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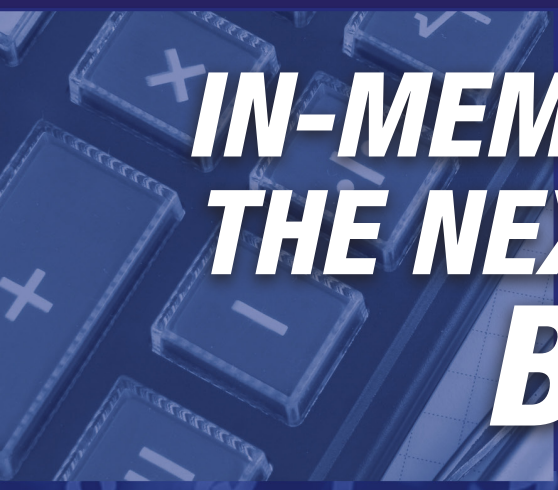

IN-MEMORY COMPUTING: THE NEXT BIG THING FOR BIG DATA

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As in-memory computing takes further steps toward maturity, the price of high-performance computing solutions will continue to become more favorable for enterprises vetting the latest solutions on the market. Certainly, the cost of in-memory computing alone should never be the sole determining factor; researchers continue to stress the benefits of in-memory computing solutions for both IT and business-focused end users.

Experts have always touted the sheer speed of in-memory computing solutions. Today, the key focus must be on how to apply in-memory computing solutions to bring real-world improvements to business processes. Analytics appliances such as SAP HANA and HP Vertica can now successfully crunch lengthy -- and too often unwieldy -- batch processes into near real-time business analytics.

THE DUAL CHALLENGES OF ACCOMMODATING BIG DATA AND ITS ANALYTICAL INSIGHTS

TO IN ORDER TO GLEAN SHARPER -- AND MOST IMPORTANTLY FASTER -- BUSINESS INSIGHTS.

What sets apart today's in-memory computing is the technology's applicability to the dual challenges of accommodating Big Data and its analytical insights in order to glean sharper -- and most importantly faster -- business insights. By taking a look at the potential use cases for specific industries, the efficiency and cost benefits of in-memory computing solutions, such as SAP HANA, Microsoft PDW, and HP Vertica, once again come to the forefront of enterprise IT in the real world.

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In-memory computing solutions stand on the cusp of overtaking the waning skepticism of IT professionals who have been wary of accepting the technology as part of a new enterprise IT infrastructure. Research by IDC helps shed light on this hesitance to turn to in-memory computing since improvements to process efficiency and business intelligence agility have been so well documented in recent years.

Some of the top concerns about in-memory computing from an IT perspective include a high price tag, the technology's ability to integrate disparate data sources and the ability to handle multiple data types -- both structured and unstructured. Today's solutions answer these challenges.

By eschewing disk-based data management solutions in favor of in-memory processing, business are now able to deliver near real-time information to business end-users who can convert this intelligence into value-added insights. Indeed, in-memory computing is a key enabler of the continued proliferation of Big Data and its analytical solutions.

GARTNER EXPECTS THE ADOPTION RATE OF 3X IN-MEMORY COMPUTING SOLUTIONS TO HAVE INCREASED THREEFOLD BY 2015

Gartner expects the adoption rate of in-memory computing solutions to have increased threefold by 2015. Given this prediction by such a trusted researcher, in-memory analytics appliances are quickly gaining ground as the cost-effective in-memory computing solution of choice for companies seeking to lower total cost of ownership while mitigating IT overhead and administrative costs.

The speed of an in-memory database management system (DBMS) alone can be 10-20 times faster than a traditional DBMS, which can consume as much as a quarter of an organization's entire IT budget.

THE SPEED OF AN IN-MEMORY DATABASE MANAGEMENT SYSTEM ALONE CAN BE 10-20 X FASTER THAN A TRADITIONAL DBMS, WHICH CAN CONSUME AS MUCH AS A 1/4 OF AN ORGANIZATION'S ENTIRE IT BUDGET.

1

THE IN-CREASING ADOPTION OF IN-MEMORY COMPUTING

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IN-MEMORY COMPUTING USE CASES

Highlighting a few specific use cases of in-memory computing solutions will clarify the benefits of high-performance technology on traditionally disparate business processes.

Four industries that are already yielding great value from an in-memory computing implementation include:


Retail


Finance


Insurance


Telecommunications

The common thread among the industries mentioned above is the challenge of handling Big Data and its analytics over the foreseeable future. Without readily available in-memory computing solutions, best-in-class organizations may not be able to maintain a competitive advantage by leveraging IT to improve the efficiency and speed of business processes.

For example, a selection of the top challenges facing retailers include latency of supply and demand intelligence, managing inventory flows in real-time, and myriad customer retention and sales data. In-memory computing provides a solution by allowing retailers to adapt to information on the fly, in support of better marketing campaigns and new insights into consumer sentiment and sales patterns. Having the ability to perform these tasks in real-time can be a major competitive advantage, enabled by in-memory solutions.

The financial industry must deal with the pressures of Big Data and its analytics, as well -- though from a very different perspective. Data volume, velocity, and variety in the financial industry continue to accelerate, while enterprises demand faster, more insightful intelligence. Latency in data analytics once forced organizations to fall behind deadlines when compiling the closing data of financial quarters, for instance. The batch processes alone may take several hours -- or even days. Also, given the intertwined complexity of analyzing a consumer's credit profile, speed is essential to provide data-driven and more cost-efficient financial services. In-memory computing offers a solution to these competitive pressures.

Similarly, insurance companies are yielding positive results by deploying in-memory solutions to the field of fraud detection and remediation. Leveraging high-performance analytics appliances such as SAP HANA, HP Vertica, and Microsoft PDW, organizations in the insurance industry can now integrate previously disparate data sources and analyze these records in near real time.

Before the advent of in-memory computing, insurers would essentially seek to detect fraudulent claims after the fact. Today's capabilities now make it possible to analyze claims much faster for possible fraud and to better assess risk. In-memory computing allows insurers to mitigate fraud at scale and -- most importantly -- preemptively.

Telecommunications is yet another industry that has started to see tangible results from an in-memory computing implementation. Specifically, one major telecommunications company in the US utilized in-memory computing solutions to provide highly targeted marketing offers to myriad consumer segments and via various channels (e.g. retail locations, direct SMS messaging, etc.). The company was able to migrate more than two billion customer records to an automated in-memory solution, which now can analyze two years of customer data within seconds on average.

As in-memory computing gains full acceptance, the benefits of high-performance analytical technology will continue to mature and perhaps coalesce into best practices in the near future. To make the most of the age of Big Data and its analytics, in-memory computing is a key enabler.

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