vmware®

VMware vSphere with Tanzu for State and Local Government

The fastest way to get your agency started with Kubernetes workloads

Introduction
Modern App Challenges

vSphere with Tanzu Helps
Agencies Succeed

Deliver Developer-Ready
Infrastructure
Align Development and IT Teams

Simplify Cloud Operations
Get Started

Innovate at Your Agency's Pace Using vSphere with Tanzu

For IT leaders in state and local government, the pressure is on to modernize operations, anticipate the impact of changing regulations, and contribute strategically to your agency's mission. Stakeholders and constituents are clamoring for the type of modern applications that deliver services more efficiently while providing a user experience comparable to what they've become accustomed to in the commercial sector. But these types of modern applications pose their own set of challenges for government agencies. More complex than traditional applications, they are often made up of multiple VMs, containers, and services, and run across heterogeneous architectures.

Modern apps are like distributed systems
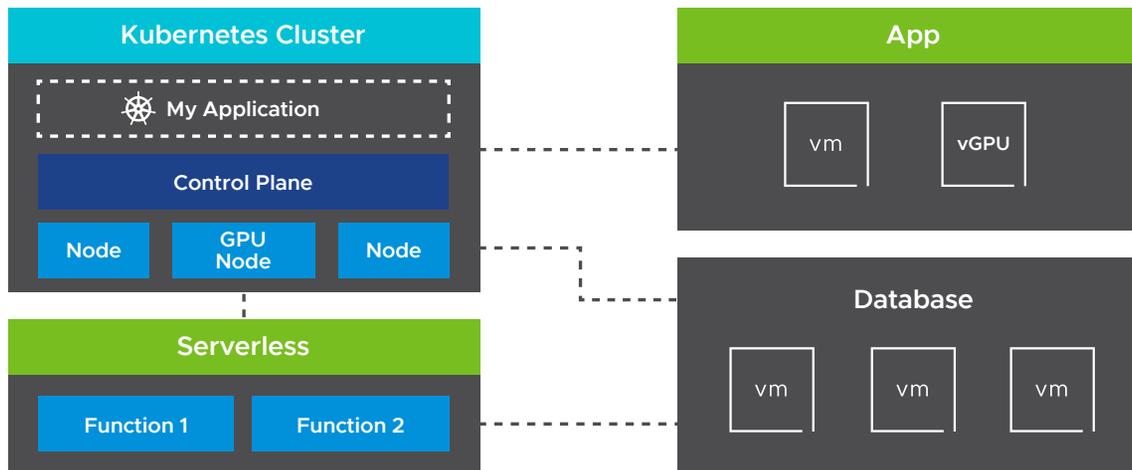
For government agencies, the next stage in their journey to the cloud is to learn to think like cloud natives.

Specifically, they need to think in terms of cloud-native development — moving away from big, monolithic software projects to smaller applications or even microservices that can be developed, tested, and fielded using Agile methodologies. Cloud-native development also usually takes advantage of containerization, an approach that makes it easy to port software from one platform to another.

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1. GovLoop. "*The Next Stage of Cloud Journey: Cloud Native Development*." February 13, 2020.

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Challenges Introduced by Modern Applications

1 **Unsustainable or hidden costs of standing up new services and platforms** — Agencies are consuming expensive cloud services or investing in dedicated Kubernetes platforms for building modern applications, so as to take advantage of modern developer tools.

2 **Infrastructure silos and multiple operating models** — IT teams deal with infrastructure silos and struggle to enforce security isolation. IT is unable to deliver infrastructure for modern applications at the desired pace of development teams or agency stakeholders, due to lack of knowledge or skillsets necessary for a cloud operating model.

3 **Increasing time to delivery for new applications** — Developer teams spend a significant amount of time on infrastructure operations related to networking and storage for Kubernetes deployments, which takes away time from development, slowing down the speed to production.
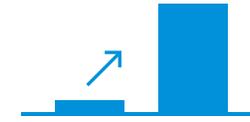
By 2025, more than 80% of ISVs will offer their application software in container format, up from less than 10% today.[2]

97%
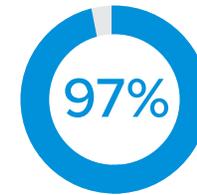
According to a survey conducted by IDC on container infrastructure software, 97% of respondents are using a Kubernetes-based platform.[3]

2. Gartner, Inc. "*CTO's Guide to Containers and Kubernetes: 10 Frequently Asked Questions.*" July 2020.

3. IDC. "*Container Infrastructure Software Market Assessment: End-User Survey Results.*" Doc # US46185520. Gary Chen. April 1, 2020.

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How vSphere with Tanzu Helps Agencies Succeed

