



Brief: Introducing Software Analytics, A Key Business Technology Solution

New Relic Insights Aims To Help Technology Management Professionals Ensure That Software Delivers Customer Value

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WHY READ THIS REPORT

On March 19, 2014, New Relic announced the public beta of its new software analytics solution, New Relic Insights. Insights, a software-as-a-service (SaaS)-based IT analytics solution, collects and stores page view and application transaction events from web applications by default. Using a simple querying language, developers and business users can answer specific questions about their companies' web application features and customer usage to provide business-centric insight. In this report, we explain why software analytics solutions should be a part of the enterprise technology management road map and how they can be used to ensure that infrastructure and operations (I&O) is seen as a key partner in supporting the business technology (BT) agenda.

NEW RELIC ANNOUNCES INSIGHTS, A SOFTWARE ANALYTICS ENGINE

On March 19, 2014, New Relic, a software company known for its developer-focused and SaaS-based application performance management (APM) solution, announced the beta release of Insights.¹ Insights, also a SaaS-based solution, has been described by New Relic's CEO, Lew Cirne, as the company's "second act," as it adds capabilities of software analytics to its solution suite.² The key features of the New Relic Insights beta release are:

- **Insights collects and stores event-specific data from web-based applications.** Either using a web application programming interface (API) or New Relic's APM agent, Insights can collect page view and transaction-based data from web applications based on .NET, Java, Ruby, Python, Node.js, or PHP code. Mobile application data collection is on the road map for the second half of 2014. The data that Insights collects includes country location, browser type, and browser and application server response times such as total transaction response times. Insights can also collect custom data attributes by adding lines of code to the web-based application. The data it collects is stored in a nonrelational, schema-less events database, which allows for economical storage and fast retrieval.
- **A SQL-oriented query language turns data into information.** Data stored in the events database is retrieved via a SQL-like custom query language called New Relic Query Language (NRQL). Queries execute quickly in the beta version, taking an average of 92.4 milliseconds, and the information can be easily displayed using built-in data charts that can be grouped into operator-created dashboards. This means that you can customize dashboards to the audience and organize them for specific business-centric use cases, such as top customer segments or checkout abandonment rates for eCommerce websites. New Relic designed Insights to integrate with other business applications, as Insights has an open and documented API.



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- **The business value of Insights depends on the business knowledge of the operator.** In the development of Insights, New Relic focused on ensuring highly scalable data storage and a rapid, easy querying language. While this gives customers the foundation to deliver business value, it does not guarantee it. I&O teams must also understand what information is commercially important in regard to web application so that custom data collection attributes can be used appropriately. This means collaborating with business teams responsible for the commercial success of software. New Relic is also working on building an active, public customer community for Insights so that customers can share approaches and best practices.

During an interview with Forrester in April 2014, Jim Gochee, senior vice president of product at New Relic, said that New Relic wants customers to view Insights as a software analytics engine rather than a solution. This is because the value derived from Insights is dependent on the questions asked by the operator. New Relic has worked hard to ensure that NRQL is easy to learn and does not require any deep technical skill.

“During the development of Insights, we wanted to make sure that it was easy to use. We had seen a number of business intelligence solutions which were complex, but with Insights, it had to be different. The simple but powerful NRQL query language is easy to construct with auto-complete suggestions. This means that the engine encourages and promotes business professionals to continue to ask and refine questions in order to make software insights quickly.” (Jim Gochee, senior vice president of product, New Relic)

Software Analytics Is A Critical Solution For Your BT Agenda

Today, customers expect to interact with your products, services, and company through software. Software is increasingly enhancing all types of customer interactions via mobile, web apps, and even physical products such as thermostats and automobiles.³ This means that your organization's software strategy is key to BT and the reputation of the overall business brand. Software analytics is vital to solving the following software strategy challenges:

- **Understanding performance and availability of web applications is not enough.** Historically, web application monitoring solutions in the application performance management market have focused on ensuring availability and predetermined performance. While this is critical in ensuring that the web application will be available and performing well when needed by the customer, it doesn't provide the business insight into the customer's experience of the web application.

