

Case Study

AltexSoft & WarrCloud:

Modernizing a Warranty Processing Platform

.NET Core, C#, Selenium, AWS SQS, AWS Lambda, Amazon EC2, AWS API Gateway



altexsoft

Background

WarrCloud provides a SaaS platform that automates warranty claim processing for franchised car dealers. It connects to numerous dealer management systems (DMSs) and original equipment manufacturers (OEMs) to streamline document workflow and reduce operational costs.

With the expansion of the customer base and the rise of new technologies, WarrCloud started considering system upgrades. Eventually, they got in touch with AltexSoft to augment their team and adapt their platform to their business growth.



Challenges

The WarrCloud software automates populating, tracking, and submitting repair orders, making the entire process efficient and transparent. But as often happens with monolithic apps, the growing number of users and transactions started to make the system error-prone and hard to maintain. Our task was to help WarrCloud modernize the system and that meant resolving the following challenges.

1.

Break up
a monolith architecture

2.

Implement more
effective automation

3.

Maintain decoupled
services

Value delivered

1. Migrating the platform to microservices

To make the platform flexible and scalable, the team began splitting it into independent modules or microservices. This approach allows for the hassle-free addition of new components, no matter the tech stack behind them. It also simplifies moving from one environment to another (say, from Azure to AWS). And if one of the components goes down, the chances are that the rest of the system will continue to work.

At this time, we have already built microservices for user management, file attachments, and integration with Opentrack and Fortellis dealer management systems, to name just a few features, with many more to come.

2. Speeding up robotic process automation (RPA)

The WarrCloud software increases car dealer productivity by automating repair order processing. Agents manually enter new data such as mileage or order number, while scripts take care of anything else — updating, editing, saving, tracking, submitting, closing, and numerous other operations with documents.

Since the number of tasks to be automated grew with time, it was decided to switch to new RPA technology. This shift reduced the number of script errors, simplified bug fixing, and sped up automation enormously, cutting down the time of task execution to just a few seconds.

3. Introducing an alert system

The downside of a decentralized architecture is its complexity if compared to a monolith. And that leads to maintenance and support issues. Additional effort is required to connect services written in different languages, coordinate their interactions, restart failed jobs, and so on.

For now, the team has implemented an alert system to notify the support team of issues, so they can fix problems as soon as possible.

Approach and technical info

The partnership with WarrCloud is ongoing in a team extension engagement model. On AltexSoft's part, 7 .NET engineers are working on the project, 3 of them occupied with microservices migration and 4 involved in automation.

The technology stack includes **.NET Core** and **C#**, **Selenium**, **AWS SQS**, **AWS Lambda**, **Amazon EC2**, **AWS API Gateway**.

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