

Augmented Operations with Snowflake for Prestigious U.S. University

Client Overview

The client is one of the oldest, largest, and most prestigious private universities in the U.S. with more than 50,000 students and 19,000 employees.

The Business Situation

The client had a complex IT infrastructure and used Oracle to manage their data. Periodically, they updated large volumes of data relating to HR and Finance operations. The data volume coupled with the complex infrastructure caused performance issues and necessitated manual intervention. Additionally, Covid norms required the client to send hourly alerts to thousands of students and staff based on their activities on campus. They also faced the sky-rocketing licensing and maintenance costs of Oracle. The client was looking to seamlessly shift to a high-performing solution that would minimize manual intervention and reduce costs.

The Solution

GAVS enabled seamless data migration from Oracle to Snowflake to enhance operational efficiencies, performance, and scalability while reducing costs. The unified management platform helped perform operations such as data extraction, job scheduling, and continuous data ingestion with ease. The effective use of Snowflake's cloud capabilities simplified complex computing of huge volumes of Covid data on compliance, test, and vaccination. GAVS leveraged Snowflake's features to upscale servers to minimize query, queue, and execution time. Voluminous job scheduling was done within Snowflake (Task/Snowpipe) to run and send alerts to thousands of students and staff, which involved processing of 70+ dimensions and 17+ fact tables daily. Data extraction from APIs was simplified and semi-structured live data from websites was decoded using Python/SnowSQL.

Challenges

- Complex IT infrastructure
- Performance issues for large data volumes
- Manual intervention required for data processes
- Difficulties in data governance of Covid norms
- High licensing and maintenance costs of Oracle

Solution Highlights

- Data migration from Oracle to Snowflake
- Simplification of complex computing of voluminous data through Snowflake's cloud capabilities
- Server upscaling to minimize query, queue, and execution time leveraging Snowflake's features
- Voluminous job scheduling within Snowflake (Task/Snowpipe)
- Simplified data extraction from APIs
- Decoding semi-structured live data from websites (Python/SnowSQL)

Solution Outcomes

- Drastically reduced maintenance costs by eliminating DB administration, licensing costs
- High performance through cloud computing
- Effective system integration between departments and students/staff despite growing no.s of students/alumni looking for historic data
- High concurrency and secure data sharing between departments
- System augmentation without additional setup or overheads
- Agile environment compatible with existing ETL/Reporting tools