambitions.

Fueled by WWT's proven approach and powerful infrastructure, our experts help you discover, evaluate, architect and implement advanced technology lab testing in our [Advanced Technology Center](#), and deploy rapidly through our global integration centers. Together, we help you make better decisions fast and implement them even faster.

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Future Proof Hybrid Cloud Platform for Modern Apps

The rise of modern apps brings new challenges. When enterprises build, deploy, and manage modern apps, many of them default to the use of containers, Kubernetes, and microservices architectures. However, those modernized components must often work with existing non-containerized applications and stateful workloads like databases. In addition, when IT operators struggle to deliver the benefits of the cloud model, app teams seek more agile infrastructure in the public cloud, leading to the use of multiple clouds across on- and off-premises with drastically different infrastructure and operations. Managing such heterogeneity while adhering to enterprise policies is a complex task for both IT operators and developers.

VMware Cloud Foundation 4¹ provides a ubiquitous hybrid cloud platform for both traditional enterprise apps and modern apps. Based on a proven and comprehensive software-defined stack including VMware vSphere® with Kubernetes, VMware vSAN™, VMware NSX-T Data Center™, and VMware vRealize® Suite, Cloud Foundation provides a complete set of secure software-defined services for compute, storage, network security, Kubernetes management, and cloud management. The result is agile, reliable, efficient cloud infrastructure that offers consistent operations across private and public clouds. In addition, Cloud Foundation contains built-in automated lifecycle management to simplify the administration of the software stack, from initial deployment, to patching and upgrading.

¹ Referred to as "Cloud Foundation" thereafter



Solution Architecture

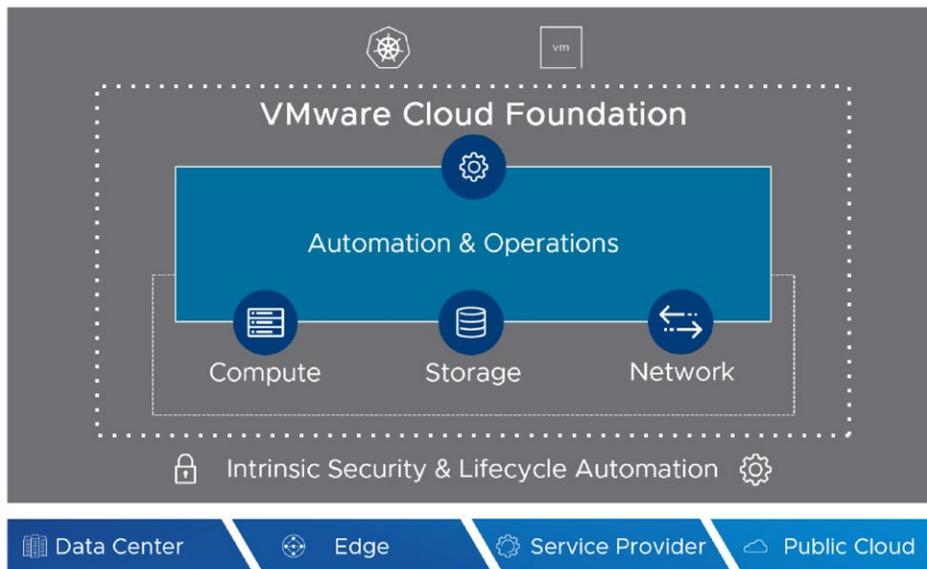


FIGURE 1: VMWARE CLOUD FOUNDATION 4 SOLUTION ARCHITECTURE

Key Benefits

Application-focused management bringing VMs and containers onto the same platform

With Cloud Foundation, customers get unified visibility of virtual machines (VMs), containers, and Kubernetes clusters in vCenter. Containers and Kubernetes clusters are treated as first-class citizens like VMs from a vCenter perspective.

Enterprise-class resiliency, QoS, security, and access control for both VMs and containers

All policies to optimize for performance, resilience, and availability that have been available to VMs are also available to containers and Kubernetes clusters. Admins can define QoS, security policies, firewall rules, encryption settings, availability and backup rules, and access control rules at namespace level, reducing the time it takes to manage and troubleshoot applications.

Developer self-service APIs to boost productivity

Cloud Foundation provides the ability to manage at the namespace level so that admins can set policies, quota, and role-based access to a namespace once. Developers can then self-service into the namespace within the predefined boundary.

This reduces the time and effort it takes for infrastructure provisioning and scaling so that developers can focus on building apps. Meanwhile, IT operators maintain visibility into those cloud resources created by developers through the VMware interfaces they are familiar with.

