VMware Cloud Foundation™

Hybrid Cloud Platform for Modern Apps

MODERN APPLICATION INFRASTRUCTURE

VMware Cloud Foundation with Tanzu is a major architectural upgrade to the industry's most advanced hybrid cloud platform.   The most exciting feature to be added into the Cloud Foundation architecture includes the integration of Kubernetes directly into the vSphere Hypervisor which delivers an entirely new set of VMware Cloud Foundation Services. These services include VMware Tanzu Kubernetes Grid plus infrastructure and automation services that provide the basis for the cloud infrastructure and container ecosystems to accelerate developer productivity. VMware Cloud Foundation with Tanzu represents a major advance in cloud-native compute, storage, networking and management to seamlessly support containers and VMs all within the same automated hybrid cloud Infrastructure. VMware Cloud Foundation now supports VCF Remote Clusters which allows connectivity and delivers full stack HCI value to remote/branch office and edge locations.

QOS, SECURITY AND ACCESS CONTROL

VMware Cloud Foundation with Tanzu delivers workload policies applied to namespaces to optimize performance, resilience and availability for VMs, containers and Kubernetes clusters within vCenter Server. Admins can define QoS, security mandates, firewall rules, encryption settings, availability and backup policies directly to the application namespace. Access control rules are also managed via namespace, reducing the time it takes to manage and troubleshoot complex applications.

VMware Cloud Foundation with VMware Tanzu™

VMware Cloud Foundation with Tanzu is a Hybrid Cloud Platform that includes an embedded Kubernetes runtime environment that accelerates development of modern applications. VMware Cloud Foundation with Tanzu automates infrastructure deployment and lifecycle management of complex Kubernetes clusters alongside mission critical enterprise applications. Now available with integrated container orchestration and VMware Tanzu™ management tools, VMware Cloud Foundation with Tanzu provides a comprehensive developer environment that bridges the gap between app developers and IT administrators. VMware Cloud Foundation can be deployed on-premises through a broad range of vSAN ReadyNode™ servers or consumed as a service from a number of public cloud providers, including VMware Cloud on AWS, Azure VMware Solutions, Google Cloud Platform VMware Solutions and many VMware Cloud Provider Partners.
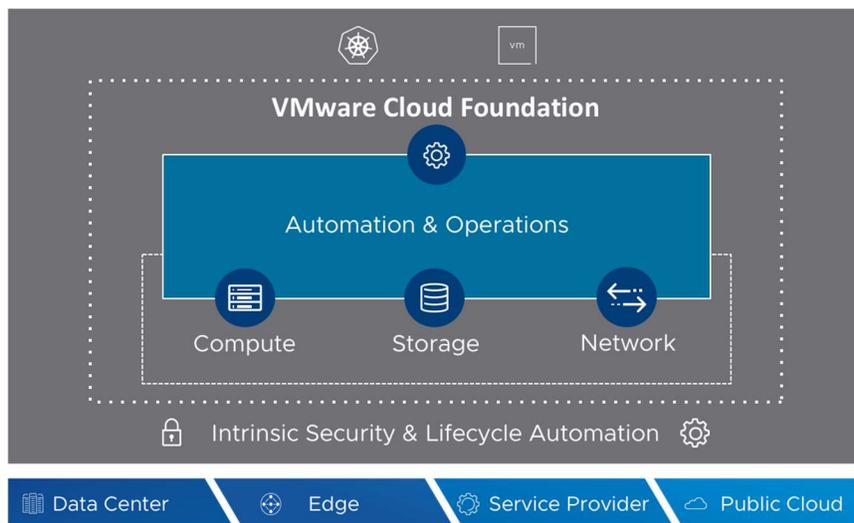

FIGURE 1: VMware Cloud Foundation Software Stack

Streamlining management to increase admin productivity

VMware Cloud Foundation with Tanzu provides Virtual Infrastructure (VI) admins with unified visibility of virtual machines (VMs), containers, and Kubernetes clusters all within vCenter Server. Containers and Kubernetes are managed alongside VMs from a vCenter perspective. The Kubernetes concept of a namespace is integrated into vSphere and becomes the unit of management. By grouping resource objects such as VMs and containers into logical applications via namespaces, VI admins who previously

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DEPLOYMENT OPTIONS

VMware Cloud Foundation can be consumed in four ways:

