VMware Goes DevOps: Wavefront Acquisition Brings Massive Data Analytics Capabilities for IT Operations

Abstract

On Wednesday, April 12, VMware and Wavefront entered into an agreement for VMware to acquire Wavefront, the Palo Alto-based data analytics firm. VMware plans to leverage Wavefront to complement its upcoming Cross-Cloud Services and its vRealize product line by enabling developers to monitor, analyze, and troubleshoot their applications independently of the cloud they rung on. Enterprise Management Associates (EMA) sees it likely that due to the modular and API-centric architecture behind Wavefront, VMware will find many more opportunities to cross-pollinate other products, such as VMware Workspace ONE or vSAN Health Services, with advanced data analytics capabilities.

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Background on Wavefront

Founded in 2013 by former Google employees, Wavefront set out to create a SaaS-based data analytics platform that would allow non-data scientists, mostly developers, to understand how their cloud-hosted applications behave within their overall business context. In October 2016, Wavefront received $53 million in series B funding by Tenaya Capital, Sequoia, and Sutter Hill Ventures, bringing the company's total venture capital funding to $67.5 million. At the time of acquisition, Wavefront employed about 60 staff members and acquired paying customers such as Box, Workday, Groupon, and Lyft.

The Technology

The Wavefront analytics platform consists of three major components that enable developers to analyze application behavior and user experience, configure intelligent alerts, and reveal how business events impact IT and vice versa:

Metrics collection and storage: Wavefront offers prebuilt API integrations for most popular application, container, and big data frameworks, as well as for the mega-clouds by Amazon, Google, and Azure. In addition, Wavefront enables customers to ingest operations data from popular databases, DNS servers, and operating

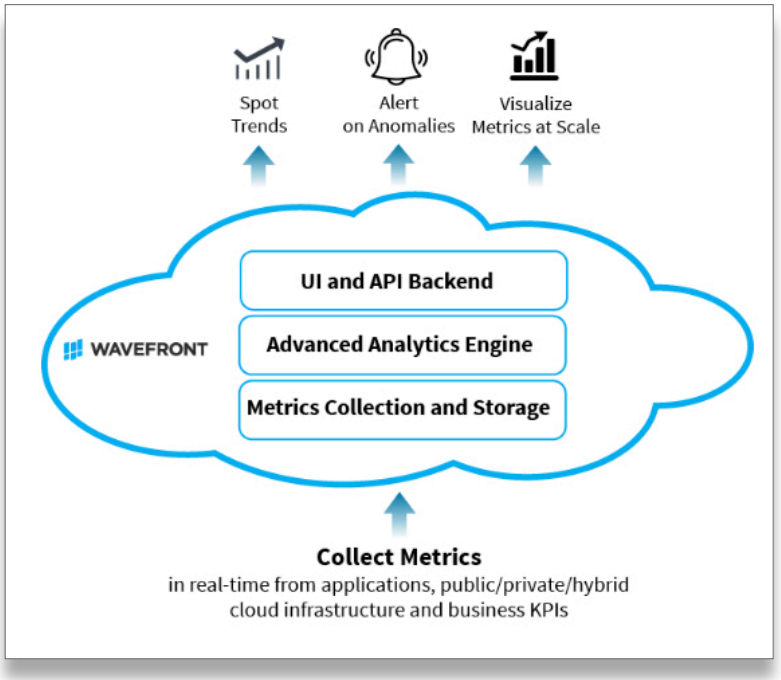

Figure 1 - Key Components and Capabilities of Waveflow

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systems, as well as from monitoring tools, single sign on platforms, message queues, and web servers. It is critical to understand that by itself, Wavefront is not a monitoring tool, but a data analytics, visualization and alerting platform that relies on input from all of the above components, including monitoring tools such as Nagios, NewRelic, or VMware's vRealize products. Therefore, Wavefront does not require data collection agents, but receives its input directly from tools and services that are already in place. Customers can add more data streams by connecting almost any data source to the Wavefront proxy service – e.g. metrics and logs – which then streams this data to Wavefront.

Analytics engine: Wavefront offers approximately 90 ready-made integrations with dashboards for metrics, alerts, and trending based on popular use cases and platforms. For example, the dashboards for Amazon Web Services (AWS) include operation metrics for EC2, ECS, Dynamo DB, RedShift, Lambda, and other AWS infrastructure, platform, and service components. The relevant data is streamed directly from Amazon's CloudWatch, CloudTrail, and other AWS APIs.

API and GUI: All capabilities of the analytic engine are available via GUI and API, enabling developers to programmatically define queries, create charts and dashboards, or configure alerts and automatic responses to specific events.

