



AHANA STREAMLINES DATA  
PROCESSING FOR CAR  
FINANCIER: **SLASHING QUERY  
RUN TIME BY 60%**



Effective data management is crucial for businesses to remain competitive and responsive to market needs. Data warehousing and business intelligence tools have become essential components for organizations aiming to make informed decisions quickly. These technologies help in organizing, storing, and analyzing data, allowing businesses to generate actionable insights and streamline their operations. As businesses increasingly move towards cloud solutions, they gain the advantage of scalability, flexibility, and improved performance, which are vital for handling large datasets and complex queries efficiently.

## Client Profile:

Our client, a subsidiary of a leading banking and financial services company based in Mumbai, has been a major player in India's car finance industry since 1996. They offer financing solutions for new and pre-owned passenger cars and two-wheelers to retail consumers and provide wholesale financing to automobile dealerships.

## Challenges:

The subsidiary, reliant on multiple source systems, aimed to replicate its on-premises Oracle databases to an AWS Redshift data warehouse. The objective was to facilitate faster and more efficient data processing for reporting through Amazon QuickSight and SAP BusinessObjects (SAP BO). The specific challenges included:

- **Report Generation Issues:** The client experienced frequent failures and delays in report generation on SAP BO.
- **Long Query Run Time:** Prolonged query execution times hindered timely data retrieval and analysis.
- **PLSQL Report Generation:** SAP BO struggled to generate PLSQL reports, complicating the data reporting process.

These issues not only hampered operational efficiency but also delayed critical business decision-making processes. The solution needed to support future machine learning models for customer churn and fraud detection, adding another layer of complexity to the project.

## Ahana's Solution:

Ahana's approach began with a thorough system analysis, leading to the development of a tailored solution architecture. The implementation included the following steps:

- **Data Migration with AWS DMS:** Data from the on-premise Oracle database was migrated to AWS Redshift using AWS Database Migration Service (DMS). Both full load and Change Data Capture (CDC) methods were employed to ensure comprehensive data transfer.

- **Data Modelling and Optimization:** Data was cleaned, aggregated, and modeled to enhance analytical performance. This optimization significantly reduced query run times.
- **Creation of Views in Redshift:** To optimize report generation, views were created at the Redshift level rather than executing queries directly on SAP BO. This change reduced the load on SAP BO, improving overall performance.
- **PLSQL Query Optimization:** PLSQL queries were adapted to the Redshift environment, enabling SAP BO to generate reports without issues.

## The Impact:

The implemented solution yielded significant improvements in the client's data processing and reporting capabilities:

1. **Query Run Time Reduction:** The optimization efforts led to a more than 60% reduction in query run times, enhancing data retrieval efficiency.
2. **Report Generation Efficiency:** Report run times decreased by over 80%, ensuring timely availability of critical reports.
3. **Elimination of Report Failures: The consistent failures experienced during report generation were eliminated.**
4. **PLSQL Report Generation:** The optimization enabled the client to generate PLSQL reports seamlessly on SAP BO.
5. **Adoption of Advanced Reporting Tools:** The client successfully adopted Amazon QuickSight and SAP BO for its reporting needs, laying the groundwork for future machine learning applications.

## Conclusion

Ahana's implementation of a tailored data warehousing solution on AWS Redshift enhanced the data processing capabilities of our client. The significant reduction in query run times and report generation failures, along with the successful integration of PLSQL report generation, has enabled the client to meet its current reporting needs effectively. Moreover, the foundation is now set for future expansions into machine learning applications, ensuring the client remains at the forefront of technological advancements in data analytics.

## About Ahana Systems and Solutions

Ahana Systems & Solutions is a leading IT Infrastructure Management Services and Digital Transformation company based in Bengaluru, India. Our expertise extends to a wide range of solutions, including Cloud, RPA, DB & EDW, BI & Analytics, and Application Development. Our 100+ roster of clients relies on us for our deep domain expertise, skilled resource base, and proven partnership with the best technology providers.

## Contact Us:

sales@ahanait.com | info@ahanait.com | +91 9148724605