- *vSAN ReadyNodes:* Cloud Foundation software can be deployed on any vSAN ReadyNode and networking switches of your choice; to learn more, visit *VMware Compatibility Guide*

- *Composable Systems:* Rack mounted composable systems provide the flexibility of on-demand hardware integrated with VMware Cloud Foundation through *Dell PowerEdge MX* and *HPE Synergy*

- *Jointly Engineered Systems:* VMware Cloud Foundation software can be delivered as a jointly-engineered, integrated system via *Dell EMC VxRail*

- *As a Service from the Public Cloud*: *VMware Cloud on AWS, Azure VMware Solution, Google Cloud VMware Solution, Oracle Cloud VMware Solution* or from any VMware Cloud Providers including *IBM Cloud*, *Rackspace*, *Fujitsu K5, CenturyLink, OVH, NTT and more.*

FOR MORE INFORMATION OR TO PURCHASE VMWARE PRODUCTS

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Visit product page:
vmware.com/go/cloudfoundation

Cloud foundation community:
vmware.com/go/cloudfoundation- community

managed thousands of VMs can now manage just dozens of application namespaces, resulting in a massive increase in scale and reduction in cognitive load.

Because VMware Cloud Foundation delivers automated lifecycle management through SDDC Manager, available updates for all underlying components are validated for interoperability to consistently determine proper installation order and maintain compliance with best practices and compatibility matrices. The updates can also be scheduled for automatic installation on a per-workload domain basis to maximize flexibility without impacting system availability. This allows the infrastructure admin to target specific workloads or environments (development vs. test vs. production) to execute updates independently and maximize productivity.

Boosting developer productivity via self-service APIs

In order to keep continuous development pipelines running at peak efficiencies, it's critical to ensure that developers have frictionless access to the application code, infrastructure services, runtime environments, system tools, libraries and registries. Through the innovations introduced with VMware Cloud Foundation with Tanzu, resources are available through a set of VMware Cloud Foundation Services that are surfaced via Kubernetes and RESTful APIs as shown in Figure 2 below.
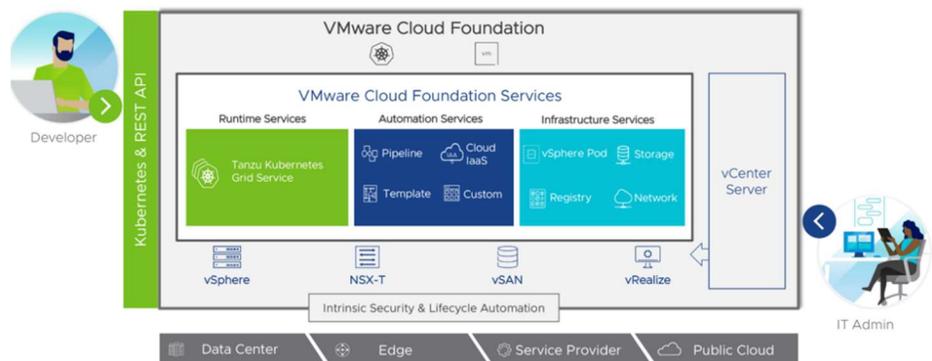
FIGURE 2: VMware Cloud Foundation Services Architecture

VMware Cloud Foundation Services consist of an upstream compliant Kubernetes runtime via **Tanzu Kubernetes Grid Services** combined with a set of **Infrastructure** and **Automation Services** that provide frictionless access to the resources needed to support non-stop continuous integration and continuous delivery (CI/CD) pipelines to foster healthy DevOps ecosystems. By managing resources at the namespace level through vCenter Server, admins can define security policies, quota, and role-based access to a namespace, then developers always access the namespace within the pre-defined properties of that namespace, always maintaining compliance with corporate mandates.

VMware Cloud Foundation with Tanzu enables developers to consume cloud resources such as Kubernetes clusters, disks and networks using familiar Kubernetes CLI and API tools, while the admins can manage systems at scale through vCenter Server. Because Cloud Foundation automates infrastructure provisioning and scaling, developers can focus on building and deploying apps while infrastructure teams become more strategic, maintaining centralized visibility and control of their global infrastructure and operations. Take the next step and learn more at *vmware.com/go/cloudfoundation*

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