Big Data and the Cloud: The Sum Is Greater Than the Parts

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West Hartford, CT — Today's enterprises face unique challenges. In the past, the requirement was to upgrade, be it a move from mainframes to PCs, command-line based to graphical interfaces, or from standalone to Web-based applications. Today, it's about building an integrated strategy that involves multiple technologies both existing and new. For example, there's more diversity in database technology than ever before (SQL vs. NoSQL, in-memory vs. elaborate cache management), server technology (physical and virtual, Intel vs. ARM), and data center infrastructure (private, public, and hybrid clouds), to name a few. At the moment, none of these technologies are replacing the others; instead, they need to be integrated.

Users are also demanding greater value from a wider range of application types, such as those running on the corporate intranet, in the cloud, and increasingly on mobile devices. They expect consistency across all platforms and equal access to data and functionality. The level of integration required presents challenges, but it also offers new opportunities if you know where and how to look, according to a new UBM Tech report [1].

Big Data's Promises and Challenges
Mining data for hidden value is the territory of big data, where large-scale, diverse data sets are collected and deeply analyzed. Tools are available to analyze potentially huge data sets to help you learn more about your market, your customers and essentially your own business. Big data analytics combined with business intelligence (BI) tools can help you take the volumes of unstructured data at your fingertips (e.g., customer, marketing, CRM and technical data) and reveal both new business opportunities and areas that you need to optimize inside your business. For example, analytics and BI can deliver a deeper understanding of your market, identify internal process inefficiencies, and surface the unspoken needs of your customers, possibly before they even know they have these needs. This is where the predictive nature of big data analytics helps to tailor your products to better suit markets and customers and create new products for newly discovered opportunities.

Of course, to leverage big data, enterprises need to overcome some major challenges. Enterprises need to decide who leads their big data initiatives. For example, should marketing or IT lead a customer data initiative and who should own the data and analysis? Enterprises also need to resist being blinded by the sheer volume of data available and steer clear of coercing analytics tools to deliver an expected, but not necessarily correct, answer. A core tenet of big data is that you absolutely need to ensure you uncover the truth in what your data is telling you. As a result, some companies have created a new role, the chief data officer — a position that combines both business prowess with the mathematical and deep analytical skills — to ensure that big data is done right from beginning to end.

The remaining challenges are technical, including tackling the processing power, storage capacity and bandwidth needed, and defining the analytics themselves to find the true value in your data.

The full UBM Tech report examines what it takes to capitalize on big data in the cloud and hyperconnected big data. The full report can be downloaded here [1].

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