VMware Tanzu™ Mission Control™ for Managed Service Providers

BENEFITS OF MULTI-CLUSTER KUBERNETES ARCHITECTURE

- **Better isolation:** using namespace as the tenancy model to separate workloads causes potential security and performance risks due to the fact that namespaces share common cluster-wide services. Thus, using clusters as the isolation boundary is the preferred way to provide hard multi-tenancy, using the underlying hypervisor to isolate workloads much more effectively.

- **Higher availability:** a multi-cluster architecture reduces blast radius. Cluster issues, especially those that are related to shared services, won't subsequently bring down all the applications running on the cluster. You can gain higher availability for your applications overall.

- **Customized configurations:** with clusters as the isolation boundary, you can equip Kubernetes with the exact configuration to meet the specific needs of the applications or teams. You can also control the lifecycle of each cluster; for example, you won't have to force all your applications to run on a newer version of Kubernetes if some of them aren't ready yet.

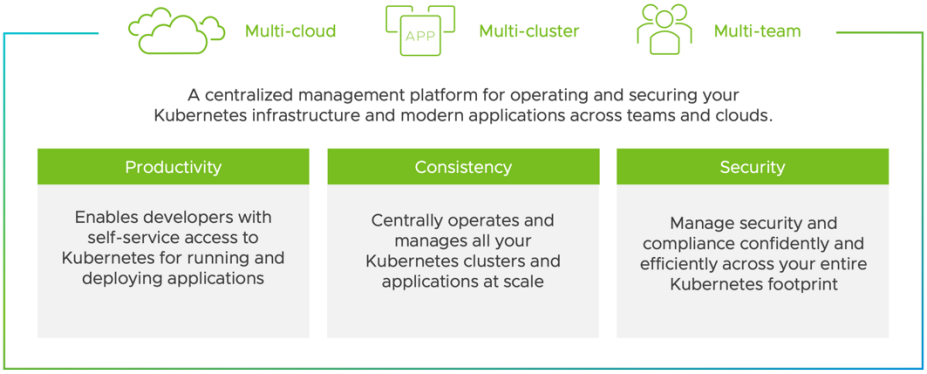
Kubernetes has become the de facto container orchestrator today and is being adopted by enterprises across all industries. As such adoption accelerating, enterprises are finding that the number of clusters they need to manage is increasing rapidly, and often times these clusters are deployed in a variety of environments – in multiple data centers on prem and/or in different public clouds.

With the increasing number of clusters that need to be managed across environments, the old, manual, cluster-by-cluster approach of management quickly becomes insufficient, or even dangerous due to its error-prone nature. Enterprises are in great need for a solution to help them automate the manual operational tasks and efficiently, consistently, and securely manage these clusters deployed across multiple clouds and/or by multiple teams, with the goal to reduce operational burden, empower the developers, and at the same time always remain secure and in compliance.

Tanzu Mission Control is a centralized Kubernetes management platform to help address such challenges.

What is Tanzu Mission Control?

Tanzu Mission Control is a centralized management platform for consistently operating and securing your Kubernetes infrastructure and modern applications across multiple teams and clouds. It provides operators with a single control point to give developers the independence they need to drive business forward, while enabling consistent management and operations across environments for increased security and governance.



WHO USES TANZU MISSION CONTROL?

- **The infrastructure and platform teams** use Tanzu Mission Control to enable the developers with self-service access to Kubernetes, and at the same time, centrally operate and manage the Kubernetes clusters and modern apps running on them with efficiency, consistency, and security.

- **The application teams** use Tanzu Mission Control to better manage and maintain applications by easily deploying services and workloads across clusters, better understanding the health of applications and quickly troubleshooting issues

Key Features of Tanzu Mission Control

Centralized Cluster Lifecycle Management: Tanzu Mission Control enables automated provisioning and lifecycle management of Tanzu Kubernetes Grid clusters across different environments. Via Tanzu Mission Control's UI, API or CLI, users can centrally provision, scale, upgrade and delete Kubernetes clusters across multiple IaaS environments where the clusters are running. It currently supports provisioning and lifecycle management of Tanzu Kubernetes Grid clusters on Amazon AWS, vSphere 7, VMware Cloud on AWS and Azure VMware Solution.

