Safran Software Solutions

The Business Challenge

When Safran Software Solutions, a leading provider of project planning, scheduling and risk management solutions, wanted to migrate its flagship product, Safran Project, from a relational database to SAP HANA®, they turned to Rolta for a complete, automation-enabled, fast migration.

Safran Project's database was complex, with a large number of different data types, triggers, stored procedures, and functions. Rolta stepped in to help. After an automated assessment using Rolta SmartMigrate™ for SAP HANA, an inventory revealed more than 500 constraints, which would mean that any manual migration process would be time-consuming and prone to errors. The sophistication of the solution was reflected in the complexity of the database: across the 10,000 lines of SQL code in the database, there were several thousand instances of conditional operators, string functions, select statements, outer joins, cursor operations, substring functions, concatenation and conversion functions, and declarations. Not only would the column store need to be created as part of the migration, but the SAP HANA Analytical Views would need to be designed to fully leverage SAP HANA's in-memory computing power. In short, this was a complex database migration.

The Customer

Safran's world-class software, experience and know-how enables businesses to plan and execute successful projects.

Safran provides the world's only project management software for planning and scheduling, risk management, and schedule and cost variance reporting from a single easy-to-deploy application for project- and asset-intensive industries.

Solution: complete migration using Rolta SmartMigrate for SAP HANA

Rolta completed the entire migration – from initiation to migration, remediation, testing and validation, and performance optimization, in just three weeks.

As the first step, Rolta SmartMigrate for SAP HANA was used to conduct an automated assessment of the Safran Project database, which provided a detailed inventory of the database schema, objects and programmatic constructs, as well as linkages and dependencies. The assessment performed a Schema Complexity Analysis which helped determine the extent of automated migration possible, and the manual remediation that would be required.

The assessment revealed that as much as 77% of the migration could be automated. This was accomplished, including the schema, data, creating the column store, the SQL objects, and the SAP HANA Analytical Views, and then followed by testing, validation, and handover.

Rolta SmartMigrate for SAP HANA's custom library functions were used to accelerate the refactoring of SQL objects, and to also enable enhanced functionality in SAP HANA.

Some examples:

- Self-table update triggers were converted and handled using procedures from the custom library

- SQL queries in the source database used scalar functions, which were substituted with procedures from Rolta SmartMigrate for SAP HANA's custom library

- Recursive procedures were refactored similarly

- Statement-level triggers were suitably refactored into row-level triggers

The results

After the migration, and once on the SAP HANA platform, Safran observed a considerable improvement in performance of Safran Project. For example, one update operation in the Safran Project application that took 80 seconds on the relational database took less than 13 seconds when executed on SAP HANA.

Rolta supported Safran in achieving the "Certified for SAP HANA" certification for Safran Project on SAP HANA.

Commenting on the success of this migration, Dean Edmundson, CEO of Safran, Americas observed, *"We are delighted that Rolta completed the migration of the Safran Project Product database to SAP HANA® so quickly and successfully, using their Rolta SmartMigrate™ for SAP HANA® tool and solution."*

Rolta SmartMigrate™ for SAP HANA® is a unique IP-based solution that enables the complete, comprehensive, and automated migration of customers' databases to SAP HANA with high-quality and predictable schedules, delivered using well-defined methodologies and processes.

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Project highlights

✓ 77% automation achieved in the migration, thus reducing timescales and improving quality

✓ 83% improvement in performance after migration, thanks to SAP HANA

✓ Automated assessment of the complete application database landscape – enabling the detailed planning of a potentially complex task

✓ Comprehensive migration of schema, data, stored procedures, and triggers using automation

✓ Automated introspection, recommendation, and DDL generation of HANA Analytical Views, which otherwise require time and expertise to model

About Rolta

Rolta is a leading provider of innovative IT solutions for many vertical segments, including Federal and State Governments, Defense, Homeland Security, Utilities, Oil & Gas, Financial Services, Manufacturing, Retail, and Healthcare. By uniquely combining its expertise in the IT, Engineering and Geospatial domains, Rolta develops exceptional solutions for these segments. The Company leverages its industry-specific know-how, rich repository of field-proven intellectual property that spans photogrammetry, image processing, geospatial applications, Business Intelligence, Big Data analytics, Cloud computing, and Software Defined Infrastructure for providing sophisticated enterprise-level integrated solutions.

Rolta is a multinational organization headquartered in India. The Company operates from 40 locations worldwide through its subsidiaries, and has executed projects in over 45 countries. Rolta is listed on the Bombay Stock Exchange and National Stock Exchange in India. The Company's GDRs are listed on the Main Board of London Stock Exchange. The Company's 'Senior Notes' are listed on Singapore Stock Exchange.