# XORIANT

# SNOWFLAKE DATA MIGRATION AND REPORTING FOR A RETAIL COMPANY

Enhanced scalability and minimized infrastructure costs

## Client Background

Our client is a next-generation retail company partnering with the world's premier technology companies to deliver goods and services. They have built a personal commerce platform to revolutionize the way people buy and enjoy the world's best technology products. Using this platform, the client ensures the delivery of products, installation services in addition to the free visit to help individuals set up and get the most of their technology.

The client's staff working on the field used mobile apps to receive near to real-time analytical alerts about scheduled visits, delivery windows and the orders. Besides, information on routes and reschedules of delivery timings. For supporting daily operations and decision-making, the client used a simple infrastructure - Postgres to store and maintain data. Tableau was a primary tool for data visualization and reporting. However, as their business grew across demography with new customers, the client experienced a dire need for scalability. Postgres being a single machine architecture, had scalability limitations. The addition of new machines was expensive, cumbersome and error-prone as it involved data replication.

## KEY BENEFITS

- Migration and validation of ~25 Tableau dashboards, ~50 data sources and 500 tables enhanced monitoring and control over KPIs, accelerating decision-making

- Minimized infrastructure and maintenance costs, making the process cost-effective and scalable

- Improved data response processing time by ~10%. With increased data volume, business will experience significant performance improvement

- Achieved more time to business-critical tasks since data warehouse management and security was outsourced to the cloud vendor

The key objectives of the client included:

- Migration from PostgreSQL to Snowflake database

- Accelerate database query response

- Develop real-time dashboards for reporting

- Enhance user experience for the staff using their mobile apps

## Xoriant Solution | Key Contributions

Xoriant's adept engineering team met the client's business requirements with seamless migration. Our team's experience, knowledge of core technologies and migration best practices enabled us to rapidly migrate from Postgres to Snowflake database.

Our key contributions included:

- Seamless migration from Postgres to Snowflake with data validation using Python

- End-to-end data defining and loading strategy for multi-region (US, UK and Canada)

- Accelerated development and migration of multiple dashboards for desktop and handheld devices using Tableau, such as Trendline charts, Bar graphs and Pivot charts.

- Analytical query migration for Tableau reporting with expertise in Snowflake database

- Established threshold parameters for each metric, displayed conditional metrics for each partner & linked form to the dashboard

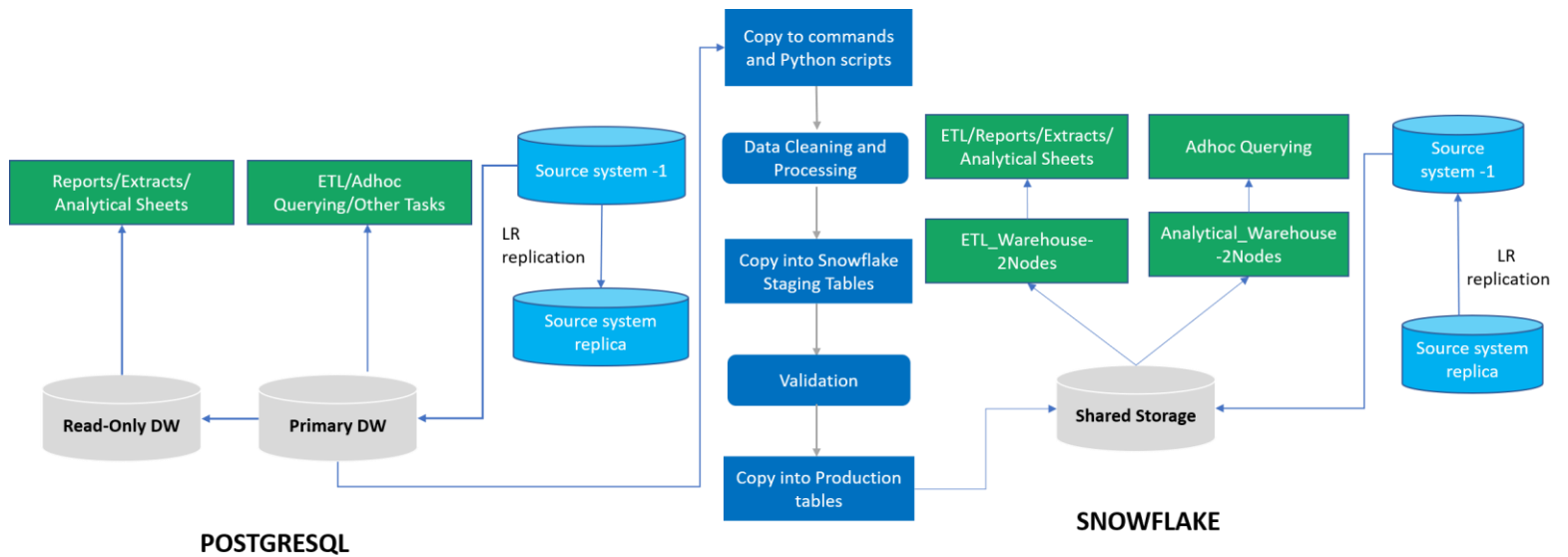- Effective migration and validation of custom API tools and other Python tasks

## Client Testimonial

*We chose Xoriant clearly because they understood our business requirements. With a good pool of technology experts bringing migration framework and best practices, Xoriant helped ease the transition with minimum disruption and generated measurable results.*

## High Level Architecture



**POSTGRESQL**

**SNOWFLAKE**

Diagram labels:
- Reports/Extracts/Analytical Sheets
- ETL/Adhoc Querying/Other Tasks
- Source system -1
- LR replication
- Source system replica
- Read-Only DW
- Primary DW
- Copy to commands and Python scripts
- Data Cleaning and Processing
- Copy into Snowflake Staging Tables
- Validation
- Copy into Production tables
- ETL/Reports/Extracts/Analytical Sheets
- Adhoc Querying
- ETL_Warehouse-2Nodes
- Analytical_Warehouse-2Nodes
- Shared Storage
- Source system -1
- LR replication
- Source system replica

## Technology Stack

**Tableau | PostgreSQL | Snowflake | Python**

Xoriant is a product engineering, software development and technology services company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite and offshore services from our eight global delivery centers with over 3600 software professionals. Xoriant has deep client relationships spanning over 30 years with various clients ranging from startups to Fortune 100 companies.