GAIN COMPETITIVE ADVANTAGE FROM BIG DATA

Analytics brings game-changing business opportunities
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As data volumes continue to grow and new, more detailed data sources have emerged, organizations are now able to address business opportunities that they could not previously address. New platforms (infrastructure) and tools (analytics) are emerging which are leading to the creation of new families of business applications.

The new platforms bring on-demand processing power to bear on massive data sets enabling the continuous identification of actionable insights buried within the big data. They enable the seamless integration of these actionable insights within the user’s work environment, wherever that might be.

The three key platform requirements for handling this new Big Data are:

- **Linear scalability** enables analysis of massive data sets (terabytes to petabytes). This is critical because most big data initiatives are going to start small and grow rapidly during business adoption.

- **Low-latency data access.** Many business opportunities are short-lived, so the companies that can act fastest on the opportunities found in the data are the ones that are going to derive financial value.

- **In-database analytics.** Integrating the analytics into the same environment as the data warehouse and business intelligence will super-charge the analytics lifecycle process and enable analytic results to be operationalized, or acted upon, more quickly.

The types of analytics enabled by this new platform allows organizations to significantly speed the analysis process and makes it easier to integrate the analytic results back into the data warehouse and business intelligence environment. In the process, it opens a new set of business opportunities.

**LINEAR SCALABILITY ENABLES ANALYSIS OF MASSIVE DATA SETS**

Instead of constraining the business to adapt to the data, the business is free to expand its analysis and data innovation by taking advantage of all aspects of the data:

- Perform multi-dimensional analysis to the “nth” degree. The business is not constrained to contemplate only three or four dimensions, but can look at hundreds, if not thousands, of dimensions to fine-tune and localize business performance. With this level of multidimensional analysis, the business can find the business drivers by specific geography (e.g., city or zip code), product (e.g., SKU or UPC level), manufacturer, promotion, price, time of day or day of week, etc.

- Address two key challenges of localized analytics: find the business drivers at the local or specific level, and find enough of these local business drivers to make a material difference to the business at the aggregate.

**LOW-LATENCY DATA ACCESS SPEEDS DECISION MAKING**

Shrink the time between data event and data availability and make operational analytics a reality:

- Exploit continuous data feeds (for example, trickle feeds) to provide low-latency operational analytics. The time between a business event (like a security trade) and the decision whether to make a buy or sell decision is dramatically reduced.
• Enable in-flight decision-making, for example, campaign managers can reallocate an online campaign budget between best-performing and/or best-converting sites and keyword combinations while the campaign is in-flight instead of having to wait weeks after campaign completion.

**IN-DATABASE ANALYTICS ENABLES NEW BUSINESS APPLICATIONS**

The ability to integrate massive, granular data sets with in-database analytics enables a whole new generation of business applications. Sample applications include:

• **Multi-Channel Attribution Analysis**—attribute credit for a sale across multiple marketing channels. This is especially topical for online marketers trying to attribute credit for a conversion across multiple display ads, websites, and keyword searches.

• **Customer Churn**—predict the probability of customers’ attrition based on factors such as usage activities, support requests, payment patterns, and the social impact of friends.

• **Product Maintenance**—predict equipment failures based upon product usage information (especially that information now being provided by embedded data devices), maintenance service records, and product performance history.

• **Clinical Trial Performance**—model different drug outcomes based upon clinical trials to understand treatment effectiveness and avoid catastrophic problems when drugs are used in certain combinations.

• **Yield Management, Merchandising Markdown Management, and Price Optimization**—build time-sensitive models to understand when and how much to increase or decrease prices given current demand and supply conditions for commodity products whose value goes to zero at a certain point in time (perishable goods, airplane seats, hotel rooms, fashion clothes, sports tickets).

**SUMMARY**

This new architecture brings game-changing capabilities to the world of analytics. With on-demand processing power, the ability to exploit fine-grained data sets, low-latency data access, and tight data warehouse and analytics integration, organizations can solve business problems that could not be addressed previously, and more easily deliver material and actionable insights to the business.

**ABOUT EMC GLOBAL SERVICES**

EMC Global Services accelerates the software-defined enterprise through world-class technical expertise and service capabilities that deliver well-run hybrid clouds, big data solutions, empower ITaaS providers, and enable new digital-era applications. Our 16,000+ services experts worldwide, plus global network of partners, have the skills, knowledge, and experience organizations need to get the maximum value from their EMC technology investments—with an unending commitment to an exceptional total customer experience through service excellence.