Attaching Clusters: Tanzu Mission Control allows you to attach any CNCF-conformant clusters to the platform for management, no matter where they are running—on-prem; in public clouds; through various Kubernetes vendors such as Tanzu Kubernetes Grid (TKG), Amazon Elastic Kubernetes Service (EKS), Azure Kubernetes Service (AKS), Google Kubernetes Engine (GKE) and OpenShift, or DIY Kubernetes clusters.

Centralized Policy Management: After you have your entire Kubernetes footprint under the management of Tanzu Mission Control through either direct provisioning and/or attaching clusters, you can use Tanzu Mission Control's powerful policy engine to apply consistent policies, such as security, access, network, quota, container registry, and even custom policies to manage them efficiently at scale. Policies can be applied to a group of clusters across different clouds, or to a group of namespaces of multiple clusters across multiple environments.

Observability and Diagnostics: Gain global observability of all your clusters that are residing in disparate environments, as well as the workloads running on them. Tanzu Mission Control also visualizes the health status of your Kubernetes clusters and workloads so you can easily identify and troubleshoot issues.

Data Protection: Leveraging the built-in open source *Velero project*, Tanzu Mission Control enables you to easily backup and restore your clusters, namespaces, and even groups of resources using Kubernetes label selectors via Tanzu Mission Control's UI, CLI, or API.

Identity and Access management: Tanzu Mission Control allows centralized authentication and authorization and federated identity from multiple sources, such as AD, LDAP, and SAML. You can also use the access policy of Tanzu Mission Control to more granularly manage access to your clusters and namespaces to make sure the right people access the right resources.

Cluster Inspection: Tanzu Mission Control enables you to run inspections on your clusters for potential configuration and security risks against the industry standards. For example, you can run cluster conformance inspection in Tanzu Mission Control leveraging the built-in open source *Sonobuoy project* to make sure your clusters are configured in conformant with the Cloud Native Computing Foundation (CNCF) standards, and run *Center for Internet Security* (CIS) Benchmark Inspection for any potential security risks.

Integration with other Tanzu products: Tanzu Mission Control integrates with other Tanzu products to provide a seamless user experience of consuming the Tanzu portfolio of products together. It integrates with Tanzu Observability for deeper Kubernetes observability, analysis and diagnostics, and integrates with Tanzu Service Mesh for microservices level connectivity and traffic management.

LEARM MORE

- **Website**
  tanzu.vmware.com/mission-control
- **Hands-on-Lab**
  labs.hol.vmware.com/HOL/catalogs/lab/6965
- **Want a free trial? Contact Us At**
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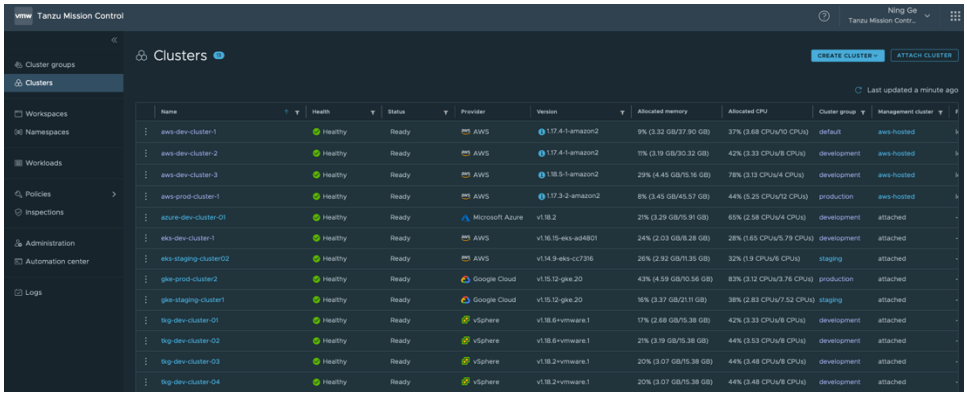
Benefits of Tanzu Mission Control

Both the infrastructure/platform team and application team find value in Tanzu Mission Control in terms of improving operational efficiency and enabling developer agility while maintaining much-needed governance for security and compliance. In particular, Tanzu Mission Control helps enterprises

Enhance operational efficiency by enabling Kubernetes infrastructure and application operators to gain the global visibility into the entire footprint of the Kubernetes across the enterprise and automate manual operational and management tasks across multiple clusters that are residing in disparate environments – on prem and in public clouds. For example, operators can centrally manage lifecycle of the clusters and apply policies efficiently to a group of clusters or namespaces at once, eliminating the old error-prone cluster-by-cluster approach.

