New Relic Unveils New Relic Insights™: Software Analytics for Business Insight

EMA

*IT & DATA MANAGEMENT RESEARCH,
INDUSTRY ANALYSIS & CONSULTING*

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Overview

ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) research has found that slow performance, intermittent problems and high fixed support costs are the top application-related problems encountered by IT organizations—and this is true regardless of whether applications are hosted on-premise or "in the Cloud." Such problems are so common in fact that an increasing number of companies are investing in Application Performance Management (APM) solutions such as New Relic. New Relic automates the process of application monitoring. In doing so, it can help customers optimize performance, diagnose and fix intermittent problems, and reduce support costs by decreasing the amount of manual labor necessary to keep applications up and running.

While the IT-related value propositions of APM solutions are significant, the addition of Advanced Performance Analytics (APA) to such products extends their value beyond IT. There is a great deal of latent business-relevant information within software transactions, yet 99% of companies ignore this data as a source of useful business insight.

EMA has extensively researched APA as a source of both IT and business insight:

"Advanced Performance Analytics, as EMA defines it, brings real-time or near real-time 'big data' to IT operations, architects, service managers and even applications development, as well as IT executives and non-IT business stakeholders. APA has evolved out of classic service performance management, but with a twist – rather than siloed approaches to monitoring and analysis, APA demands more eclectic data collection, huge levels of analytical scalability and strong insights into cross-domain and/or business outcomes."[1]

The same report goes on to discuss multiple use cases for advanced analytics data, two of which include:

- *Technical performance analytics* supporting the resiliency of critical application and business services with a strong focus on triage, diagnostics, roles supported, self-learning capabilities and associated automation—the traditional functions associated with APM.

- *Business impact management,* which includes such factors as customer experience, business process impacts, business activity management and data such as revenue per transaction, abandonment rates, competitive impact, and IT operational efficiency.

While New Relic's traditional focus has been on technical performance analysis, the New Relic Insights product addresses business impact management as well. This new solution is designed to "crack open" transactional data to make business (and technology) insights available to business and IT stakeholders.

This EMA white paper discusses the value proposition of APM solutions, particularly when sophisticated analytics are added to the mix. In this context, it will describe the fundamental capabilities of New Relic Insights (Insights), along with the implications to customers, prospects and the industry at large.

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New Relic Background and Products

New Relic was founded in 2008 as a second-generation, Cloud-hosted APM solution by Lew Cirne, an APM veteran with a history of founding successful companies in the space. Per Mr. Cirne, New Relic "is, and always will be about APM, but will continue to innovate." Insights is an example of this

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1 *EMA Radar™ for Advanced Performance Analytics (APA) Use Cases: Q4 2012*, December 2012. Available for download at http://bit.ly/1cuJYrG

innovation, which extends New Relic's value propositions to a new group of users. Insights unlocks access to useful information buried within terabytes of transactional data.

With APM solutions traditionally hosted on-premise, New Relic was at the forefront of the SaaS-hosted APM market. Even today, seven years later, there are still relatively few Cloud-hosted vendors focusing specifically on Application Management, and virtually no "born in the Cloud" competitors with New Relic's depth of visibility into application code.

The APM acronym is used across the industry to cover a broad range of solutions. Some Cloud-hosted competitors to New Relic, for example, derive application-related visibility primarily from synthetic transactions. While such technology can give a high-level perspective on performance and availability at a given point in time, such transactions don't deliver "real time" application insight as they are run at standard intervals. And while they are useful for high-level "up/down" notifications, they lack the detailed information necessary for triage and root cause analysis. Network-focused APM solutions, browser injection technologies, and endpoint instrumentation all have their strengths and weaknesses as well. However, one of New Relic's key value propositions is the ability to trace application problems through infrastructure (via instrumentation) and into application execution environments.

Today, New Relic supports Ruby, Python, Java, .NET, PHP, and node.js. It also provides infrastructure monitors, as well as transaction tracing, SQL and NoSQL performance analytics, application topology mapping, and deployment history markers and comparisons. As a Cloud-based alternative to on-premise application management, New Relic has successfully navigated the tightrope between the typical infrastructure-focused Cloud vendor and the deep-dive metrics and performance data necessary to manage, versus simply monitor, an application.

New Relic has grown into a dominant player in the APM market, monitoring more than 450 million mobile devices and over 3 million applications within more than 80,000 active accounts.

> Insights is an example of this innovation, which extends New Relic's value propositions to a new group of users. Insights unlocks access to useful information buried within terabytes of transactional data.

