Providing faster, more powerful business reporting

With the IBM DB2 Analytics Accelerator for SAP NetWeaver Business Warehouse on IBM z Systems

Globalization and the lowering of barriers to international trade have led to increased competition across all industries and geographies. With the variety of choices and channels for purchasing goods and services continuing to grow, the center of power has shifted to consumers – who are intent on getting the best bargain on the market.

Companies aiming to win valuable new business and retain existing clients must gain a deeper understanding of consumer behavior, and optimize their operations to react quickly to market changes. Enterprises that fail to act on insights extracted from business data risk falling behind the competition.

For organizations that use integrated SAP software to manage their operations, the SAP® NetWeaver® Business Warehouse (SAP NetWeaver BW) application offers a highly effective platform to analyze data and gain valuable insight into operations.

To ensure that analytics and reporting processes keep up with the rapid pace of business, many companies use tools to accelerate data queries on their data warehousing and business intelligence platforms. With near real-time business information, organizations can make smarter decisions faster, to stay one step ahead of the competition.

The IBM® DB2® Analytics Accelerator is an IBM product that extends IBM DB2 for z/OS® for SAP and non-SAP applications, helping to considerably speed data queries and provide business users with rapid access to vital information.

Highlights:

• Dramatically accelerates data queries
• Makes data queries much more uniform, resulting in more predictable reporting times and improved scheduling
• Removes the need for data aggregation, unlocking significant time and cost savings
• Enables companies to perform super-fast business analytics queries on transactional SAP Business Suite data
• Supports more efficient management of SAP application data
**Powerful data analysis**

IBM and SAP are constantly working together to improve the analytics solutions available for the IBM DB2 for z/OS database platform, which delivers a single, workload-optimized system for both operations and warehousing.

By integrating the IBM DB2 Analytics Accelerator appliance into SAP NetWeaver BW, IBM has dramatically accelerated reporting processes, helping companies to gain faster, deeper insight into their operations. With this enhanced agility, enterprises can gain the edge they need to beat out market competition when it comes to winning new business.

The IBM DB2 Analytics Accelerator for z/OS is designed to rapidly run complex data queries on large data volumes for the IBM DB2 for z/OS database. It is offered as an appliance on IBM PureData™ System for Analytics powered by IBM Netezza® technology: a data warehouse and analytics solution that unites blade servers, disks, software and advanced analytics capabilities in a single integrated system.

Alternatively, the IBM DB2 Analytics Accelerator on Cloud can be deployed to run complex analytics on a secured dedicated server in the hybrid cloud. Hardware provisioning, operations and management is performed by IBM.

**Faster data processing**

Data is stored in SAP NetWeaver BW in data containers, the most common of which are InfoCubes and Data Store Objects, which serve as the basis for analysis and reporting processes. The IBM DB2 Analytics Accelerator provides rapid access to these SAP NetWeaver BW data containers, supporting fast reporting at the document level, which eliminates the need to prepare this data for reporting separately.

By configuring SAP NetWeaver BW to replicate data to the DB2 Analytics Accelerator prior to query processing, queries can be executed very quickly, directly on the DB2 Analytics Accelerator itself. The solution is workload-optimized, and the DB2 optimizer intelligently decides – based on cost considerations – whether to execute each query on the accelerator or using the regular DB2 data access, helping to balance fast query processing and cost-efficiency.

If the extract, transform and load (ETL) processes that move data from SAP Business Suite applications into SAP NetWeaver BW are too slow, customers can define virtual InfoProviders in SAP NetWeaver BW that operate on the original transactional data in the SAP Business Suite tables – eliminating the need for ETL. Replicating the required tables into DB2 Analytics Accelerator ensures that ad-hoc queries can be completed rapidly, and also either enables snapshot reporting or the use of the continuously updated transactional data – with no negative impact on transactional workloads for SAP Business Suite applications.

The Control Center for IBM DB2 Analytics Accelerator, which is integrated into SAP NetWeaver, can be utilized to set up and monitor data replication of SAP NetWeaver BW data containers. At the data container level, administrators can decide which data to replicate into the DB2 Analytics Accelerator, and easily configure replication.

**Saving time and money on SAP system administration**

For analytics and reporting, it is common to design, create and maintain data aggregates – a costly, time-consuming process that can be a significant drain on IT resources. Data aggregates are usually rebuilt after each set of data is loaded into the accelerator tool, creating additional workload for database administrators.

The DB2 Analytics Accelerator helps companies manage their SAP data more efficiently, and can accelerate data queries to such an extent that data aggregation is no longer necessary.

Eliminating the need for data aggregation by using the DB2 Analytics Accelerator can save administrators considerable effort when it comes to day-to-day system management, and can unlock huge time and cost savings for companies.

As maintenance of the DB2 Analytics Accelerator is tightly integrated into SAP NetWeaver BW staging procedures, no additional administrative effort is required to manage the solution.
Effective management for historical and current data
To help reduce costs, companies often choose to move static data from the online database supporting the SAP NetWeaver BW production system onto near-line storage. As this static data is then no longer involved in backup, rebuild, and system cloning operations, these processes run more quickly and require less system administration.

The IBM High Performance Near-Line Storage solution, based on the IBM DB2 Analytics Accelerator, is designed to reduce the effort and cost of managing historical SAP data. The solution automates and simplifies the movement and retention of static data, and simultaneously speeds up access to that data.

Dramatically accelerating data queries
Tests of IBM DB2 Analytics Accelerator have demonstrated that it accelerates data queries by a factor of 50 on average, with the potential to accelerate certain reports by a factor of 3,600. With the IBM DB2 Analytics Accelerator, reports that previously took hours to create can now be compiled in just seconds.

Additionally, the IBM DB2 Analytics Accelerator improves reporting consistency, providing uniform response times for data queries. With predictable reporting times, administrators can schedule work more effectively and ensure that they hit their service level agreements. The SAP NetWeaver BW application interfaces are unchanged, and users benefit from the speed and predictability of IBM DB2 Analytics Accelerator without the need to modify the design or content of reports.

Making better business decisions
The IBM DB2 Analytics Accelerator enables speed-of-thought analytics, allowing managers to dig deeper into business data and gain new insights into their business operations. With more accurate, up-to-the-minute information, executives can make smarter decisions and provide the business with a crucial competitive advantage.

The near-real-time access to mission-critical data provided by IBM DB2 Analytics Accelerator helps companies boost agility, react faster to market developments, and keep pace with the relentless rate of change. For all enterprises operating mission-critical SAP solutions, the IBM z Systems platform makes economic, technical and business sense.

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Figure 1: Results of a dedicated query test on an InfoCube containing 18 million records; each query represents a typical query that might be run at a customer site. IBM DB2 Analytics Accelerator delivered significant performance improvements, accelerating data queries by a factor of 50 on average.
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