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Andy Thurai
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GigaOm Vendor Profile: VMware

An Exploration Based on Key Criteria for Evaluating Cloud Observability

Cloud & Infrastructure

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Table of Contents

1. Summary

The VMware Tanzu™ solution suite, designed to support cloud, hybrid cloud, and containerized applications, adds observability to its portfolio with Tanzu Observability. VMware is expanding its support for cloud and Kubernetes and this platform, rebranded from the Wavefront product acquired in March 2020, is designed to help produce, maintain, and scale cloud-native applications.

Tanzu Observability offers full-stack observability using operational telemetry such as metrics, traces, histograms, span logs, and events aggregated across distributed applications, application services, container services, and the enterprise multi-cloud based on public, private, and hybrid cloud infrastructures.

The offering has been available for more than seven years now, making it one of the longest-running offerings and a mature one. Tanzu Observability provides effective integration with many AWS offerings, including AWS CloudWatch and AWS CloudTrail, as well as with Google Cloud (GCP Stackdriver) and Microsoft Azure, putting it on par with other observability solutions. VMware product integration with products such as vSphere, vSAN, TMC, TAS, and TKG shines, providing customers with complete observability for their hybrid infrastructure.

Tanzu Observability supports dependency mapping with application and service maps. The application map provides an overview of how the applications and services are linked; it allows users to focus on a specific service and to view request, error, and duration (RED) metrics for each service and its edges. The user can also view traces for the services and edges and drill down from the application map. Service map enables a user to view the service dependencies and follow the flow of request calls from service to service. The user can see the service RED metrics that reflect the service's health—request count, error count, and trace duration at the 95th percentile, as well as overall traces (root spans) that originate in the service.

For open source enthusiasts, Tanzu Observability provides decent integration with Prometheus, Jaeger, Spring, and Zipkin, and it is OpenTelemetry compliant.

HOW TO READ THIS REPORT

This GigaOm report is one of a series of documents that helps IT organizations assess competing solutions in the context of well-defined features and criteria. For a fuller understanding consider reviewing the following reports:

Key Criteria report: A detailed market sector analysis that assesses the impact that key product features and criteria have on top-line solution characteristics—such as scalability, performance, and TCO—that drive purchase decisions.

GigaOm Radar report: A forward-looking analysis that plots the relative value and progression of vendor solutions along multiple axes based on strategy and execution. The Radar report includes a breakdown of each vendor's offering in the sector.

Vendor Profile: An in-depth vendor analysis that builds on the framework developed in the Key Criteria and Radar reports to assess a company's engagement within a technology sector. This analysis includes forward-looking guidance around both strategy and product.

2. Key Criteria Analysis

	KEY CRITERIA							
	Observability & Visualization	Observability & Application	Pattern Analysis	Baselining/Drift Identification	Root Cause Analysis Data Sources	Remediation/ Automation	Partner Marketplace	Ops Integration
VMware	+++	+++	++	++	++	+	++	++

+++: strong focus and perfect fit of the solution
++: The solution is good in this area, but there is still room for improvement
+: The solution has limitations and a narrow set of use cases
-: Not applicable or absent.

Source: GigaOm 2021

In the context of key criteria presented in the Radar report, Tanzu Observability stood out as one of the strongest offerings in the area of Observability & Visualization. Customizable dashboards based on user persona and individual needs are easy to create in VMware, and enable a level of self-service that can help organizations scale to thousands of potential users working with personalized data visualizations in real-time.

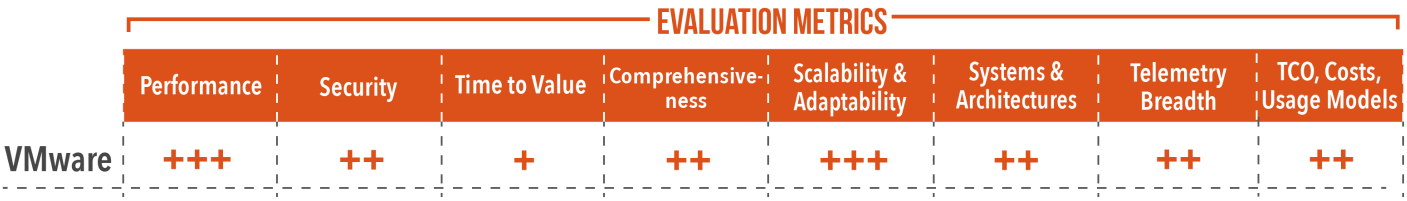
The solution's support for more than 110 analytical functions out of the box also made it a top scorer in the Observability & Application criterion. These functions span areas such as capacity planning, forecasting, and anomaly detection, enabling an enterprise to get to work quickly without a lot of customization.

