

VMware's Solutions for Modern Apps

Innovate and grow your business on any and many clouds—fast

CHALLENGES FOR CLOUD NATIVE ADOPTION AT SCALE

Recent surveys found that there are still significant obstacles to modern apps.

Developer productivity challenges include:

- 37% struggle with legacy platforms/developer tools*
- 36% have difficulty integrating new tools*
- 34% have too many manual and/or ticket-based processes*
- 30% have application portability challenges/complexity (e.g., between clouds, Kubernetes) *
- 29% say security is not well integrated into development process*

Kubernetes management challenges include:

- 40% struggle with providing secure configurations**
- 36% need to apply security policy more consistently**
- 33% have challenges with application performance monitoring
- 31% indicate they lack Kubernetes skillsets

*Source: A commissioned study conducted by Forrester Consulting on behalf of VMware, March 2022

**Source: ESG: VMware Tanzu for Kubernetes Operations Delivers for Application Modernization, 2022

Drive Business Growth with Cloud Native Apps

Software is a strategic corporate asset. Your ability to innovate and deliver new software-based products and services, quickly and continuously, is your strategic advantage. Meanwhile, a security breach or data leak can cost millions in lost revenue and fines, not to mention that it can decimate your brand. Keeping up in today's dynamic business environment means navigating today's equally complex IT landscape.

Whether you are all-in on public cloud, or are managing a hybrid application infrastructure, your software estate is likely a combination of new cloud native apps and microservices, and long-standing, monolithic apps, all of which require constant care and iteration. In all these cases, you must *be great at software*. Being great at software means focusing on the full lifecycle of building, delivering, and managing the apps, as well as the platforms and infrastructure on which they run, including public cloud, containers and VMs. And you must attain this culture of innovation while controlling costs and enforcing governance.

The combined offerings from VMware Tanzu and VMware Aria include a range of solutions, managed services, platforms, and practical consulting that can help you build the internal practices needed to foster innovation, modernize your operating models, and support technology initiatives that control the bottom line. Take advantage of open source innovation, securely, while optimizing the investments you have made in infrastructure, and employee upskilling.

Enable better collaboration across development, security, platform/cloud engineering and cloud operations teams with a clear separation of concerns and automation so:

- Developers can focus on delivering innovative business logic.
- Security teams can reduce risk and ensure compliance guardrails are continuously integrated, and automated.
- Platform Engineering and Operations teams can focus on building and running secure, scalable, and useful platforms on any cloud or Kubernetes distribution.
- Cloud Engineering and Management teams can unify operating models across cloud and hybrid environments and optimize cloud spend.

With VMware Tanzu and VMware Aria, you can harness the power of cloud native technologies and practices to empower collaboration and drive your business forward.

BENEFITS OF VMWARE TANZU AND VMWARE ARIA

Build and deploy more software - more quickly and more securely with VMware Tanzu.

- **A single solution:** End-to-end, integrated platform that provides a rich set of developer tooling and prepped paths to production.
- **A consistent developer experience:** For use across multi-cloud and multi-Kubernetes services and offerings.
- **Easy and automated paths:** Out-of-the-box, centralized secure supply chain management for faster app building and deployment, plus repeatable processes for onboarding teammates.
- **Freedom in flexibility:** Modular capabilities allow teams to swap in their preferred third-party tools.
- **Enterprise security:** Intrinsic compliance, controls, vulnerability dashboards, and more.
- **Reduce administration by 70-80%** with robust multi-cluster, multi-cloud Kubernetes management so you can offer developers self-service access to preferred Kubernetes with guardrails.
- **Reduce risk** by intelligently detecting and securing service-to-service connectivity across distributed Kubernetes with hardened runtime environment, patching, logging, and authentication.
- **Decrease time-to-value by 3-5x** through automating platform lifecycle and improving consistency of package management for greater operational efficiency.
- **Improve scalability & resiliency** of your apps. Unprecedented enterprise scalability enables app operators to increase reliability and portability.

Add to this **VMware Aria's** centralized governance and automated cloud management at multi-cloud scale for a complete, cloud native solution for modern apps.

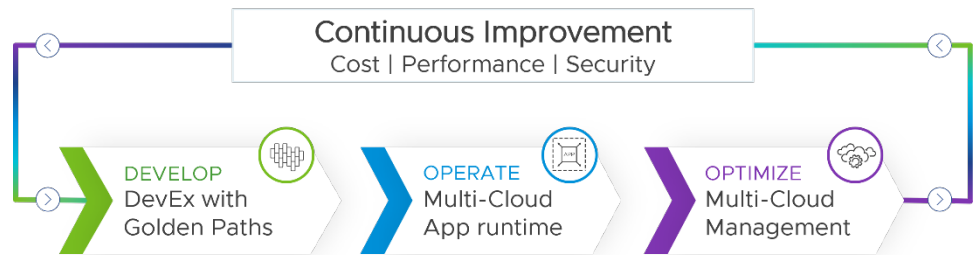


FIGURE 1: Modern software workflow from supporting developer velocity to operating apps in production at scale.

VMware Tanzu Use Cases

VMware Tanzu is a modular, cloud native application platform that enables development and operations teams to deliver business value faster and more securely to any cloud—and manage apps at scale across clouds. Using VMware Tanzu, you can reduce the complexity of building, delivering, and operating cloud native apps in a multi-cloud world—enabling innovation to happen on your terms. **VMware delivers streamlined paths to production with automated platform operations at scale for optimal cost, performance, security, and governance at every step of the cloud native journey.**

The following use cases provide more details of how VMware Tanzu can help your organization.