Solution: Software analytics provides needed business insight. Software analytics solutions allow a customer's application activity to be linked to business metrics. For example, an eCommerce website that lists the number of items in the checkout cart for each customer can be linked to potential revenue and shown automatically in a dashboard to give insight on which items are the most popular at any point in time. Additionally, software analytics makes it

possible to detect configuration changes that have a negative impact on profit; for example, in 2013, a computer glitch resulted in the Delta Air Lines website showing extremely discounted airfares, which caused a revenue loss up until the mistake was detected.⁴

- **Software success is dependent on meeting customer experience requirements.** Ultimately, commercial software has to meet customer needs, be easy to use, and be enjoyable. These three facets define customer experience, and Forrester's research shows that companies that deliver positive customer experience see direct revenue benefit.⁵ Persona-based design techniques utilized by marketing professionals ensure that the business user is kept in mind during all phases of design, development, and testing so as to ensure positive customer experience.⁶

Solution: Software analytics helps enhance your customer understanding. By querying the right data, such as location, device type, features used, and date and time variables, software analytics solutions can provide insight that enhances existing persona knowledge in relation to software consumption. For example, it's possible to understand the type of consumer device that customers use to access applications, what time they do this, for how long, and which features they use the most. This information can be used for a better understanding of customers and allow you to adjust your targeted marketing and sales campaigns.

- **Displaying information in context is critical for forward decision-making.** The strategic importance of software means that decisions made without considering customer needs appropriately, in terms of upgrades and new releases, can negatively impact the business brand. For example, in December 2013, National Westminster Bank (NatWest) in the UK had a presumed failed software update that caused its customers' debit and credit cards to be declined. This prompted customers to vent their anger at NatWest on social media channels.⁷

Solution: Software analytics displays the commercial sensitivity of software. When planning new software releases and updates, it's essential that I&O and other business teams have detailed information as to how customers use the application and its features. This information should be used to appropriately plan change-and-release schedules so that they don't impact the customer's experience. Software analytics solutions are able to present detailed usage information down to the application features, allowing I&O to plan updates and new releases, taking into account any potential commercial impact.

Software analytics is just one form of statistical pattern analytics solutions that are beginning to appear in the IT analytics market.⁸ Systems are becoming more complex due to rapid advancements in technology innovation, which means that traditional monitoring solutions will not be enough to ensure the proactive management of technology-based business services. Thus, investing in IT analytics is a must for business technology organizations.

WHAT IT MEANS

SOFTWARE ANALYTICS HELPS CEMENT I&O AS A STRATEGIC BUSINESS PARTNER

Historically, I&O professionals have been charged with maintaining internal IT service uptime and performance while reducing IT costs.⁹ But moving forward, I&O must aggressively shift into focusing on providing commercial value and real business insight. The adoption of software analytics supports this shift, as it provides business teams and developers with immediate information to make adjustments to marketing campaigns, customer loyalty initiatives, and product sales activities. This will help bolster I&O's position as a key partner with your company's business technology strategy. I&O professionals should consider software analytics solutions because they help:

- **Promote collaboration with business teams.** The strategic importance of software means that every line-of-business role, from marketing to application development and delivery (AD&D), will be responsible for software strategy success. Software analytics solutions make it easy to customize dashboards to a particular audience (e.g., marketing will be interested in the utilization behavior of customers, while AD&D will be interested in function and code specifics). Mature solutions should be able to create compelling visualizations reflecting these interests.
 - **Develop business cases in a commercial context.** Through inquiries, we hear that developing business cases for IT automation initiatives are challenging, as it's difficult to show the business return on investment (ROI) of automation solutions. The financial benefits of automation applied to tasks, processes, or decisions must be described in context of a specific business capability and the applications that support them. Software analytics solutions can identify these applications and produce reports that add weight to the business case. For example, they can generate reports that show applications and activity segmented by business users. This helps to identify the most critical applications to the business and in turn highlights where automation business cases should focus.
 - **Market I&O as a promoter of innovation.** Historically, I&O organizations have measured the value that they deliver to the business using descriptive metrics such as number of incidents and mean time to repair (MTTR).¹⁰ While these are useful metrics to highlight the past efficiency of I&O, they only promote I&O as a service delivery provider and not an innovation partner — something the business requires today. Software analytics solutions with easy data query abilities encourage questions and exploration of what-if scenarios. If you promote and support these solutions, you can help market your team as a business technology innovator to the rest of the business.
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SUPPLEMENTAL MATERIAL

