

VMware Tanzu® for Kubernetes Operations

Foundation for a modern, multi-cloud container infrastructure

CUSTOMER PAINPOINTS

- Disjointed, multi-cloud K8s management with no consistency, creates operational silos and lack of visibility which increases cost and risk
- Provisioning and managing a distributed container infrastructure at scale is complex and prone to inconsistencies and inefficiencies
- Security and traffic management for distributed applications that reside in multi-cloud environments require capabilities beyond that of traditional, perimeter-based approaches
- Monitoring a complex and abstracted stack like Kubernetes across clouds and distributions is difficult

Overview

Digital transformation is fueling the adoption of cloud computing as well as cloud native technologies such as containers. As container adoption goes mainstream, Kubernetes beat the competition and became the de facto container orchestrator. It is being used across all industries today to help automate the deployment, management, and scaling of containerized applications.

Along with the fast Kubernetes adoption, enterprises are quickly moving to a multi-cloud reality due to a variety of reasons such as avoiding vendor lock in, minimizing risks, saving cost, customizing solutions, and meeting the exact needs of development teams asking for choices of cloud providers. We are seeing more and more enterprises today running Kubernetes across multiple clouds and/or across multiple vendors or distributions.

With this multi-cloud reality, building, operating, and managing a Kubernetes-based container infrastructure is becoming even more challenging. How do you simplify day 1 deployment and get Kubernetes clusters to your developers in hours or days rather than weeks or months? How do you increase the efficiency of day 2 operations by automating tasks such as upgrading, patching, and scaling? How do you properly connect and monitor your entire Kubernetes footprint of different Kubernetes distributions across clouds? Last but not the least, how do you make sure your Kubernetes infrastructure and applications are secure and compliant?

VMware Tanzu for Kubernetes Operations

VMware Tanzu for Kubernetes Operations is the foundation for building a modern container infrastructure at scale across all your clouds. It simplifies container management with tools, automation, and data-driven insights that boosts developer productivity, secure applications and data, and optimizes infrastructure performance across all your clouds.



TANZU ACTIVATION SERVICES

VMware Tanzu® Activation Services™ are professional services designed to get you up and running quickly with VMware Tanzu™ for Kubernetes Operations. Our team of expert engineers will quickly deploy, integrate and configure Tanzu for Kubernetes Operations in your environment, and migrate one pre-agreed upon application onto your new platform. We collaborate with you to build a platform that aligns with infrastructure and app needs while optimizing your platform operating costs.

Tanzu Activation Services is designed to accelerate the establishment of your platform capabilities.

- Quickly deploy, integrate and configure Tanzu for Kubernetes Operations in your environment.
- Enable developer self-service access to the right infrastructure abstractions and app building blocks
- Automate and monitor cloud platform operations
- Enforce networking, security, and compliance requirements
- Find, prioritize and migrate apps to the new platform for maximum benefit

Outcomes with Tanzu for Kubernetes Operations

Choice with Guardrails

For platform engineering teams, offering a choice of Kubernetes distributions to their development teams can mean reduced friction - but only if you can provide that runtime with all the guardrails in place so that the developer does not have to build anything themselves.

Tanzu for Kubernetes Operations enables you to simplify container provisioning, management, monitoring and observability so that developers can have a consistent and scalable runtime no matter what cloud, or Kubernetes, they use. At the same time as offering choice with reduced friction, you can ensure you are delivering environments that are easier to manage and are consistent with corporate policies and best practices.

Enterprise Security

With the proliferation of multi-cloud, distributed applications, organizations can inadvertently open themselves up to new security risks and attack vectors. Decentralized microservices, APIs, and data can increase flexibility and agility, but it can also increase the organization's attack surface, exponentially. On top of this, platform engineering teams are having to utilize a growing number of tools to manage these distributed resources, and decentralized tools can create an increased security risk.

Tanzu for Kubernetes Operations reduces security risks by helping you control access to Kubernetes clusters through granular and customizable Role Based Access Control. You can reduce vulnerability risks by allowing only certain roles to have access to specific APIs or clusters so you can limit your exposure while at the same time limiting cluster failure risk.

Operational Efficiency

Adaptation is the name of the game when it comes to Kubernetes. If you are working with Kubernetes clusters, you need data-driven insights and actionable intelligence so you can optimize your operations. You also need a consolidated set of tools for cross team collaboration. However, centralizing management and monitoring distributed applications in highly dynamic environments at scale, is not easy.

Tanzu for Kubernetes Operations enables you to adapt more quickly through full-stack, unified observability that provides visibility for any application on any cloud so that SREs and platform engineering teams can quickly identify and troubleshoot service and application health issues, shortening mean time to repair by up to 80%. In addition, the global control plane facilitates multi-team collaboration and provides development teams with self-service access to best configurations of Kubernetes so you can speed time to value.

LEARN MORE

Website

<https://tanzu.vmware.com/kubernetes-operations>

• Test Drive

https://pathfinder.vmware.com/v3/path/tko_path

Scalability & Resiliency

One of the defining characteristics of modern applications is the ephemeral nature of the infrastructure underneath. Kubernetes clusters are designed to be built and torn down regularly. As an application evolves and the individual microservices are modified over time, they can become top heavy and fail without automation.

Tanzu for Kubernetes Operations also includes elastic autoscaling through the service mesh so you can scale the container support and accommodate additional demand based on pre-defined service level objectives. Plus, the platform provides analytics with actionable insights based on performance monitoring, user, logs and security events in a single dashboard with end-to-end visibility so you can adapt more quickly. Further, Tanzu for Kubernetes Operations offers flexible backup and restore options and allows I&O teams to move applications between any cluster, running on any cloud, or on-prem data centers for more resiliency and simplified site recovery.

Summary

Tanzu for Kubernetes Operations provides enterprises with the foundation for building, operating, and managing a modern, Kubernetes-based container infrastructure across multi-cloud. It simplifies provisioning and management of Kubernetes with tools, automation, and data-driven insights to boost developer productivity, secure applications and data, and optimize infrastructure performance across your entire multi-cloud IT estate.

With Tanzu for Kubernetes Operations, all your clouds become launchpads for innovation to deliver vital business applications to the right place, at the right time, and at the right scale to accelerate your transformation journey from where you are, to where you want to be.