Faster, More Secure Paths to Production

Your business is at its best when you have happy developers creating value for your customers. Developers should be able to focus on getting their code working in production, and not spending time on packaging, security, or infrastructure—or trying to figure out Kubernetes.

VMware Tanzu offers a superior developer experience for building and deploying software quickly and securely on any compliant public cloud or on-premises Kubernetes cluster. Developers can access preconfigured cloud native app templates to jumpstart development along with a rich set of developer tooling for rapid iteration, able to debug code straight from their IDE. Developers can also maintain visibility of applications at runtime to troubleshoot and improve their apps. Your teams can experience...

- **Consistent Delivery & Deployment of Apps** – Reduce friction and streamline path to production with out-of-the-box Golden Paths, repeatable best practices supported by I/O, security, and platform teams.
- **Improved Developer Experience** – through masking complexity and issuing preconfigured templates for cloud native patterns.
- **Continuous Security of Apps** – with secure software supply chains with continuous vulnerability scanning, container image verification at time of build, and pre-set policy enforcement.

VMWARE TANZU LABS

Technology is only part of any modernization initiative. You may need support and expertise on your journey to deliver the outcomes you want in the timeframe you need.

VMware Tanzu Labs™ can empower your teams to respond faster to your customers’ needs and deliver the results that drive your business. With Tanzu Labs, you can:

- Build and modernize applications. Quickly assess business-critical applications so you can start migrating existing software immediately.
- Develop a Kubernetes-based app platform and run it at scale, making life better for developers along the way.
- Adopt modern practices and culture changes that are necessary for meaningful transformation and sustained success.

Learn more about [VMware Tanzu Labs](#).

Automate Kubernetes Platform Operations

Chances are your enterprise is living in today’s multi-cloud reality and so is your Kubernetes infrastructure. Managing these separate environments can be a heavy lift and unscalable, especially as more development teams start to use Kubernetes platforms.

VMware Tanzu provides a set of capabilities that empower your platform operations teams to provision, manage, connect, secure, and observe a multi-cloud Kubernetes platform. From a centralized SaaS management hub, you can manage security and access policies for all compliant Kubernetes distributions. You can impose networking and security measures at multiple layers to meet the strictest security and compliance requirements. You can also gather and analyze platform and application metrics to proactively detect and fix anomalies, as well as fine tune your infrastructure and applications for best performance. You can simplify, secure, and optimize your multi-cloud, multi-cluster Kubernetes estate as follows:

- **Consistent Cluster Lifecycle Management** - Simplify container provisioning, management, monitoring, and observability by providing consistent and scalable management across clouds.
- **Strengthen Security & Compliance** - Deliver secure, end-to-end connectivity to all your apps and platforms for improved compliance.
- **Optimize Kubernetes Operations** - Centrally manage, automate, and monitor diverse Kubernetes distributions and operations across any cloud, for any cluster type, by many teams for increased ROI.

Centralize Multi-cloud Governance & Policy

VMware Aria is a transformational, multi-cloud management solution that complements VMware Tanzu’s solutions. VMware Aria provides a single platform unifying performance, configuration, and delivery automation to optimize business outcomes for any cloud, any platform, any tool, and every persona. Built to address the scale and speed that cloud native applications need, with VMware Aria you can experience...

- **Centralized Multi-cloud Policy Management** – Define and deploy guardrail templates for any cloud with consistent experience.
- **Automatically Detect Drifts & Violations** – Gain full visibility into cloud environments, continuously monitor, and detect drifts and violations from desired state.
- **Continuous Compliance Enforcement** – Enforce desired state to ensure continuous compliance, automating drift and violation remediation.

VMware's 'Cloud Smart' Solutions for Modern Apps

Deliver a superior multi-cloud developer experience on Kubernetes with [VMware Tanzu Application Platform](#)

Often, developers must build their software pipelines on Kubernetes by combining bags of parts from infrastructure providers and public clouds, with technologies and tools they must source from the fragmented cloud native ecosystem. [VMware Tanzu Application Platform](#) is a modular, application-aware platform that provides a rich set of developer tooling and pre-paved paths to production to build and deploy software quickly and more securely on any compliant public cloud, or on-premises, Kubernetes cluster.

Implement a simplified, consistent approach to container deployment, scaling, and management with [VMware Tanzu for Kubernetes Operations](#)

VMware Tanzu for Kubernetes Operations provides the foundation for building a modern Kubernetes-based container infrastructure at scale across all clouds. It helps simplify container management with tools, automation, and data-driven insights that boost developer productivity, secure applications, and data, as well as optimize infrastructure performance across all your clouds.

Summary

Companies like yours are moving to the public cloud in some capacity. In fact, most organizations are multi-cloud – either by happenstance or by design, or inclusive of one or more public clouds, private clouds, and edge. With silos of cloud usage, you can have inconsistent experiences for operations and development, which makes application delivery, security, and management across clouds a significant challenge. And, even if you are concentrated on a single public cloud, in many industries, this can still cause business risk.

By abstracting applications from infrastructure, VMware Tanzu offers a consistent developer and operation experience for any Kubernetes on any cloud, as well as the ability to operate all Kubernetes as one for maximum efficiency and security. This model enables you to provide more flexibility in public cloud adoption. It also lets your business needs dictate cloud usage and helps you to avoid lock-in to any single cloud vendor or set of tools.

To learn more visit [VMware Tanzu Cloud Native Application Platform for Multi-cloud](#).