The built-in WQL (Wavefront Query Language) includes features that impact both the Pattern Analysis and the Baselining/Drift Identification criteria. WQL offers anomalous, holt-winters, nnforecast, and linear forecast functions that users can turn into charts and alerts with a single click. The AI/ML-based AI Genie further helps with automatic anomaly detection.

Tanzu Observability offers integration with Ansible, Chef, Puppet, Terraform, Jenkins, Concourse CI, and other automation tools to streamline remediation, while built-in monitoring and remediation of config changes (such as Puppet config) can monitor unauthorized changes. These capabilities directly impact the Ops Integration and Remediation/Automation criteria.

The platform seems to support high cardinality with short-lived containerized environments with ease. It also retains data at full fidelity for 18-plus months, instead of down sampling like some of the other solutions in the market.

3. Evolution Metrics



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Source: GigaOm 2021

The VMware TanzuObservability platform earned high marks in the Performance evaluation metric of the GigaOm Radar for Cloud Observability. In the field, the solution is widely deployed in production at large digital enterprises, serving large engineering, platform and support teams.

Tanzu Observability can ingest more than 250 million data points per minute and can scale to support large-scale container deployments with ease. It can scale to observe (ingest, analyze, and visualize telemetry) up to 200,000 containers per cluster across Kubernetes clusters running concurrently—not an easy task. In some large, digital-native enterprises (such as Lyft or Workday) the platform supports up to 2 million points per second (PPS) for metrics ingestion, which is more than adequate for even the most demanding hyper-digital environments.

On the security front, VMware is making progress by developing granular level access control to individual metrics data. This will be a welcome addition in limiting visualization, analysis, and interpretation of data only to those people or systems with appropriate clearance—vital for regulatory/compliance environments where access to sensitive data is highly restricted.

Overall, Tanzu Observability provides adequate controls and integrations across a broad swath of functionality, from security, compliance, GDPR, and privacy, through to authentication, authorization, and identity management integrating with existing enterprise tools.

As with most providers in this space, VMware has adopted a pay-as-you-go pricing model, doing away with the unwelcome complexities that comes with models based on per seat, per license, per node, per container, per host, and the like. The consumption-based data pricing model is driven by the data ingestion rate, with discounts for higher volumes of data. The system allows customers to accurately predict pricing based on the data they send across production, pre-production, test, and development environments. Metrics are priced according to PPS, while spans/traces and histograms are priced as a multiplier of PPS.

While the overall TCO of Tanzu Observability is not the lowest, our analysis places it within the top tier based on VMware's competitive pricing model.

Delivered as a self-service SaaS, Tanzu Observability enables users to sign-up and use the service

immediately, while VMware's service and partner teams are available to help guide implementation. That said, time to value and time from proof of concept to production-ready implementation are both judged to be about average for the observability sector.

4. Bottom Line

For enterprises looking for hybrid observability solutions, VMware presents a strong offering. This is especially true because VMware Tanzu Observability is one of the very few solutions in the sector that treats VMs, enterprise software, and cloud-native solutions all as first-class citizens. When you add the fact that its Kubernetes cluster observability can observe across any type of cloud—AWS, Azure, GCP, or on-premises infrastructure—its value becomes even more compelling.

Tanzu Observability boasts strong enterprise features such as governance, security, policy, and compliance, but it needs to catch up with some of the new digital observability platforms to offer more cloud-native solutions. VMware does earn praise from large enterprise users for its pricing and usage model, which makes it easy to start at any application size and then scale up or down as needed. This removes the hard choice some outfits have faced, to observe only some production applications because the cost of observing them all was so high.

If you are looking for a true hybrid observability platform that can help you observe your distributed application with a mix of a private data center, public cloud, and partner APIs, VMware Tanzu Observability is a very strong offering.

5 About Andy Thurai

Andy Thurai is an accomplished IT executive, strategist, advisor, and evangelist with 25-plus years of experience in executive, technical, and architectural leadership positions at companies such as IBM, Intel, BMC, Nortel, and Oracle. He also advises many start-ups. He has been a keynote speaker at major conferences and served as host for many webcasts, podcasts, webinars, and video chats. Andy has written more than 100 articles on emerging technology topics for publications such as Forbes, The New Stack, AI World, VentureBeat, and Wired magazine.

Andy's topics of interest and expertise include AIOps, ITOps, observability, artificial intelligence, machine learning, cloud, edge, and other enterprise software. His strength is selling technology to the CxO audience with value proposition rather than a technology pitch.

You can find more details and samples of Andy's work on his website at www.thefieldcto.com

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