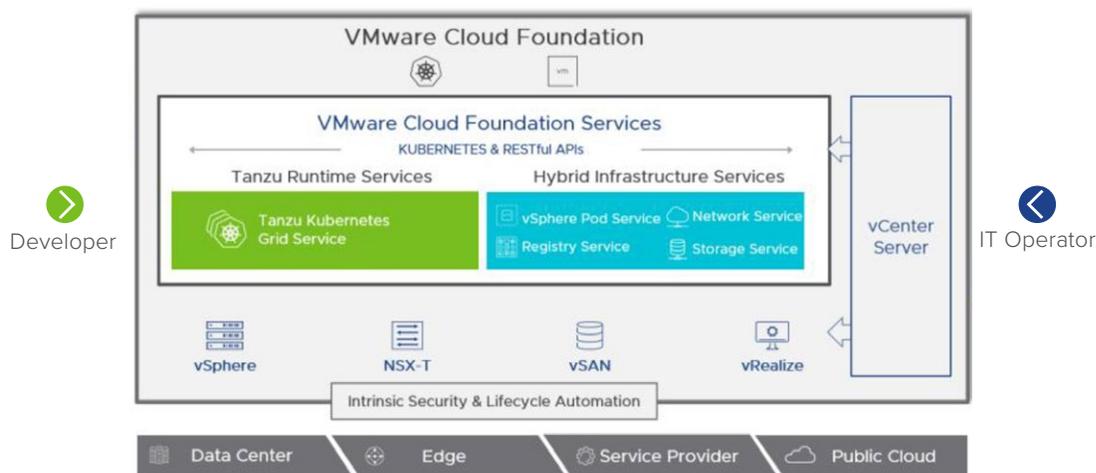


FIGURE 2: OVERVIEW OF VMWARE CLOUD FOUNDATIONS SERVICES

Rapid application deployment with full stack agility

In Cloud Foundation, a workload domain is a policy-based resource construct with specific availability, and performance attributes. It combines compute (vSphere), storage (vSAN), networking (NSX-T), and cloud management (vRealize Suite) into a single consumable entity. Workload domains greatly speed up the instantiation of Kubernetes, deploying both the underlying infrastructure and Kubernetes components in an automated fashion.

Enhanced infrastructure lifecycle movement

Cloud Foundation offers automated lifecycle management on a per-workload domain basis. Available updates for all components are tested for interoperability and bundled with the necessary logic for proper installation order. The update bundles are then scheduled for automatic installation on a per-workload domain basis.

CLOUD FOUNDATION TAKEAWAYS

EASY TO DEPLOY and run integrated cloud infrastructure, including compute, storage, networking, security, and cloud management services for modern applications on the same platform as for traditional applications.

BOOSTS DEVELOPER PRODUCTIVITY, allowing app teams to access cloud resources they are already familiar with through industry standard APIs.

SIMPLE TO OPERATE AND FUTURE PROOF HYBRID CLOUD STRATEGY that is consistent and compatible across on-and-off-premises environments with the ability to deploy VMs, containers, and any next-generation application needs..

ASK ABOUT OUR APPLICATION SERVICES

Our [Application Services](#) team can provide overview sessions and technical assessments with key stakeholders to focus on your existing strategy. Additionally, we can lead strategy development by partnering with you to develop specific application architectures and processes for cloud initiatives. This includes advising on VMware technologies, processes, public cloud providers and market trends.

Full stack networking and intrinsic security at every layer of the stack



At the container image layer, Tanzu Kubernetes Grid includes a best-in-class container registry with build-in vulnerability scanning, image signing, and auditing.



At the compute layer, vSphere provides comprehensive built-in security for protecting data, infrastructure, and access that is operationally simple.



At the network layer, NSX-T delivers micro-segmentation and granular security to the individual VM or pod workload, enabling a fundamentally more secure data center.

At the storage layer, Cloud Foundation offers data at rest encryption at the cluster level.

At the management layer, vRealize solutions automate manual tasks to eliminate human error, provide monitoring and auditing the full stack, and provide self-driving operations to quickly remediate issues as they are identified.

Cloud operating model extending across private and hybrid cloud

The same core software-defined infrastructure stack leveraged in private cloud deployments of Cloud Foundation is also the underpinning technology of VMware based public clouds like VMware Cloud™ on AWS and other VMware Cloud Provider™ Program partners, as well as VMware Cloud on Dell EMC. With Cloud Foundation powered clouds offering consistent infrastructure and operations, customers can begin to shift to a different way of operating IT, where service delivery is better aligned to the service consumption needs of the business. Adopting a cloud operating model represents a move toward application modernization and new application architectures that enable digital initiatives.

DESTINATION TRANSFORMATION

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