Transactions: Information Source for Business and IT

With a track record of success in the APM marketplace, New Relic is expanding beyond its roots with New Relic Insights, a Real-time Analytics Platform. Like "Operational Business Intelligence (BI)" or "Operational Analytics" solutions, New Relic's Insights product will facilitate the extraction of business and IT-related insight. A key differentiator, however, is that New Relic Insights will do so from live production software in real time.

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By watching real events flowing through business transactions monitored by New Relic, Insights will enable users to "mine" transactions for business insights. Initially focused primarily at software development teams, the solution provides a SQL-like query language, auto-generated data visualizations (graphs, charts, etc), and dashboarding features that provide real-time insights to technology and business professionals alike.

Transactional analysis could provide answers to questions such as the following:

- What percentage of users are accessing the corporate site via mobile devices, and what types of devices are they using?
- What is our average daily revenue from web transactions from Asia Pacific?
- Has changing a web page impacted the amount of time users spend on that page?
- How many online purchasing transactions are actually completed? Of those not completed, on which page were users most likely to abandon?

The IT and business-related questions are almost limitless. This new platform supports real-time Question and Answer (Q&A) with a massive, Cloud-hosted event database, capable of storing hundreds of billions of metrics per day. The database persists and catalogs raw data, enabling visualization and "lightning-fast" queries supporting real time, data-driven decision making.

New Relic Insights

While most mid-sized to enterprise-sized companies have BI solutions in place, there are multiple disadvantages to such solutions from the perspective of Operational data analysis. The most obvious is the fact that BI data has typically been staged, massaged and re-loaded versus being analyzed in its raw state. In fast-paced Operational settings, this means that available data is out of date.

BI data is also typically aggregated, a process which removes the granularity necessary for answering ad-hoc questions. In addition, they require skills in Hadoop, Extract, Transform and Load (ETL) procedures, and database administration, which can be hard to find as well as expensive when they can be found.

In contrast, New Relic Insights requires no data loading/manipulation, expensive skills or expensive software. Using New Relic APM instrumentation as a base, Insights provides a query engine on top of potentially terabytes of data. Once a user asks a question, Insights scans the raw data and produces a report in milliseconds.

The platform is supported by a massively parallel processing cluster for fast response time, as well as vast amounts of transactional data stored on the New Relic platform. Analytic functions and event attributes are auto-populated, enabling users to build New Relic Query Language (NRQL) queries with no knowledge of the data architecture or SQL query language.

And while Insights operates on existing data collected directly from software applications, it also includes APIs to import data of virtually any type. The analytics capabilities are data agnostic, opening up the platform to third-party tools and external data stores.

Users can also create new events such as "Revenue Changes," "Daily Accounts," etc., which can be associated with database attributes supporting the reporting function.

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Differentiators and Value Propositions to Business and IT

Today, every company is data-hungry. No matter how much information an executive has, he or she always wants and needs more.

Traditional BI solutions solve part of the problem; however, they are designed to handle aggregated, business-focused information from traditional data sources. IT managers and executives often complain that they have no technology-focused equivalent to BI. In fact, EMA research reveals that executives are even more "data-hungry" for Big Data generated from their software and infrastructure than line staff are.

New Relic Insights analyzes transaction data for business- and technology-relevant insights. It has the potential to fill the "information gap" identified by both business and IT leaders with a variety of distinctive features:

- *Ease-of-use plus data currency:* Insights requires no BI platform, no DBA and no lengthy load process. Instead, it operates in real time on current data gathered by New Relic agents—or via APIs. A SQL-like query engine, data visualizations, and dashboards provide easy accessibility for all authorized users.

- *No requirements for expensive database or storage:* High-performance databases and storage supporting rapid data access are expensive. New Relic Insights utilizes a flexible, schema-less, index-less database hosted on New Relic's purpose-built, scalable platform.

- *No need to build elaborate queries or learn complex "regular expressions":* New Relic simplifies Q&A with dashboards and auto-complete capabilities. The solution includes common queries enabling "point and click" access to many reports.