VMware vSphere® with VMware Tanzu™ helps agencies extend the value of their IT investments by modernizing workloads already running on vSphere. VMware now delivers Kubernetes to the fingertips of millions of IT admins across the globe for rapid application development on existing IT infrastructure. This solution is the fastest way to get started with Kubernetes workloads on developer-ready infrastructure. Cloud-based services are an alternative, but they bring their own challenges with cost, compliance, and security.
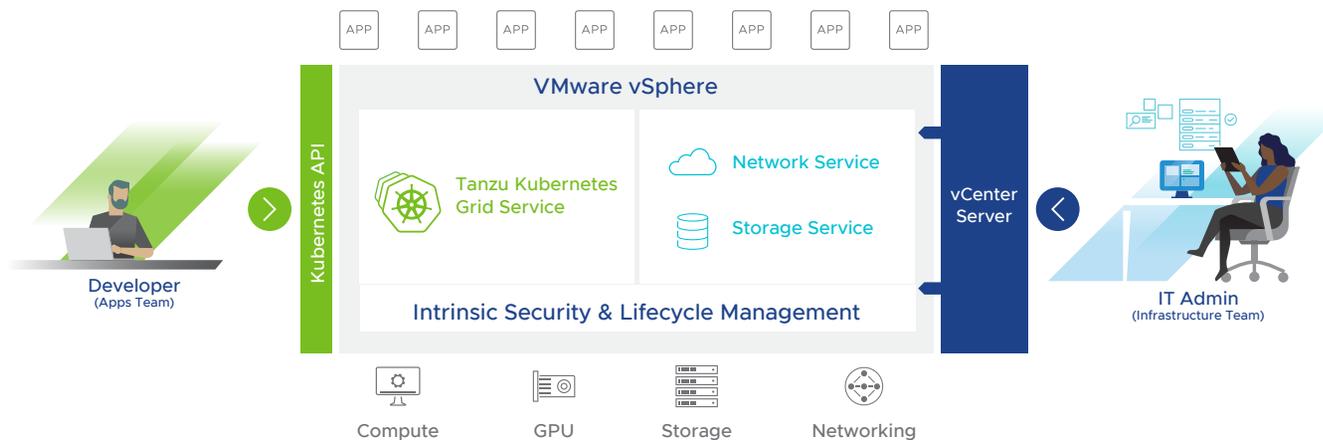
VMware vSphere with Tanzu opens the floodgates to Kubernetes workloads.

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Deliver Developer-Ready Infrastructure

What if your IT operations teams could use their existing vSphere environment to deliver Kubernetes clusters to the developer teams at a rapid pace? And what if they could do this while enabling the mission-critical governance, reliability, and security that modern state and local government agencies require?

Developers can't afford infrastructure that slows them down. State and local government agencies rely on developers to develop and deploy applications to accelerate digital transformation without sacrificing security or compromising the ability to adhere to government mandates. IT teams are challenged to deliver modern infrastructure that supports modern container-based application development, including the services and tools to build new applications. Kubernetes helps with container orchestration, but as a technology it is still maturing and currently complex. Public cloud-based services are an alternative, but they often become unsustainable due to cost or compliance reasons.

Configure a mission-ready Kubernetes infrastructure with existing networking and storage within 1 hour.*

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* Based on internal VMware testing and expectations for a production environment, where appropriate networking settings are preconfigured for consumption.

Tanzu Kubernetes Grid Service

Manage consistent, compliant and conformant Kubernetes clusters.

Storage Service

Manage persistent disks for use with containers, Kubernetes clusters, and virtual machines.

Network Service

Manage virtual routers, load balancers, and firewall rules.

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What if your IT admins could use vSphere tools to deliver modern developer services to developer teams on existing vSphere infrastructure and manage multiple Kubernetes clusters alongside virtual machines through vCenter?

Developers and IT admins are often not on the same page when it comes to priorities, skillsets, key performance indicators, preference for infrastructure platforms, or operating models. Aligning these teams is critical to the success of modern application development — especially to bring efficiency, scale and security to these Kubernetes deployments.

VMware vSphere with Tanzu allows these teams to operate with their existing skillsets and deliver self-service access to infrastructure for the development teams, while also delivering observability and troubleshooting for Kubernetes workloads to IT teams. It's also the perfect tool for developers leveraging "low code" or "no code" application development strategies. Public repositories such as GitHub can be securely managed by Tanzu, boosting the reach and productivity of your agency's existing resources.

Simple, fast, self-service provisioning of Tanzu Kubernetes clusters within a few minutes.*

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* Based on internal VMware testing and expectations for a production environment, where appropriate networking settings are preconfigured for consumption.

Simplify Cloud Operations

The role of the IT administrator has been evolving into the role of the Cloud administrator or the site reliability engineer (SRE), as organizations are increasingly building software applications using a cloud operating model. VMware vSphere with Tanzu brings agile cloud operations to the IT admin to enable this transition into the role of Cloud administrator or SRE by delivering agility in day-to-day IT operations related to Kubernetes infrastructure.

"Cloud infrastructure is elastic, which means if the pilot doesn't provide the promising results, the servers where the apps are built can be easily turned off without incurring further expense, and if the pilot turns out promising, the infrastructure handling the application can be scaled easily."

4. ACT-IAC Emerging Technology Community of Interest DevOps Working Group. "Devops Primer: Case Studies and Best Practices From Across Government" February 19, 2020.

Learn More about VMware vSphere with Tanzu

Modern applications are often complex combinations of many different technologies — traditional in-house applications, databases, modern applications in containers, and potentially even modern applications in functions. Managing these applications across that heterogeneity is a complex task for both developers and operators.

VMware brings the simplest implementation of Kubernetes to the fingertips of millions of IT admins.

New

vSphere with Tanzu

The **fastest** way to get started with Kubernetes workloads

WATCH THE VIDEO

VMware Cloud Foundation with Tanzu

The **best** way to run Kubernetes workloads **at scale**

For more information, check out VMware vSphere with Tanzu online.

VISIT WEBSITE

Read the comparison infographic to learn more about vSphere with Tanzu and VMware Cloud Foundation™ with Tanzu.

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