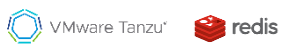


# Real-time Geo-distributed Apps with Redis Enterprise and VMware Tanzu®



Learn More

[Redis on VMware Marketplace](#)

[VMware Tanzu Overview](#)

With Redis Enterprise and VMware Tanzu solutions, developers can build, run, and manage geo-distributed modern applications with ease by leveraging a fast and resilient data caching layer that scales with the pace of business.

## Building Data-Centric Modern Applications

Today's developers use tools such as VMware Tanzu® Application Platform™ and the Spring framework to build modern applications. However, to truly build best-of-breed intelligent, data-centric modern applications, developers must utilize a modern, unified, in-memory data layer. This will enable development teams to truly scale their applications with the pace of business, especially when that business extends across the globe.

With the combination of Redis Enterprise and the VMware Tanzu portfolio, including the popular Spring framework, developers can do all these things and more.

## Benefits of Redis and VMware Tanzu

- **In-Memory Data Layer:** Developers who utilize [Spring](#) and [VMware Tanzu Application Platform](#) to build modern, real-time applications, find a need for an in-memory data layer. To build a world-class modern application, there's an underlying requirement to have true integration between different models (e.g., graph, stream) in a database. Redis Enterprise enables multi-model operations across and between modules and the core Redis data structures to be executed in a fully programmable and distributed manner, while maintaining instant, sub-millisecond latency.
- **Operating at Full Speed:** When it comes to creating, scaling, and managing Redis instances, developers are often bottlenecked by operations teams. With Redis Enterprise, VMware Tanzu Kubernetes Grid users can do these tasks on-demand and with ease, freeing up operations teams for other tasks.



Support Multi-model operations



Improve operational efficiency

## Use Cases for Redis and VMware Tanzu

With Redis and VMware Tanzu solutions, developers around the world use VMware Tanzu Application Platform and the Spring framework to build intelligent, data-powered applications. There are several key industry-specific use cases that are an ideal fit for the joint solution:

- **Geo-distributed modern applications:** Much like the companies building them, applications are expected to function in a geo-distributed manner – including in their caching capabilities. For example, consider the management of sessions data and real-time inventory in the retail industry to make the online shopping experience for customers seamless. Redis Enterprise, combined with VMware Tanzu solutions, can aggregate searches to bring faster, more accurate results, thus enabling customers to find exactly what they need, right away.
- **High availability for geo-distributed applications:** Geo-distributed modern applications typically need to be highly available in order to meet the pace and requirements of the business. This is especially important in scenarios such as fraud detection and disaster recovery. Redis Enterprise, with VMware Tanzu solutions, can be used for performance, scale and the assurance of exceptional customer experience with minimal downtimes.
- **Edge and AI:** Not only are today's modern applications distributed across the globe, but they are often built to function at the edge. This is especially crucial in field-intensive industries such as Fintech and retail. Redis Enterprise paired with VMware Tanzu solutions can be used in fraud detection services, enabling companies to easily manage billions of transactions per day.



Geo-distributed applications



Highly available applications



Applications running on edge

## Deploying Redis Enterprise on VMware Tanzu® Kubernetes Grid™

VMware and Redis collaborated on a joint Reference Architecture that details how to deploy Redis Enterprise on VMware Tanzu Kubernetes Grid (TKG). The reference document covers details such as Kubernetes requirements and cluster layout for Redis Enterprise.

By following the Reference Architecture, you should be able to create a highly available, production-grade deployment of Redis Enterprise with VMware Tanzu Kubernetes Grid. However, you should not feel constrained by the exact path in the document if your specific use cases lead you to a different deployment architecture. Design decisions in the architecture paper reflect the main design issues and the rationale behind a chosen solution path, and if necessary, can help provide rationale for any deviation.

The Reference Architecture discusses several different cluster layouts. The level of availability and redundancy required by the workloads being deployed will determine the topology of the clusters—from a simpler, single cluster running in just one availability zone, to a more complex deployment of multiple clusters distributed all over the world, either on a single cloud provider or across multiple cloud providers.

In the following diagram, we represent a high-level architectural view covering Redis and VMware Tanzu solutions.

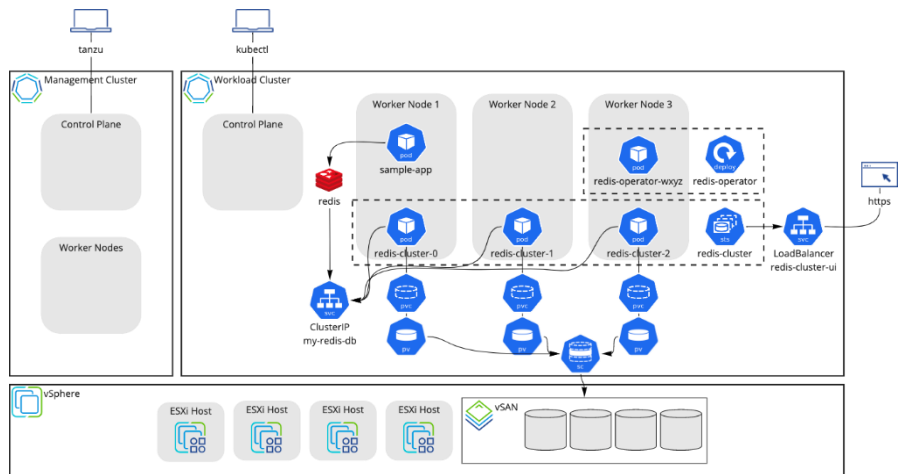


Figure 1: Architectural View – Redis Enterprise and VMware Tanzu Kubernetes Grid

## How to get started

For more information on using Redis and VMware Tanzu solutions, reach out to your Redis sales rep or your VMware Tanzu sales rep, and we'll be in touch!

