Azure Data Warehouse Migration Analytics and Optimization

Reduced Cost, Risks, Time to Migrate Exadata Data Warehouse to Azure

Ensured Ongoing Cost Efficiency and Business Productivity in Azure

RESULTS

Reduced migration time by two months versus the initial plan

Decreased expense by 4 man-months

Lowered ongoing Azure consumption costs by 15-20%

Identified infrequently used and duplicate data reducing storage costs by 26%

Data Warehouse Director, Wells Fargo

"Teleran enabled the bank to deliver a cost-effective, low risk migration that met business expectations."

"Teleran's real-time user management ensured business users were cost-efficient and productive in their ongoing Azure data warehouse use."

Client: Wells Fargo Bank

The Bank committed to migrating an Oracle Exadata enterprise data warehouse to Microsoft Azure SQL Data Warehouse service. The data warehouse contained over 200 terabytes of data and was used by over 2000 users in 12 departments across the bank.

Challenges

The bank lacked a comprehensive profile of overall data warehouse usage and an understanding of the unique risks and challenges migrating a complex Exadata data warehouse to a new platform. The bank was concerned that it needed a more detailed view of usage including how the unique features of Exadata were being used such as Smart Scan (storage indexes and query offload), flash caching, and hybrid columnar compression, among others, in order to appropriately configure and resource their Azure data warehouse.

Given the lack of understanding, the bank was worried that unanticipated challenges would increase project risks and surprises, increasing the time and cost to complete the project, and once in Azure, needlessly driving up consumption costs and risking dissatisfied business users.

After the initial migration planning with Microsoft, the bank was introduced to Teleran's automated Azure Migration Analytics and Optimization software solution. It offered a unique combination of user, application, and data usage analysis and Exadata system level metrics to provide a comprehensive migration assessment and planning solution.

Solution

In partnership with the Bank's services firm, Teleran conducted a 30-day Exadata usage assessment. The objective was to automatically profile and analyze the Exadata data warehouse usage quickly and efficently to ensure an accurate, low risk and cost-effective migration and ensure cost efficiency and productive business use in Azure. Teleran's solution captured a continuous view of usage characteristics at the query, user, application and data level.

Teleran's analyses integrated its usage metrics with selected Oracle Exadata system metrics including CPU, IO, memory as well as node, cluster and storage index and offload statistics. This provided a comprehensive and accurate picture of data warehouse usage issues, resource consumption, and optimal Azure configuration going forward. Teleran's solution identified, quantified, and prioritized those usage issues that required remediation during the migration project. It also defined discrete workloads that enabled a prioritized and phased migration to enable a manageable and transparent process. Specific profiling, resource requirements, and remediation and optimization analyses included:

Profiling and Resource Requirements

- Long-running queries/reports requiring optimization
- SQL statements using Exadata storage indexes and offloading
- Exadata system resource metrics including CPU, IO, memory correlated to SQL queries
- Performance and volume metrics including transactions, users, applications, and ETL cycles
- Database objects, sizes, and data growth rates
- Licensed Exadata features and configurations

Remediations and Optimizations

- Unbalanced Exadata node processing/concurrency issues/peak period resource consumption
- Poorly formed, inefficient queries (many joins, select*/wild card)
- Wasteful user behaviors (duplicate queries, no data returned queries)
- Application errors, database errors
- Inefficient or obsolete ETL or other maintenance processes
- Unused applications/reports
- Unused or infrequently used data

Results

Teleran's unobtrusive, fact-based analyses enabled the services firm to generate a low risk, highly accurate plan that provided for a faster, less costly migration project. Specifically, the bank working with their services firm reduced the migration time by two months versus the initial plan, decreasing the budgeted expense by 4 man-months. Teleran's usage analyses identified issues and remediations that helped lower ongoing Azure consumption costs by 15-20% versus initial projections and ensured performance, cost, and business user expectations were met on Azure. Additionally, Teleran's solution identified infrequently used and duplicate data reducing storage costs by 26% from initial projections.

Contact Us

For more information about how Teleran's Azure Migration Analytics and Optimization solution can save you time and money, and ensure your Azure success, visit www.Teleran.com or call +1.973.439.1820.

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