

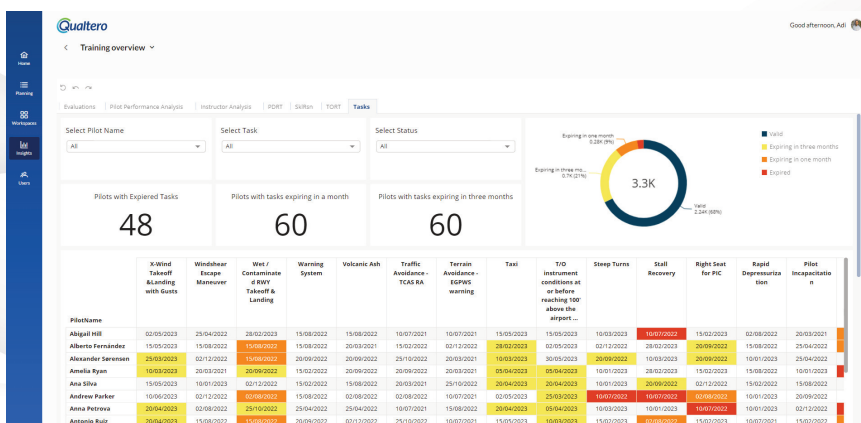
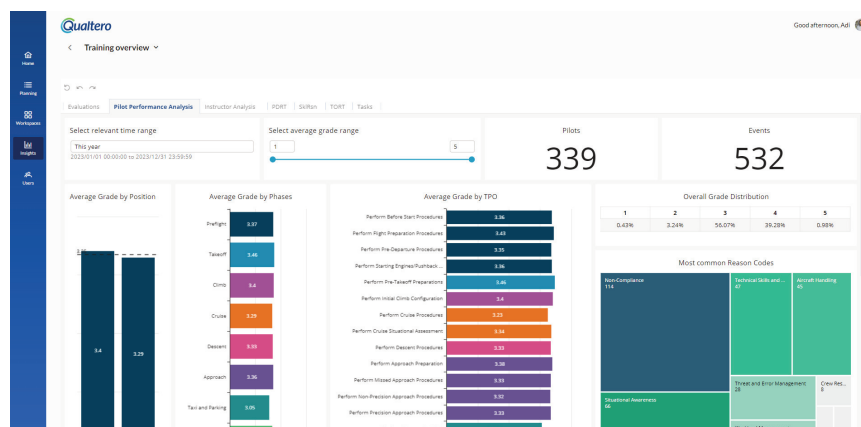
# Qualtero Case Study



## Leveraging Amazon Redshift, Qualtero partners with AllCloud to develop and deploy an end-to-end serverless data pipeline to support its new, game-changing BI SaaS solution

## About Qualtero

Formerly named Britannica Knowledge Systems, Qualtero is a world-leading provider of training management and readiness solutions for the aviation industry, with two decades of experience and excellence in the field. Via two powerful web-based solutions – Fox Training Management and the newly launched Evaluation & Qualification Management System – Qualtero is realizing the company vision to optimize commercial and military aviation training operations and deliver better performance and outcomes for its global customer base.



## Summary

Qualtero partnered with AllCloud to develop a BI SaaS solution for their new Evaluation & Qualification Management System. The solution enables real-time retrieval, analytics and display of pilots' evaluation results, helping to optimize training and management processes in the aviation industry. AllCloud developed an end-to-end data pipeline using Amazon Redshift as the data warehouse, extracting data from Aurora PostgreSQL RDS Instances and transforming it for consumption and analytics. The solution ensures data separation for each tenant, offers near-real-time insights, and integrates with Amazon QuickSight for user-friendly dashboards. The project was successfully completed within a few months, meeting Qualtero's launch deadline.

## Challenge

Qualtero was looking to build a BI SaaS solution to support its new [Evaluation & Qualification Management System](#). This revolutionary product is designed to retrieve pilots' evaluation results in near real time for display via dashboards, enabling airlines and aviation companies to effectively track the qualifications status of pilots and crew, and optimize the training and management process. It also reports performance data to regulatory agencies, enabling customers to ensure compliance at all times.

The Evaluation and Qualification Management System was to be launched to the market as an additional solution to the industry-leading Fox Training Management System.

Qualtero wanted a partner with the expertise to develop a complete end-to-end data pipeline, from operations to business intelligence, that will power the new evaluation and qualification platform and provide a robust and reliable solution for Qualtero's customers.

## Solution

Qualtero chose to partner with AllCloud's expert cloud data team to develop and implement the optimal end-to-end data pipeline for its new BI SaaS product. The company did not have a data warehouse, so after evaluating several tools, the decision was made to use Amazon Redshift, a fully managed, serverless data warehouse that enables rapid, scalable data analysis without the configurations necessary for a provisioned data warehouse.

The pipeline extracts the data from Aurora PostgreSQL RDS Instances using Lambda function, and then loads the data into the RedShift data warehouse. There it is transformed by SQL from staging schema to production schema. The data is now consolidated and ready for consumption and analytics, available in BI visualizations via QuickSight dashboards – all of this happening in near-real time, which was a special requirement of the solution architecture on which AllCloud successfully delivered.

Qualtero's new SaaS BI solution provides the end customer with an advanced, user-friendly dashboard featuring near-real-time analytics and reports. This enables aviation companies to view and manage crew evaluations and qualifications according to KPIs, ensuring faster, more efficient operations and performance.

## Results

Qualtero aimed to announce its new Evaluation & Qualification System and offer demos for customers at the WATS 2023 convention. The company engaged with AllCloud to develop and deploy the BI SaaS solution in a timely manner according to the launch deadline, and with maximum cost efficiency.

AllCloud was able to meet the deadline, completing the project in less than three months.

The end-to-end data pipeline developed by AllCloud brings several key benefits and advantages to Qualtero:

- **IaaS:** Based on Infrastructure-as-a-Code, and by using Terraform, the solution is compatible for deployment in several environments, including dev, staging and production, in a rapid-fire way, helping boost efficiency and agility.
- **Serverless:** With Amazon Redshift serverless data warehouse, resources are provisioned automatically, and the capacity of the data warehouse scales intelligently, supporting fast performance and optimal management of high-demand workloads.
- **Near real-time:** The data pipeline extracts, ingests, and consolidates data in close to real-time, enabling accurate, timely access and analysis of data.
- **Tenant solution:** Customer data is completely separated, ensuring maximum integrity, security and governance.
- **QuickSight dashboards:** By integrating with Amazon QuickSight, there is no need to manage and maintain several tools or applications. QuickSight provides integrated access to advanced Business Intelligence capabilities and robust, user-friendly dashboards for an excellent user experience. The dashboards can also be deployed using CI/CD with Terraform.

*"We are very pleased with the success of the AllCloud team and their implementation of the RedShift project for Qualtero's Evaluation & Qualification Management System. AllCloud's expertise in developing the end-to-end data pipeline using Amazon Redshift as the data warehouse, has been exceptional. They seamlessly extracted data from Aurora PostgreSQL RDS Instances, transformed it for consumption and analytics, and ensured data separation for each tenant.*

*The near-real-time insights provided by the solution, coupled with the user-friendly dashboards through Amazon QuickSight, have revolutionized our aviation training and qualifications management. AllCloud completed the project well within our launch deadline, demonstrating their efficiency and commitment to delivering robust and reliable solutions.*

*We are thrilled to have partnered with AllCloud and look forward to further collaborations in the future."*

*- Adi Silagy, VP Product & Engineering, Qualtero*