



Phact B.V.

Lightning-fast analytics boost network service levels, driving greater customer satisfaction

Overview

The need

With growing numbers of subscribers counting on reliable voice and data services, Phact's clients need ever faster insight into operational data so that they can ensure competitive service levels.

The solution

Phact migrated its telco service analytics applications from Microsoft SQL Server to IBM® DB2® with BLU Acceleration, enabling clients to run high-speed analytics alongside online transactions.

The benefit

DB2 with BLU Acceleration enables up to 160 times faster insight—accelerating problem resolution and helping improve service reliability—simplifies architecture and cuts database size by more than 60 percent.

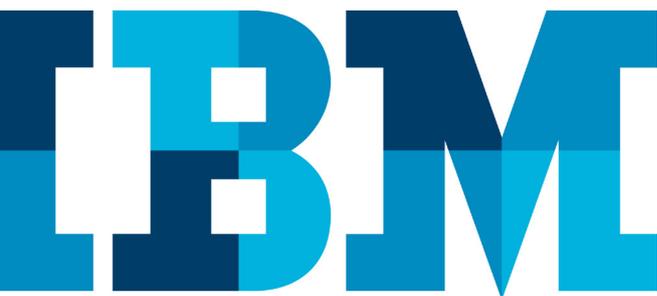
In the telecommunications industry, network operating centers (NOCs) are responsible for ensuring reliable performance for subscribers (customers). Monitoring the network, whether fixed or mobile, to detect and resolve incidents is always a race against time. To ensure customer satisfaction by maintaining competitive service levels—particularly in the age of social media, where bad news spreads fast—network operators must rapidly analyze huge volumes of operational data to identify and resolve issues.

Supporting telco clients serving millions of customers in this highly performance-sensitive industry, telecommunications service provider Phact needed to accelerate its big data analytics capabilities.

Paul Peters, Lead Database Administrator at Phact, explains, “Our clients’ operating centers monitor network activity. As soon as they notice any kind of performance or reliability issue, they need to dig deep into 800 million database records to identify the root cause and solve the problem. Our job is to allow their specialists to analyze more data faster, so they can minimize delays and interruptions for their customers.”

To enable analytics in the past, Phact would replicate its main IBM DB2 database running on Linux to a separate Microsoft SQL Server database, allowing clients to run complex analytics reports without impacting transactional performance. This replication, however, could take up to one minute to make operational data available for analytical processing—an unacceptable delay in telecoms terms, where every second counts. In addition to introducing this delay, this approach also offered limited performance when executing complex queries.

In telco operating centers, speed is critical when trying to resolve service issues. “IBM DB2 with BLU Acceleration enables our clients to gain real-time insight into huge volumes of network data. This capability accelerates the identification of root-cause issues and enables faster resolution,” says Paul Peters, Lead Database Administrator, Phact.



Solution components

Software

- IBM® DB2® for Linux, UNIX and Windows

Services

- IBM Software Services—Lab Services
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Taking advantage of DB2 with BLU Acceleration

When BLU Acceleration for IBM DB2 was announced, Phact recognized the potential of this innovative in-memory technology and opted to join a special program giving early access to the solution. Paul Peters says, “The combination of efficient compression, columnar data storage and in-memory processing was the perfect recipe to eliminate the performance issues and provide real-time insights into millions of data points.”

Phact migrated its telco service analytics applications from Microsoft SQL Server to IBM® DB2® with BLU Acceleration, enabling clients to run high-speed analytics alongside online transactions in the same database. Phact upgraded its production landscape to IBM DB2 with BLU Acceleration without downtime. As the new functionality was already covered by the company’s existing DB2 license, Phact was able to deploy the new analytics capabilities without increasing its costs.

While DB2 provides an online table conversion utility, the company decided to reload the relevant database tables and generate columnar BLU tables automatically to take advantage of all new features of the IBM product. Paul Peters elaborates, “By recreating tables with optimized table spaces, we made sure that we could benefit from all the performance advancements provided by IBM DB2 with BLU Acceleration. The granular performance management provided by IBM DB2 allowed us to migrate all data without slowing down our production applications.”

Enabling real-time insight

By moving analytical workloads off the replica database onto IBM DB2, Phact streamlined its data management and dramatically increased the speed of insight. The company relies on the Shadow Table feature which provides a transparent data copy in a columnar storage format to speed up analytical queries without impacting transactional performance. Paul Peters says, “In the past, replication delayed data availability by up to one minute. Thanks to IBM DB2 with BLU Acceleration, all data is instantly available for analytical processing, helping our clients to get faster insight into critical information.”

“Using IBM DB2 with BLU Acceleration, our clients get quicker insights without increased costs.”

— Paul Peters, Lead Database Administrator,
Phact

The use of column-organized tables eliminates the need for auxiliary indexes, simplifying both the initial setup and ongoing maintenance. Combined with improved data compression, the new solution has reduced database size by more than 60 percent, which speeds up backup and recovery processes and reduces disk and memory costs for Phact.

Paul Peters concludes, “The cutting-edge technology of IBM DB2 with BLU Acceleration helped us make data analytics 160 times faster, reducing the runtime of complex queries from 24 minutes to 9 seconds. Thanks to such features as data skipping and actionable compression, we only need to load relevant data into memory and caches, and are able to hold more data in memory and calculate results without decompression. In short, we can use our resources much more efficiently than before.

“Using IBM DB2 with BLU Acceleration, our clients’ network operating centers have instant access to real-time data, and can now find and solve service issues quicker than ever. What’s really great from our point of view is that we can provide these performance improvements while also reducing our costs through not needing to maintain separate environments for transactions and analytics.”

About Phact

Headquartered in Venray, the Netherlands, Phact is a one-stop-shop for software and hardware solutions, support and consultancy. Among other activities, Phact provides specialist data integration and analytics services, and supplies business intelligence solutions to companies in all market segments.

To learn more about Phact, visit: www.phact.nl

For more information

To learn more about IBM DB2 with BLU Acceleration, contact your IBM representative or IBM Business Partner, or visit the following website: ibm.com/blu



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