AIXBRO: Cutting load time from days to minutes

> *"Not only have we modernised our means of managing our extensive inventory, PGS Software has also shown us a future-proof solution that will stay with us as we grow and transform. Thanks to the Cloud, we've now got a frustration-free solution that will become the basis for multiple new features that will transform our company even further."*
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> Stefan Hilbrich
> Director E-Commerce — AIXBRO Swiss GmbH

When AIXBRO - a leading supplier of automotive parts in Switzerland - wanted to improve their online database and search functionality, they looked to the Cloud to build a brand new prototype that could cut data generation and archive times.

BUSINESS NEED

AIXBRO help clients to source and order a wide range of automotive parts from their eCommerce system. As such, the company has up to 30 million products at any one time, which means that data management is essential.

Unfortunately, their current infrastructure is limited and can only populate around half a million products - even then, it takes up to 80 hours. Because of these limitations, the service underperforms as it's not possible to update the entire system or access large enough sections. Consequently, AIXBRO wasn't able to update their entire database efficiently, and certainly not all at once. This, as a result, led to a suboptimal experience for both partners and customers alike.

As a possible solution to all of this, AIXBRO were curious about the Cloud's potential. To test this, they wanted to create a Cloud-native Proof of Concept (PoC) to showcase how effectively the technology can solve their situation. This solution needed to achieve two main objectives; to populate the entire database and to do so at a much faster rate.

PROJECT DETAILS

The initial PoC was built entirely in the Cloud. This solution need to offer fast query times with minimal latency, but also offer flexibility and scalability. The Cloud was a clear choice, as it allowed the PoC to be easily expanded and enhanced in the future.

To help users get faster results, Elasticsearch worked as a data store, which the company and their partners could access through AWS' API Gateway. Elasticsearch enables the system to handle much larger queries and easily find results. What's more, unlike the old solution, it can handle data volumes far above half a million entries, helping to future-proof against growing needs.

AWS Lambdas, combined with Python, were used to ensure a fast and cost-efficient load process, due to its serverless nature. Where AIXBRO's previous solution took up to 80 hours to load half a million items, Lambda and Elasticsearch in the Cloud takes less than 5 minutes. When populating, loading or updating across 30 million automotive component listings - the company's full inventory - the solution only took a few hours, rather than days, allowing for more regular, efficient, and consistent updates.

BUSINESS BENEFITS

The final PoC proves that AIXBRO has a lot to gain from the Cloud, ensuring customers are able to better use their services and purchase from their store more easily.

— Thanks to scalable performance, the PoC fits within AWS' free tier, helping save significant costs.

— AWS managed services also reduce administrative & maintenance based costs

— Databases can be updated and deployed in minutes.

— The API allows the client's other partners to easily access the required information.

— AIXBRO no longer have to worry about their infrastructure - even with a growing inventory, the system scales up.

— A more efficient system allows for regular, consistent updates to the database.

— Searches now take just seconds, allowing clients and partners to more easily browse AXIBRO's stock.

— The company is now looking to expand the PoC to include additional content, including user-generated information.

TECHNICAL DETAILS

SOLUTIONS
AWS Cloud, Infrastructure as Code, AWS Serverless, Elasticsearch

TECHNOLOGIES
AWS Lambda, Amazon Elasticsearch Service, Amazon API Gateway, Amazon S3

TOOLS
Java, Python, Terraform, IntelliJ IDEA, Postman

TEAM
1 Cloud Architect, 1 Cloud Developer

ABOUT THE CLIENT

AIXBRO GmbH is a company that specialises in the distribution of car parts and accessories across Switzerland, including via an online store, Auto Equipment CH. Based in St. Gallen, the company allows customers to source and order from a wide range of original and aftermarket parts, whether it's from their smartphone, tablet, laptop or desktop computer.

ABOUT PGS SOFTWARE

PGS Software delivers custom-made IT solutions to clients around the globe. We specialise in providing a range of services in Cloud Computing, Data Science, and UX/UI Design. Our offer also extends to include Software Development, Business Analysis, and Quality Assurance. Among our existing clients are Yell, Ringier Axel Springer Media, Volotea, and many more.

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