

Improved Connectivity of the Top ETL Platform Led to a 10-Year Partnership

During a decade, a global provider of business intelligence solutions have been relying on Altoros for building new ETL connectors, automation, and aligning acquisition goals.



10+
years of collaboration



\$100,000
saved on drivers yearly



120+
source connectors

The Customer

Based in the USA, the customer is a leading provider of data integration and business intelligence solutions. The company serves 38,000 enterprises in 100+ countries. Gartner lists the firm among the top suppliers of analytics and BI platforms for 10+ years in a row.

The Need

To expand its global reach and a portfolio of services, the customer acquired a company that developed an ETL (extract, transform, load) suite. The product enabled enterprises to gather data from various sources (databases, third-party services, social networks, etc.). To fit in the existing ecosystem of tools, the suite had to comply with the workflows in place. For instance, it was vital to automate manual processes, such as the creation of custom connectors.

Before the acquisition, Altoros participated in the development of the suite. Satisfied with the results and our [.NET development](#) expertise, the customer decided to proceed with the partnership.

The Challenges

Under the project, the team at Altoros had to address the following issues:

- As the connectors dealt with sensitive data, it was important to strengthen security.
- Under the hood, connectors utilized drivers from third-party vendors. Licensing for such drivers was both costly and time-intensive, increasing end-user budgets.
- A monitoring mechanism of the existing Salesforce connector logged the incidents without prioritizing them. This made it difficult to find the root cause of critical issues.

The Solution

Stage 1. After analyzing the customer requirements, .NET engineers at Altoros prioritized a backlog of tasks and worked out a roadmap of improvements. To deliver tangible results on a regular basis, the team used the Agile methodology and moved in frequent iterations.

Stage 2. To improve overall security of the suite, the developers created a host whitelist moderating access to third-party services. Then, the team tweaked the mechanism responsible for verifying the authenticity and validity of SSL certificates, as well as optimized the logic behind self-signed certificates. The developers also enabled cache encryption and support of the OAuth 2.0 protocol.

Stage 3. The engineers delivered an automation framework for the creation of custom connectors. Via a drag-and-drop builder, the tool enabled to easily plug the connectors as extensions.

Stage 4. The team also built new connectors—for Facebook, LinkedIn, REST APIs, and JDBC. The latter would allow for using open-source drivers instead of proprietary ones.

Stage 5. The QA engineers created unit, simulation, functional, and integration tests for the new connectors.

Stage 6. To optimize incident monitoring of the Salesforce connector, the developers created an error-sorting mechanism configuring it to perform severity-based tracking.

Stage 7. The team at Altoros provided ongoing support to ensure that the development aligns with the customer's post-acquisition goals.

The Outcome

Partnering with Altoros for over 10 years, the company released new ETL connectors and automated the creation of custom ones down to just a few hours. The customer also ensured that the acquired suite of connectors integrated well into the existing ecosystem of proprietary tools. The delivered JDBC connector will promote the use of open-source drivers, saving hundreds of thousands dollars on vendor ones and simplifying licensing. The security measures in place helped to protect sensitive data of 38,000 enterprises.

Brief results of the collaboration

- The ongoing support provided by Altoros during 10 years of collaboration enabled the company to satisfy its objectives around integrating the acquired suite into its existing ecosystem of tools.
- With the delivered automation, it is now possible to create custom connectors in a matter of hours.
- The customer built new connectors for REST APIs, Java Database Connectivity (JDBC), LinkedIn, and Facebook.
- The measures introduced around security—the OAuth 2.0 protocol, cache encryption, host whitelisting, SSL certificates validation—helped to protect sensitive data of 38,000 enterprises.
- Utilizing JDBC will help to save hundreds of thousand dollars yearly on vendor drivers.

Technology stack

Platform	Google Kubernetes Engine
Programming languages	C#, C++, Java, JavaScript, Lua
Frameworks and tools	.NET Framework 4.8, .NET Core 6.0, WPF, Docker, ODBC, JDBC, Java gRPC, Protocol Buffers, Databricks, NUnit, Protractor
Databases	MongoDB, PostgreSQL, Azure SQL Server, Apache Phoenix, BigQuery

