



## I D C   A N A L Y S T   C O N N E C T I O N



**Mary Johnston Turner**  
*Research Vice President, Enterprise System Management Software*

### **The Case for APM SaaS in the Era of Big Data and Digital Business Transformation**

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*In the highly connected worlds of online business and social media, application performance management (APM) provides IT operations and software teams with the ability to monitor and analyze a fire hose of data generated by mobile and desktop end users, API-based transactions, and continuous updates to application code bases. SaaS-delivered APM solutions can scale rapidly to accommodate unpredictable changes in application release schedules, code complexity, usage patterns, and data volumes while providing customers with continuous access to state-of-the-art innovation and analytics. APM SaaS offers customers low-cost on-ramps to test functionality under real business conditions as well as the ability to quickly scale as needed to support rapid business growth.*

The following questions were posed by New Relic to Mary Johnston Turner, research vice president for IDC's Enterprise System Management Software, on behalf of New Relic's customers.

**Q.    Online and mobile apps, along with robust social media activity, are the heart of many digital business initiatives. What role does APM play in helping a company succeed in today's "always on" digital world?**

A.    Today, all businesses live and die by the success of their online applications, mobile services, and social media presence. IDC estimates that by 2017, CIOs will spend as much as 80% of their time focused on analytics, cybersecurity, and creating new revenue streams through digital services. Many of these applications will be deployed and supported using agile development and continuous delivery methodologies. Rather than plan one or two major releases a year, organizations will update these digital business solutions dozens of times a year.

Many digitized business solutions are enabled by complex hybrid computing, API-based integrations, and application architectures that span physical, virtual, and cloud infrastructure. These types of applications rely on dynamic integration across modern, continuously updated customer engagement applications and more static, traditional applications and databases. Maintaining a desired service level requires visibility into the end-user experience as well as the ability to monitor and optimize code, cross-tier dependencies, and enabling infrastructure.

Given the increasing pace of change and complexity of application architectures, APM monitoring, reporting, and analytics have become mission-critical tools for both development and IT operations teams. APM solutions are being deployed across the application life cycle to debug preproduction and production code, identify the root cause of end-to-end performance problems, visualize customer online experiences, and answer

complex business impact queries. In today's "always on" digital world, APM enables development and IT operations to proactively optimize real-time application performance and end-user experience.

**Q. Modern APM solutions need to monitor and analyze millions or even billions of data points from a wide variety of sources every day. How effective are they at quickly finding the metrics that matter?**

- A. Today's best APM platforms are much more scalable and flexible than earlier-generation solutions, which were often fairly brittle and reactive. The older solutions were frequently deployed only to monitor the highest-value application environments and were most often used when problems started to emerge. The overhead and performance impacts injected by the monitoring systems made it difficult to proactively track a wide range of applications.

In the current digital business environment, APM solutions are being used to manage many applications in real time. To keep up with the volume of events and performance data generated, modern APM solutions are taking advantage of big data analytics technologies that can capture and analyze performance and event data from a wide range of sources using open APIs and agent-based interfaces, depending on the environment and the needs of the customer. These solutions can correlate data and identify root cause across dynamic public, private, and hybrid clouds; containers; virtual infrastructure; modern and traditional application code; microservices; and a broad range of middleware, databases, and transaction processing engines.

Effective APM solutions offer role-based views, customizable dashboards, visualization, and intuitive query tools to answer questions quickly and accurately. Modern APM solutions can often provide almost real-time, end-to-end transaction tracing, code-level performance impact assessments, cross-tier root cause analysis, and anomaly detection.

**Q. Can APM help my organization innovate faster?**

- A. In an online digital world, innovation requires organizations to be able to develop, test, and deploy new capabilities as rapidly as possible. Continuous delivery environments allow enterprises to make new features and functions available across mobile and Web services very quickly. APM solutions are vital to the successful implementation of these innovative services. APM enables development teams to rapidly isolate and remediate code-level problems and help IT operations teams respond to service-impacting events and proactively respond to emerging performance issues before they impact end users.

Simultaneously, the APM data about end-user engagement, interactions, and performance can provide real-time insight into which features and updates are driving customer engagement and which may have missed the mark. Business analysts can query APM data to better understand the types of customers that respond to different updates and to help identify opportunities to continue to improve the user experience. Sharing insight with a single tool across development, operations, and line-of-business teams allows faster development, more frequent updates, and better customer-centered innovation. APM solutions need to be treated as important business innovation tools.

**Q. What advantages do SaaS-based solutions offer over hosted or on-premise APM options?**

- A. IDC research shows that spending on SaaS-based APM solutions is growing almost three times as fast as spending on on-premise APM solutions. In general, users of SaaS-based APM are looking for rapid access to sophisticated reporting and analytics and the ability to quickly add to or expand the number and diversity of monitored environments.

For organizations that want to apply big data analytics to APM data to better understand online user behavior or evaluate the impact of new feature and functions, SaaS-based APM analytics services provide a rapidly scalable option for processing large volumes of data about the customer's digital experience.

APM buyers frequently choose SaaS to avoid the operational friction and capital costs of on-premise solutions that require internal IT staff or outsourcing providers to procure, configure, and maintain enabling hardware; track and optimize software licensing; and manage the ongoing scaling and updating of the full application, middleware, and infrastructure stack to keep up with changing business needs. They also choose SaaS to gain early access to new technologies, such as containers and microservices monitoring, without having to go through a major on-premise or hosted APM software update cycle.

Choosing between on-premise and SaaS requires decision makers to consider a number of trade-offs related to speed, cost, and agility. Multitenant SaaS APM offerings are generally built using shared, multitenant platforms that allow rapid, seamless scaling and sharing of resources, support staff, and infrastructure. By design, updates and new features can be made available quickly to all customers.

**Q. What about security? What are the risks of APM SaaS solutions, and how are customers addressing them?**

- A. The security of the service is almost always an issue when an organization considers SaaS-based solutions. Typically, some decision makers may have been uncomfortable with SaaS-based APM because of concerns about the security or performance of shared, multitenant platforms. They also worry about how to validate the impact of continuous feature and function updates.

More recently, many organizations have begun to implement SaaS-based, mission-critical business applications that contain sensitive personal and financial information — for example, customer relationship management, claims processing, ecommerce, and workforce management. Data management and security risks for APM SaaS are really no different from those for any other type of SaaS offering. Customers should look for SaaS providers that have seasoned, internal security teams that are tasked with actively securing the SaaS service and also provide publicly documented audits and other security assessments. Managing security risks requires a mix of rigorous process controls and access management and auditing capabilities. Most enterprise organizations have developed fairly robust approaches for evaluating and using a broad range of SaaS solutions.

Prospective buyers of APM SaaS should definitely include their corporate online security team in the evaluation of potential solutions. In many cases, organizations that adopt SaaS-based solutions may find that the SaaS service provider has standardized process management and change audit controls to enforce policies of user profiles and the categories of data an organization can access and manage.

## ABOUT THIS ANALYST

*Mary Johnston Turner, research vice president for IDC's Enterprise System Management Software, drives IDC's forecasts and analysis of many IT management software markets, including public and private cloud operations, datacenter automation, virtualization management, and performance and availability management. She is a major contributor to IDC's annual IT industry predictions process.*

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Global Headquarters: 5 Speen Street Framingham, MA 01701 USA P.508.872.8200 F.508.935.4015 [www.idc.com](http://www.idc.com)