



Market Insight Report Reprint

VMware's Tanzu Data Services emphasizes data modernization in cloud and application transformation

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While its Tanzu brand is best known for its cloud-native application development and modernization offerings, the company also boasts a growing data management portfolio that is not to be overlooked. Here we outline the VMware Tanzu Data Services portfolio and provide an update on its evolution.

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Introduction

VMware launched its Tanzu portfolio in 2020 to provide a foundation for platform and application modernization driven by cloud-native architecture and technologies acquired from the likes of Pivotal, Bitnami, Heptio and Wavefront. The VMware Tanzu portfolio is now well-established to aid enterprises in their business and technology modernization initiatives with offerings that address container-based application development and deployment; networking configuration and management; and developer-centric self-service platform orchestration, with the necessary security and access control.

While we have checked in regularly on the evolution of the overall portfolio and strategy, we have paid less attention to the company's data management assets. VMware Tanzu Data Services is an important part of the overall portfolio, however, with the functionality to support operational and analytic databases, as well as data grid/caching and messaging/streaming, on elastic, cloud-native architecture. In this report, we provide a brief reminder of the VMware Tanzu Data Services portfolio and give an update on its evolution.

THE 451 TAKE

It has been some time since we checked in on VMware's progress with the various offerings it acquired along with Pivotal in August 2019. While Greenplum, GemFire and RabbitMQ have all been marked with the Tanzu brand since then, and Tanzu SQL has been introduced, for the most part the Tanzu Data Services portfolio has benefitted from the company building on the former Pivotal strategy of addressing data-processing requirements for modern application, cloud and DevOps transformation initiatives. This wider strategy has been accelerated by VMware, alongside its multicloud management and hyperconverged infrastructure portfolio, making Tanzu Data Services an increasingly logical choice for enterprises embarking on new initiatives or looking to refine their approaches to modernizing their data and application stacks.

VMware faces a variety of competitors for Tanzu Data Services given the breadth of functionality delivered across the four products. Potential alternatives include MySQL PostgreSQL (as well as a plethora of products and services based on those two databases) for Tanzu SQL; Snowflake, Teradata, Oracle, Microsoft and IBM for Tanzu Greenplum; GridGain, Hazelcast, IBM, Oracle and others for Tanzu GemFire; and IBM, Confluent and others for Tanzu RabbitMQ. However, the vendor is also well differentiated thanks to the combination of functionality provided by the four offerings in combination, as well as its availability both on-premises and in the cloud, particularly in conjunction with the wider portfolio of cloud-native platform and application modernization offerings – not least the various Tanzu editions.

Details

According to data collated by Tanzu Telemetry, part of the company's Customer Experience Improvement Program, 25% of workloads currently running on VMware are databases. Tanzu Data Services is therefore considered a significant part of the vendor's wider portfolio even if (and perhaps even because) the data layer can often be an afterthought in application, cloud and DevOps transformation strategies.

Based on products that were acquired along with Pivotal – and can trace their lineage back much further than that – the VMware Tanzu Data Services stable includes the Tanzu SQL operational databases, as well as the Tanzu Greenplum analytic database, Tanzu GemFire for in-memory data grid/caching, and Tanzu RabbitMQ for messaging. The company has more than 500 customers across Tanzu Data Services, in a variety of industries. The products are all priced by core count, which VMware believe insulates customers from the uncertainties and surprises of usage-based pricing.

With the exception of Greenplum, these are all currently supported for deployment on Kubernetes (including Kubernetes on public cloud, as well as Tanzu editions), and the Tanzu Application Service, with Kubernetes Operators designed to automate the database lifecycle and enabling on-demand, self-service consumption. (While a Kubernetes Operator for Greenplum is available, the vendor is focused on developing an offering for as-a-service consumption – planned for launch before year-end.)

Below is a reminder of each of these services, as well as recent announcements:

- **Tanzu SQL:** Provides a choice of relational databases compatible with MySQL and PostgreSQL to offer an operational data platform with built-in backups, monitoring and high availability, as well as automation to reduce the manual effort required for patching and updating. Available for deployment on any cloud, VMware Tanzu SQL enables self-service provisioning of database instances by developers. Additionally, Data Management for VMware Tanzu supports the creation, provisioning and management of Tanzu SQL databases running in vSphere, enabling users to create database instances from predefined templates.
- **Tanzu Greenplum:** Based on – and 100% compatible with – the open source PostgreSQL database, Tanzu Greenplum is primarily associated with analytic workloads (data marts, data warehousing and data science), for which it has been used through its various incarnations since 2003. However, as previously reported, VMware is keen to evolve Greenplum beyond analytic workloads – taking advantage of its parallel architecture to also support transactional and other operational workloads. This remains a work in progress that will likely be delivered initially as a managed cloud service in the next 12 months or so.
- **Tanzu GemFire:** This in-memory data grid/cache offering is also based on an open source project (Apache Geode) and can trace its history back to the early 1980s. VMware Tanzu GemFire is designed to accelerate data-processing performance by offering an in-memory cache, as well as distributed data processing.
- **Tanzu RabbitMQ:** Also based on an open source offering (the RabbitMQ message broker), Tanzu RabbitMQ is available as a container image, as well as for Kubernetes, and for the Tanzu Application Service. It has recently been bolstered with the RabbitMQ Streams model, which adds persistence and replication to the append-only log that is positioned as a potential alternative to Apache Kafka, with the addition of complex routing, high throughput, and ‘time travel.’

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