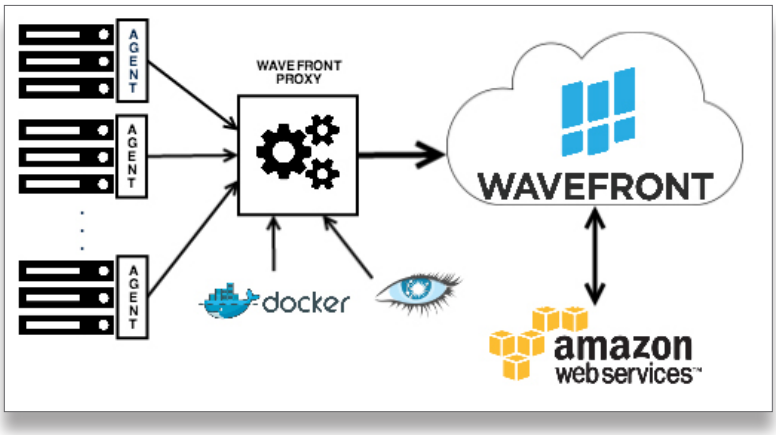

Figure 2 - Wavefront Proxy Forwards Data to the Analytics Engine (source: Wavefront)

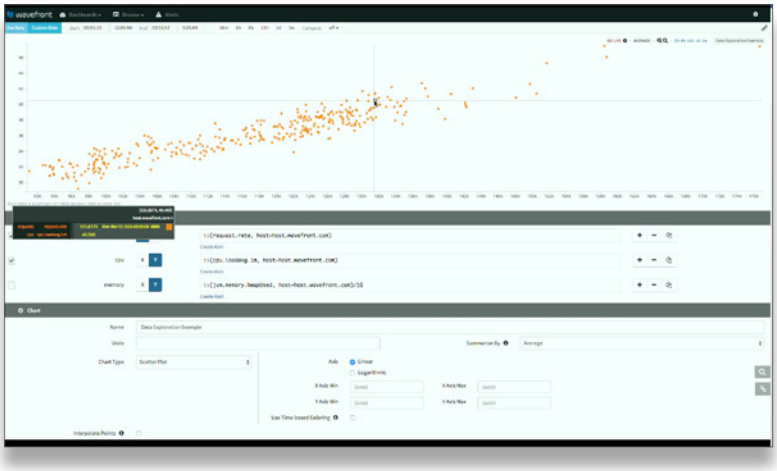

Figure 3 - Identifying Hidden Correlations

Use Cases

Wavefront enables developers to understand exactly how their application consumes cloud infrastructure. The more data sources are connected to the analytics engine, the more impactful the results can be not only for IT, but also for optimizing business processes. For example, a food delivery service can identify restaurants that take too long to confirm customer orders or it could detect that, for some reason, after 6pm the average order placed via iPhone takes 30% more time than orders through Android. The Wavefront user can then separately look at telemetry data for iPhone against Android transactions and for fast-responding versus slow-responding restaurants. Maybe there is no correlation, but the user may find that during peak hours, the iPhone app experiences more storage latency than the Android app, explaining why orders take longer and maybe even why a growing percentage of iPhone users are abandoning the service. Next, the user will create a query that determines whether slowly-responding restaurants are typically the ones using the iPhone app. If this is not the case, the user can continue to compare more telemetry data between user sessions of fast versus slow restaurants and may come up with insights that could help addressing this business issue.

At the basic level, Wavefront is simply a flexible analytics tool to provide granular metrics to help developers understand the impact of usage patterns, code changes, increases in the user base, and other events. These insights can then be used to "waterproof" the app, move it to a more suitable environment, define a more efficient scaling process, deliver performance and reliability metrics that belong to specific business processes, or define automated failure responses.

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Strategic Fit and EMA Perspective

Wavefront could become the VMware data analytics layer that initially enhances the developer appeal of Cross-Cloud Services and vRealize. This platform is sufficiently flexible to provide analytics capabilities across VMware's portfolio that will also reach to third-party software. Ultimately, Wavefront could help VMware create a business and IT analytics platform that enables the enterprise to better align IT operations management with business goals.

Today, developers typically regard VMware's software as "the tools the operation guys wanted," and often do not feel invested in ensuring optimal operation. Providing these developers with a platform that enables them to create better performing and more reliable software through receiving immediate and continuous feedback on performance, user acceptance, scalability, reliability, resource consumption patterns, and other critical metrics is essential to software success.

The existing Amazon partnership and product integration is more than simply a "cherry on top," as because the currently-available Wavefront dashboards for Amazon already demonstrate how customers can, for example, benefit from reports showing the potential savings by moving additional applications to AWS Lambda.

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About EMA

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on Twitter, Facebook, or LinkedIn. 3566.041717

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