- *Simplified analysis:* Instead of returning raw data alone, Insights returns both data and graphs for easy analysis (see Figure 1).
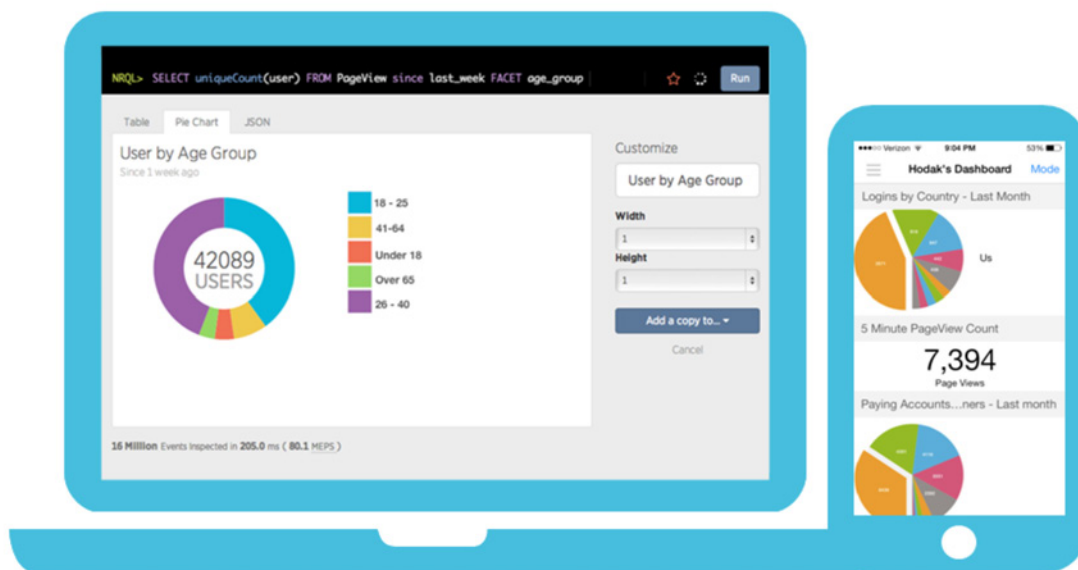

Figure 1: Data returned in numerical and graphical formats

- *Flexible, intuitive, natural data interactions deliver "brain-driven" insights versus canned reports:* Real-time, iterative queries against raw (versus aggregated) data enable users to drill down from returned data to the "next logical question" (see Figure 2).

The iterative nature of Insights

Figure 2: Real time question and answer leads to "next logical question"

- *Engineered for scale and speed:* Scans and reports on 100+ million events in milliseconds
- *Detailed, event-driven transaction data:* Collecting and storing every page view and application transaction event in real time creates a detailed record to reveal time spent by user per page, response time, etc.
- *Data agnostic:* Insights is engineered "out of the box" to analyze data from New Relic instrumentation; however, data can also be fed into the platform via APIs or by application instrumentation. Virtually any type of data can be analyzed on a powerful, scalable platform.

EMA Perspective

Regardless of how many reports IT delivers to technical and business users, it is never enough. Each report leads to new questions, which, in the standard BI model, require new indices, data loads, and reports. New Relic Insights is positioned as a more flexible and real-time alternative, which enables users to interact with data in a way that is not possible with traditional business intelligence OR application management solutions.

The software transactions executed as part of everyday business are the "lifeblood" of the business. They contain the customer orders, invoices, website interactions, and sales information that are critical to business operations. This type of information has traditionally been underutilized, primarily because most APM tools lack visibility to transaction content. Network-focused tools are an exception; however, network specialists are the typical users of such tools.

New Relic Insights builds on the value proposition of the hosted New Relic APM platform and is part of a broader umbrella of solutions that New Relic calls *Software Analytics*. Insights is a separate solution, which can be utilized alone or in conjunction with New Relic APM. The beauty of the Insights platform lies in its simplicity. As an "interactive" data store, it not only gives users access to data that they would previously not have had, but also enables them to do sophisticated data analysis in a "point and click" interface.

The early users of Insights will likely be developers and IT professionals who are comfortable with SQL and data analysis functions. However, EMA research clearly shows that IT executives are even more "data-hungry" for Big Data from and about their software than line staff are. For this reason, it is very likely that by the time this product is generally available (near the end of Quarter 2, 2014), management will be clamoring to get their hands on it as well.

There are a few caveats that potential customers should consider. Because operational data is "information rich," it may contain sensitive information that should be masked or otherwise obscured for most users. And since it also contains sensitive business information, access should be centrally controlled in a way that gives only authorized users access to role-relevant data.

That being said, just as New Relic was a new "take" on APM, New Relic Insights is a new "take" on the analysis of Big Data from operations, applications and software in general. Its ease of use, combined with the fact that it requires no database, storage or IT support investments, distinguish it from virtually every other competing product. Once GA'd, this product will likely be on the "wish list" of the majority of New Relic customers and may well encourage prospects "on the fence" to make the move to a hosted APM solution.

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About Enterprise Management Associates, Inc.

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 its 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 or Facebook.

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