Company Interviewed For This Report

New Relic

ENDNOTES

- ¹ General availability (GA) of New Relic Insights will be later in 2014.
- ² Source: Jordan Novet, “New Relic Enters A New Phase With Software For Business Users, Not Just Devs,” Venture Beat, March 19, 2014 (<http://venturebeat.com/2014/03/19/new-relic-insights/>).
- ³ Your customers increasingly interact with your products and service directly through the software they touch: mobile apps, connected products, websites, and digital experiences. If the software fails — or fails to delight — the brand suffers. Even physical products, from automobiles to thermostats, are increasingly enhanced by software. But software doesn’t stop with the application’s customer’s touch. It pervades your entire product and service experience, from call center reps to analytically derived custom offers from marketing. See the January 23, 2014, “[Software Must Enrich Your Brand](#)” report.
- ⁴ Source: “Delta Air Lines Sells Ultra-Low Fares After Computer Glitch,” The Guardian, December 26, 2013 (<http://www.theguardian.com/business/2013/dec/26/delta-airlines-ultra-low-fares-computer-glitch>).
- ⁵ Firms that move from below-average to above-average in Forrester’s Customer Experience Index (CXi) have more customers who say that they are willing to buy from them again. Even if only a fraction of those customers do make another purchase in the same year, the revenue benefit can range from a low of \$43 million for Internet service providers to more than \$880 million for wireless service providers, whose extremely large subscriber bases mean that even a small percentage change in repeat purchasers translates into a very large dollar value. See the March 27, 2014, “[The Business Impact Of Customer Experience, 2014](#)” report.
- ⁶ Alan Cooper first introduced personas in 1999 as a way to solve a persistent serious design challenge: the tendency of company stakeholders to design solutions that please themselves, not their customers. See the February 19, 2013, “[The State Of The Art Of Personas](#)” report.
- ⁷ Source: Kunal Dutta, “Cyber Monday: IT Outage Leaves NatWest And RBS Customers Unable To Use Debit And Credit Cards On One Of The Busiest Online Shopping Days Of The Year,” The Independent, December 2, 2013 (<http://www.independent.co.uk/news/business/news/it-outage-leaves-natwest-and-rbs-customers-unable-to-use-debit-and-credit-cards-on-one-of-the-busiest-online-shopping-days-of-the-year-8978659.html>).
- ⁸ Statistical pattern analytics infers the existence of relationships where explicit (topological) relations are either weak or missing. Statistical analytics compares performance patterns to identify common behaviors, and, therefore, implicit relationships. Simpler forms identify anomalies from established patterns of “normal” behavior. Normal patterns are deduced from historical behavior. See the December 5, 2012, “[Turn Big Data Inward With IT Analytics](#)” report.

- ⁹ Chief firefighter, master plumber, and head engineer. These are just a few of the names your peers within IT and the business likely call you, the IT infrastructure and operations executive — or I&O executive, for short. Your mission is to maintain service uptime, reduce costs, and empower employees and developers. To do this, your team is responsible for everything from IT infrastructure in the data center to the devices and collaboration tools your employees use, the service desk, operational processes, and resiliency. See the April 18, 2013, “[Reinvent The Role Of Infrastructure And Operations Executive In 2013](#)” report.
- ¹⁰ Many metrics define the quality and performance of IT systems and services as well as for the individuals, organization, and the business itself. One of the more common metrics for IT operations is mean time to resolution — MTTR is often also referred to as “mean time to repair” — and is a good metric to gauge an organization’s performance at executing incident management and problem management processes. See the June 30, 2011, “[Enhance Service Visibility To Reduce MTTR](#)” report.