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Datadog Expands into APM

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IDC's Quick Take

Datadog, a fast-growing, SaaS-based provider of performance monitoring for on-premises and public cloud infrastructure, has recently expanded into the application performance monitoring (APM) space. By offering customers the opportunity to collect and analyze infrastructure and application performance data via the same analytics, dashboarding, and alerting platform, Datadog hopes to help IT operations and development teams better collaborate and support dynamic modern applications running on ephemeral, variable hybrid cloud infrastructure.

Product Announcement Highlights

The initial Datadog APM release extends the current Datadog infrastructure monitoring platform to support application health, latency, and throughput along with transaction tracing for web applications written in Python, Ruby, and Go. It uses open source Datadog agents to instrument and tag on-premises infrastructure, public cloud services, middleware, and application resources. Third-party commercial monitoring tools can also feed data into the Datadog analytics engine using the Datadog API. The company's predictive analytics engine can correlate data from across more than 150 application and infrastructure integrations.

APM capabilities available in this first release include:

- Automatic tracing of individual requests from end to end across hosts and services
- Flame graphs for quickly and accurately identifying the most frequently used code paths
- Customizable dashboards for data aggregation and correlation
- Smart alerting via email, SMS, and cloud-based collaboration tools
- Anomaly detection based on machine learning
- Transparent tag-based aggregation of performance data from microservices, containers, and other ephemeral hosts

Datadog is positioning APM as an extension of its existing infrastructure monitoring business and is offering combined infrastructure and application monitoring for the list price of $27/month/host, discounted to $23/month under a one-year contract. Customers can choose hourly, monthly, or yearly purchase agreements. The company believes this pricing model will allow customers to match monitoring spend to the increasingly variable rate of infrastructure and application usage in cloud and container-based environments. Datadog also hopes this pricing strategy will enable organizations that previously felt they could only afford APM for a small percentage of their applications to cover more of their application environment.

IDC's Point of View

IDC estimates the worldwide APM software market will total $3.9 billion in 2017, with SaaS-delivered APM offerings growing at almost triple the rate of on-premises software offerings. Similarly, IDC sees performance and analytics for cloud infrastructure and applications growing rapidly, with many customers preferring SaaS-based options over time.

As more and more enterprises embrace DevOps and take advantage of cloud and container-based microservices architectures, application and infrastructure monitoring will need to be tightly integrated. These modern environments no longer assume that applications and infrastructure are static and tightly coupled. Rather, SOA-style, highly distributed microservices will independently scale, migrate, and update as needed and the end-to-end application performance will depend on how well transactions and API calls flow across these components and the infrastructure that supports them. APM solutions built for traditional architectures will struggle to interpret the impact of auto-scaling, dynamic workload migrations and related infrastructure variations on application availability and performance.

For organizations that are making rapid investments in applications running on containers and/or in the public cloud, the need for modern APM visibility and reporting has become increasingly apparent. In response, during the past year, several leading APM and infrastructure monitoring software and SaaS vendors have recognized this trend and begun promoting more unified approaches to application and infrastructure monitoring. Machine learning and predictive analytics provide important enabling technology for more unified and dynamic solutions.

Datadog's initial APM offering represents a first step toward validating Datadog customer interest in unifying application and infrastructure monitoring across on-premises and public cloud resources. It is somewhat limited in that it does not yet support mobile applications, end-user experience reporting, and synthetic monitoring, nor does it support widely used programming languages such as Java. However, its pricing model is aggressive in comparison to many more comprehensive APM solutions. For customers using Python, Ruby, and Go that want a low-cost on-ramp to test APM for dynamic infrastructure, Datadog offers a reasonable option.

IDC believes Datadog has rightly identified an important customer need that will continue to expand as enterprise infrastructure and application architectures make greater use of microservices, containers, and public cloud infrastructure. Datadog has picked a good time to establish an APM beachhead and to begin to grow awareness of its capabilities across emerging DevOps teams.

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