Strengthen security and compliance by allowing platform and application operators to easily and efficiently govern Kubernetes infrastructure as well as the application running on it. With Tanzu Mission Control's powerful policy engine, operators can consistently apply security-related policies at scale to clusters and namespaces across environments. The uniquely designed resource hierarchy of Tanzu Mission Control enables infrastructure admins to set broader company-level security and compliance guardrails while allowing application teams to gain more granular control over their own applications. Furthermore, operators can also leverage the built-in inspections to regularly check the security and compliance status of the new and updated clusters to minimize the potential risks.

Increase developer agility and productivity through enabling them with self-service access to Kubernetes clusters and namespaces. With centralized authentication and authorization and federated identity, as well as the policy engine for directly managing access, Tanzu Mission Control makes it much easier for developers to get the right Kubernetes access they need to deploy and run their applications without even changing their existing workflow.



Why Choose Tanzu Mission Control?

Cloud Neutrality: Tanzu Mission Control is cloud neutral. It enables you to deploy and manage your Kubernetes workloads across any environment – on prem, in any public clouds, or through any vendors of Kubernetes distributions.

Enterprise Readiness: Tanzu Mission Control, specially designed to handle the most demanding needs of the enterprise management, provides a hardened solution for running Kubernetes in production at enterprise scale, making sure your critical production

workloads are always running in high availability, optimal performance, with security and in compliance.

Community-Aligned Approach: Building on open source technologies ensures you to have access to a global community of innovation and support. Tanzu Mission Control is built leveraging the open source technologies that are leaders in the Kubernetes ecosystem to deliver our customers the best Kubernetes experiences offered by the community.

VMware Tanzu Mission Control for Managed Service Providers

The Managed Service Provider (MSP) route to market gives partners the option to use VMware software-as-a-service offerings without investment in their own data center infrastructure, delivering managed services on top. VMware Tanzu Mission Control is offered to our MSPs through our centralized service provisioning portal, the VMware Cloud Partner Navigator which helps MSPs transact, deploy, and provision SaaS offerings from a single pane of glass.

Partners offering Tanzu Mission Control through Cloud Partner Navigator can easily provision the service to their end users, or offer it as part of a managed service.

How to Get Started

Below is an overview of the VMware Managed Service Provider (MSP) lifecycle:

Commit Contract – Partner signs a VMware Tanzu Mission commit contract with a VMware Aggregator. Partner then commits to VMware an MSRP (list price) spend to obtain a volume discount for their purchases.

Cloud Provider builds MSP Pipeline – Partner initiates go to market activities and starts building their business for Managed Services.

Deliver Managed Services and Own the Terms of Service – Once the opportunity has been identified, partners can order VMware Tanzu Mission Control from VMware and provide managed services as part of the offering to their customers. Partners must provide their own terms of service and managed services as part of the offering to the end customer. At a minimum, this must include technical support for the service and all functions associated with service configuration, add-ons, renewals and anything pertaining to billing.

On-Board and Provide Support to their Customers – Partner will on-board VMware Tanzu Mission Control for their customers. Subsequently, they may obtain technical support from VMware as needed. Partners are responsible for all customer support, which may include but may not be limited to customer communication, any managed services, answering installation, configuration, and usage questions. VMware is the single point of contact for the MSP partner.

Complete Monthly End Customer Reports and Pay Invoices – On the 10th of every month, the partner will log into the VMware Commerce Portal and review the prior month's usage. Partner will review the report and submit it to their Aggregator by the 15th day of the month. Following that, the Aggregator will send the partner an invoice for the month.

Access our MSP end-to-end getting started guide *here*.

Summary

With Kubernetes adoption accelerating, the number of clusters that an enterprise needs to manage are increasing quickly, and very possibly across a number of different environments – in multiple data centers on prem and/or in different public clouds. The old, manual, cluster-by-cluster approach of management becomes in-sufficient, or even dangerous due to its error-prone nature.

With VMware Tanzu Mission Control, we are providing enterprises with a centralized management platform for consistently operating and securing Kubernetes infrastructure and modern applications across multiple teams and clouds, freeing developers with the independence they need to drive business forward, while maintaining proper guardrails for security and compliance.

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