# GVM Sion transforms its aircraft reservation software

## Overview

One of Switzerland's oldest flight schools, the Groupe de Vol à Moteur de Sion (GVM Sion), aimed to enhance its aircraft reservation and management software. Facing the limitations of a legacy system, GVM Sion partnered with 56k.Cloud to build a modern, scalable platform on AWS. The new platform, Aviator, not only serves GVM Sion but is also available to other flight schools as a multi-tenant SaaS application.

## Challenge

GVM Sion needed to address several key challenges. Their existing legacy system was outdated and lacked mobile-friendly capabilities. As the number of students and members grew, the system needed to handle increased demand and new feature requests, including:

- *Provide pilots with up-to-date aircraft documentation, checklists, and safety information*
- *Follow the progress of students and identify students at risk of not finishing the syllabus*
- *Track aircraft flight time and flight analytics*
- *Report and follow up on aircraft issues requiring maintenance*

Without these new features GVM Sion was faced with tedious manual administrations tasks slowing the organization down and taking time away from what matters: flying.

## Solution

GVM Sion and 56k.Cloud implemented a cloud-native serverless architecture on AWS to develop Aviator, a new reservation and aircraft management platform. The solution was designed to be scalable, cost-effective, and highly efficient, addressing all the challenges faced by GVM Sion.
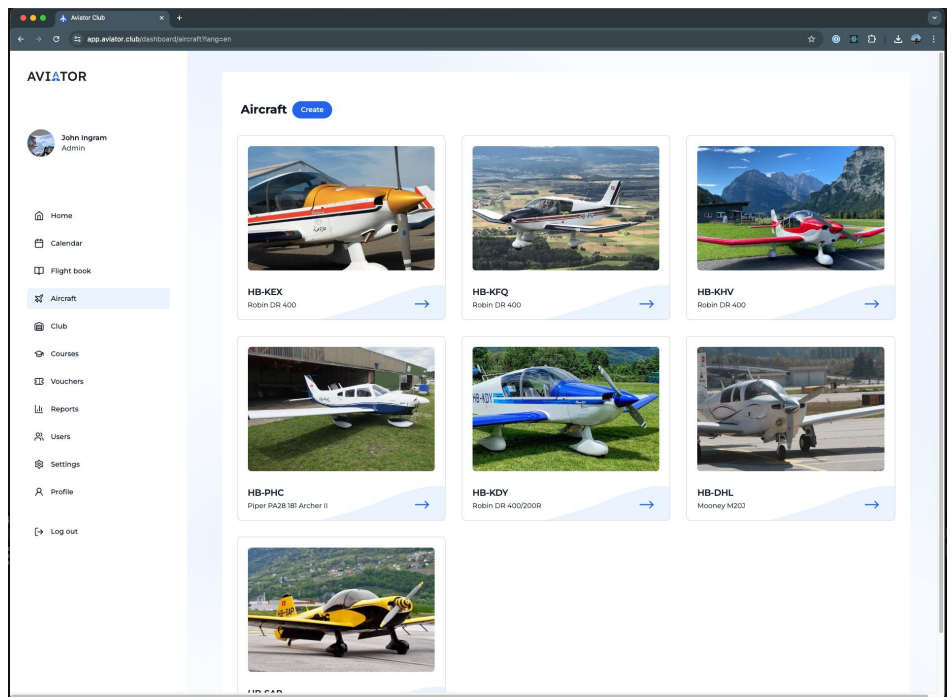
A serverless backend was created utilizing:

- *AWS Lambda: Utilized for business logic, ensuring that the backend could scale automatically with demand.*
- *Amazon API Gateway: Managed API requests and authenticated users via JWT tokens, ensuring secure communication between the frontend and backend.*
- *Amazon DynamoDB: Primary database, offering high availability and performance without the need for complex maintenance.*
- *Amazon Cognito: Identity platform to authenticate users and serve access credentials*

### GVM Sion

**The GVM Sion is a prominent Swiss flight school and club located in the heart of the Alps in the Valaisan capital, Sion. With seven aircraft and more than 20 instructors, it provides its students with the ability to achieve the first major milestone in a flying career: a private pilot license (PPL). Being also a club, it provides its over 300 member pilots with aircraft rental and continuous flight training services, including aerobatics and mountain and glacier landing ratings.**

Provisioning the infrastructure on AWS is fully automated using Infrastructure-as-Code. Furthermore, application updates and infrastructure changes are automatically tested and deployed using CI/CD pipelines.

56k.Cloud did not stop with developing a new backend on AWS, but also relied on its UI/UX and web application expertise to bring to life a modern frontend application using Next.js. The application includes an interactive aircraft reservation calendar, analytics dashboards for flight schools to monitor aircraft activity, and much more.



## Benefits

The transition to a serverless architecture on AWS provided several key benefits. Aviator has enabled GVM Sion to reduce operational overhead and increase pilot satisfaction by providing a modern and user-friendly experience.

Leveraging a fully managed serverless infrastructure allows the development team to develop and deploy new features to production quickly, enhancing agility. The serverless infrastructure scales automatically with demand, ensuring reliable performance. The pay-as-you-go pricing model reduces costs by eliminating the need for provisioning and maintaining servers.

## Conclusion

Deploying Aviator on AWS has revolutionized GVM Sion's aircraft reservation and management processes. The adoption of serverless architecture and automation has facilitated rapid feature development and deployment, ensuring a modern, scalable, and cost-efficient solution. Aviator is set to grow as more flight schools can easily leverage its multi-tenant capabilities. This new platform is set to fill a gap in the aviation community for a modern, secure and user-friendly application for pilots, instructor and flight school admins.

## 56k.Cloud

56k.Cloud, an AWS Advanced Partner, specializes in cloud migration, workload optimization, and cloud-native application development. With deep expertise in embedded systems and networking, they offer innovative, automated solutions tailored to client needs. Their services include comprehensive consulting and hands-on training, focusing on real-world applications to ensure practical learning. By leveraging cutting-edge technologies and best practices, 56K.Cloud helps businesses effectively navigate their cloud journey.

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