Build a Future-Ready Infrastructure

Simplify and accelerate modern apps with VMware vSphere with Tanzu on Dell EMC PowerEdge servers

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As you drive your business forward and look to maintain your competitive edge, modernization — in every aspect — becomes essential.

It’s likely that modernizing applications is high on your to-do list, but with so many moving pieces and issues to consider — including massive amounts of information, multiple operating models, infrastructure silos and increasing container usage — it can be difficult for IT to keep up.

The good news is that the latest release of VMware® vSphere® 7 includes vSphere with Tanzu, which marks a significant step forward on the path to application modernization — and easy access to container usage with VMware. Mainly, it brings Kubernetes®, the primary container orchestrator, to the fingertips of millions of IT administrators using VMware vCenter® across the globe.

Of course, your infrastructure foundation is equally important. You need a foundation that is primed and optimized to run vSphere. And this is why partnership and integration between VMware and Dell Technologies are so important. Dell EMC PowerEdge servers are designed for the modern, evolving data center. They are integral to making your transition to modernized apps easier and faster than ever before.

VMware® vSphere® 7 offers vSphere with Tanzu

vSphere with Tanzu requires vSphere 7U1 Enterprise Plus or above, and is offered as a separate subscription-based term license.
Application modernization — it’s time

Modern apps and container usage are on the rise. That’s why the time to focus on, and act on, workflow and infrastructure modernization is right now.

More apps than ever before

Over the next five years, enterprises will build 500 million logical apps using cloud native tools and methods. To put this into perspective, that’s equal to the total number of apps built over the last 40 years.\(^2\)

\(^2\) IDC Futurescape 2018.
Accelerate modern apps with containers — and Kubernetes orchestration

More businesses are using containers and Kubernetes orchestration to deliver apps quickly and reliably.

Run containers alongside virtual machines. Containers are particularly suited for app modernization because they:

1. Encapsulate apps, making them easier to move around
2. Are lightweight, using fewer resources
3. Are easier and faster to spin up or down

95% of new apps use containers.3

Accelerate modern apps with containers — and Kubernetes orchestration

Likewise, Kubernetes has become the de facto container orchestrator. It runs across many different environments, scales automatically to meet demand, self-heals, is extensible and is fast. Kubernetes significantly speeds up many processes that have traditionally caused delays for IT and developers.

97% of businesses running containers use Kubernetes

Time from commitment to deployment to production:

86% faster

(7 days to daily)\(^5\)

Time from request to provision resources:

450X faster

(14 days to 10-15 minutes)\(^5\)


\(^5\) VMware, "Kubernetes for Executives."
VMware vSphere with Tanzu on Dell EMC PowerEdge servers — the fastest way to get started with Kubernetes workloads

VMware vSphere with Tanzu simplifies the operation of Kubernetes on premises, putting cloud native constructs at the vSphere infrastructure (VI) administrator’s fingertips as part of vSphere 7 on premises.

Accelerate performance and reduce latency across edge, core and cloud deployments with PowerEdge

Speed your path to containerization with VMware on Dell EMC PowerEdge servers:

- **Simplify.** PowerEdge servers are preinstalled and pre-activated with VMware vSphere.
- **Seamlessly scale your infrastructure.** PowerEdge Scalable Business Architecture supports maximum performance across the widest range of applications.
- **Reduce latency.** Increase responsiveness for vMotion® with up to 73% lower latency⁶ on PowerEdge MX.

Benefits of vSphere with Tanzu

Simplified adoption of Kubernetes
Embedding Kubernetes in the vSphere 7 control plane removes much of the complexity associated with Kubernetes deployments.

Support for modern applications
Run VMs and containers side-by-side on the same platform to simplify management.

Ease of management
Manage everything—software, containers, firmware—from one location with vSphere Lifecycle Manager™ (vLCM) + Dell EMC OpenManage Integration for VMware vCenter (OMIVV).
Benefits of vSphere with Tanzu

Developer self-service
Give developers self-service access to resources while still maintaining policy and security controls.

Open source alignment
Gain access to the full innovation and energy of the Kubernetes community and greater influence over project direction.

Familiar management
Use tools you’re already familiar with — VMware vCenter — to implement policy and allocate capacity.

How to get started
vSphere with Tanzu is available with the latest release of vSphere Enterprise Plus edition.
Simplify and scale with other vSphere 7 enhancements

While vSphere with Tanzu is the centerpiece of this release, other exciting new features include:

- **vSphere Lifecycle Manager (vLCM)**
  Brings together firmware and software updates for simplified lifecycle management — scheduled within VMware vCenter.

- **Monster VMs**
  Scale up to 24TB memory and support up to 768 vCPUs, leaving other hypervisors in this category in the dust.

- **vSphere Bitfusion**
  Leverages accelerators for artificial intelligence (AI) and machine learning (ML) workloads in VMs or containers. Disaggregate and attach or detach GPU resources on any VM, based on workload demand.

- **Cluster scale enhancements**
  Expands the number of hosts to 96 per cluster — a 50% increase compared to the previous release.
Simplify and scale with other vSphere 7 enhancements

Two Dell EMC PowerEdge servers are certified to run Bitfusion:

- Dell EMC PowerEdge R740xd
- Dell EMC PowerEdge C4140
Application modernization begins and ends with your foundation

Dell EMC PowerEdge servers provide a solid foundation on which to run VMware software and take advantage of its latest and greatest features, including vSphere with Tanzu.

Our joint innovation and integration serves you in a variety of ways:

- **Reduce risk.** Dell EMC hardware is pre-tested, pre-validated and optimized to work with VMware technology.
- **Integrated solutions deliver benefits.** OMIVV is a vCenter plug-in that provides monitoring, updates and management of Dell EMC PowerEdge servers via the vCenter administration domain. Working with vLCM, OMIVV enables you to complete software and firmware updates 68X faster.\(^5\)
- **Getting the support you need is simple.** Make one call for all hardware and software issues.

\(^5\) A Principled Technologies report commissioned by Dell EMC. "New VMware vSphere 7.0 features reduced the time and complexity of routine update and hardware compliance tasks." August 2020.
Achieve multi-layer security across physical and virtual machines and containers

Fortify operations with enterprise-grade data security from chip to server to VM to cloud native applications.

- Every PowerEdge server comes with a cyber-resilient architecture that extends across firmware, data, operating system, peripheral devices and management operations.
- PowerEdge securely boots with TPM 2.0 security, while vSphere adds support for TPM 2.0 hardware and virtual TPM 2.0 for VMs.
- Get intrinsic security and control with remote verification using vSphere Trust Authority and Identity Federation.
Establish a future-ready foundation with Dell Technologies and VMware

Together, Dell EMC PowerEdge servers and VMware software simplify and accelerate your hybrid cloud journey. As leaders in the industry, we deliver a scalable, flexible architecture, intelligent automation and management, and multi-layer security from the core to cloud to edge. You can rest assured that your business is in good hands with proven technologies and a modern, agile foundation that can help you tackle application modernization and take your business to the next level.

Scalable, flexible architecture, intelligent automation and management, and multi-layer security
Get started

Begin the process of modernizing your applications today with help from Dell Technologies and VMware.

Learn more: DellTechnologies.com/PowerEdge-VMware.
Watch: Dell EMC PowerEdge and VMware vSphere video.

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