Success Story

Telecommunications Marketing Warehouse defeats explosive growth in partnership with T-Systems and relavision Software GmbH

a brief History

This large European Telecommunications company, like many other multi-org, multi-product corporations in the European economy, is faced with the need to consolidate, control and strategically assert its market position in an increasingly competitive marketplace. This was the original intent of a system which today has an ever-increasing importance and value for making strategic corporate decisions.

The resulting system has undergone a life-cycle of changes which established it as a mission-critical system used today by hundreds of users daily for identifying corporate market tendencies, for determining key corporate accounts, customer interests and buying patterns, and for historical performance analysis.

A key challenge faced by the organization is the overwhelmingly large and explosive data volume increases in association with an "already complex" marketing data warehouse. Since onset, the warehouse has increased with a volume of 2 million transactions per day. In the beginning this data volume was manageable, but due to historical data retention it soon became apparent that external expert assistance was needed.

The search for a competent DWH Solutions Partner

When considering which external IT solutions provider should continue the developments of the Marketing data warehouse they looked for industry specialists who understand the principles of DWH and Marketing systems as well as the complexities involved in realizing a multi-Terabyte database solution. Two such organizations with a proven track record with large Data Warehouses are the customer's own internal IT Systems House and the external company **relavision™** Software GmbH.

The end customer chose relavision as its key external partner for the Warehousing because it was clear what they had. The founders are former Oracle employees with decades of experience in the IT branch at several other large multi-national conglomerates. For the past 12 years the consultants of relavision have maintained a major role in the new developments and on-going support of the Marketing Data Warehouse, working closely together with the internal IT Systems house.

Through this effective cooperation with relavision the marketing warehouse architecture has been improved significantly and the overall system performance dramatically improved utilizing the latest ORACLE-based warehouse technologies.

Sluggish Performance and Complex ad-hoc Warehouse queries: overcoming the challenge

Although the Customer had already made significant system advances through SQL-tuning and Data Partitioning to improve system performance and manageability it was evident that additional strategies were needed to address the ever-increasing Warehouse demands.

relavision joined forces with the internal systems house in the re-engineering of the parallel processing engine to achieve full optimization of Parallel load management. To achieve this an Oracle queue-based system was engineered which dynamically maximized process-based parallelism. The new feature replaced the existing parallel mechanisms and was used to quickly and effectively parallelize the remaining serial ETL processes. In addition Oracle's system-level parallelism was incorporated to achieve "nested parallelism".

Another key strategy implemented together by the two partners in conjunction was the incorporation of Oracle's Materialized View technology. After a study which included the detailed analysis of Customer's ad-hoc queries, Fact and Dimension usage statistics were collected and grouped in order to derive usage patterns. The usage patterns served as a basis for determine sensible Materialized Views, which were later implemented together with the customer. The end result was a query performance gain of 50 to 80 percent for large, long-running queries. In combination, the two strategies resulted in a highly-optimized and highly-parallel, load-balanced Data Warehouse.

Further Data Warehouse advancements were achieved through the relavision partnership in the engineering of an "aggregation management system" for simplified creation and maintenance of data summaries, a rule-based "Data Quality Management" system for the monitoring and controlling of Warehouse data quality, and an Internet-based meta-data management system implemented with JAVA technology.

The customer's choice of IT Solutions providers proved to be right. relavision employees strengthened the customer's vision to have a manageable system and to achieve a much higher user satisfaction level as a result of reliable and optimized analytics. relavision consultants addressed these requirements with a high degree of professionalism and competence.