

Healthcare and Life Sciences Client Improves Performance and Reduces Operating Costs with Cloud Migration



Summary

Our client, a leading provider of proprietary healthcare and life sciences solutions, was challenged with high operational costs and the inability to meet customer expectations for one of its critical solution offerings. InfoCepts enabled the migration of an older solution to the cloud and significantly redesigned their older system within a strict deadline helping our client achieve significant performance improvements and reduce operating costs.

Industry

Healthcare and Life Sciences

Users

Senior and Sales Executives

Technologies

Teradata, Informatica, Amazon RedShift, MicroStrategy

Team Size

8 InfoCeptions, 2 Customer Associates

→ The Challenge

Our client, a leading provider of proprietary solutions to Fortune 500 healthcare and life sciences companies, faced challenges with one of its sales credit solutions. Updates were done using single end-to-end batch runs and took more than a week of processing time. In addition, the system was constrained by hardware limitations and did not allow for parallel runs.

The previous solution was implemented using an on premise Teradata database with Informatica for its ETL. As such, the operating costs of the system as it was configured were high. In addition, the inability to execute parallel runs with limited system availability resulted in low end-user satisfaction.

After assessing the client's needs and evaluating their existing solution, the following objectives were set

- Migrate system to an easily scalable platform
- Optimize data processing routines to reduce cycle run time
- Redesign system to reduce operational costs

→ The Solution

Our team carried out an end-to-end migration of the previous system (with ETL and DB components) to Amazon Cloud. This included two work streams – migrating the Teradata databases to Amazon Redshift and optimizing the older data processing routines to reduce the cycle run time.

In addition to typical database migration challenges, the Teradata to Amazon RedShift migration effort included the following:

- Schema redesign as per Amazon RedShift performance best practices
- Conversion of Teradata stored procedures to PSQL scripts invoked shell scripts

Our team carried out extensive optimization of older data processing routines in order to ensure conforming to target cycle run times. This included:

- Intelligent mix of “deep copy” and “split incoming file” load strategies
- Strategic placement of “vacuum” and “analyze” scripts post data load and steps to boost downstream query performance
- Automated scripts to monitor system performance and suggest possible enhancement opportunities

Using our expertise in Amazon Cloud technologies, we were able to recommend significant improvements to the original design to optimize operational costs. This included:

- Implementation of control table driven ETL framework to replace older Informatica workflows that were predominantly push down transformations
- Usage of CLI routines for automated cluster maintenance in order to shut down cluster post-cycle run and automatic archival of production cluster data to S3 and Glacier

→ The Results

After meeting all of the stated project objectives our client has realized the following benefits:

- **Reduced infrastructure costs by approximately 50%** due to economical Amazon Cloud pricing and savings from replacing in-house ETL with Informatica
- New system requires almost zero manual intervention so costs related to support staff were **reduced by approximately 35%**
- **Cut down end-to-end cycle run time** by 80%
- Met end-user expectations by configuring updates to run monthly and conduct on-demand runs in parallel