CASE STUDY

How TiloRes enabled a Consumer Credit Bureau to **Scale and Provide Real-time Data**

Find out how a German consumer credit bureau used TiloRes to:

- Assemble tens of millions of **entities** from hundreds of millions of records
- Provide risk data to eCommerce clients in near **real-time** (<150ms)
- **Scale** the amount of data they could handle without increasing costs
- Increase their entity **accuracy** by fine-tuning matching rules
- Optimise their **GDPR** processes

The Company

Regis24 is a German consumer credit bureau. The company was established in 2003 as a customer address research agency for law firms, as an alternative to directly querying the local government residents registration offices. Today, Regis24 is a fully-fledged consumer credit bureau, providing data and AI-based risk scoring solutions to companies to help them make credit risk and fraud decisions based on the richest possible data. The company's hundreds of customers range from law firms and banks, to eCommerce companies and online payment providers.

We spoke to Daniel Golletz, Head of IT at Regis24, to understand their data challenges. He gave us an insight into the complex data Regis24 works with and how TiloRes helped them achieve their goals.

The Big Data Challenge

As a consumer credit bureau, Regis24 deals with a large volume of data about individuals and the complexity of handling this data has always been a challenge. The most critical part of this challenge is the accuracy of the data that they supply to their customers and the speed with which they can deliver it.

Regis24's Head of IT, Daniel Golletz, explains:

> ***We have a number of different data suppliers. Some of that data is delivered in bulk and some of it arrives in a near real-time stream. The challenge is that we need to very quickly match that data to common identities so that customers have the full data picture of an individual. Then, we need to be able to search that complex, matched data. Technically, it is very challenging.***

The challenge increased as Regis shifted their business focus to e-Commerce and online payment clients, who demand real-time data. Regis24 experimented with various technologies, such as graph databases and Apache Spark. but no tools on the market could meet their needs for speed, scale, and cost control that the new customer segments demanded.

> ***Relational databases just don't work for this sort of data. The data is too complex and the databases get locked very easily. Graph databases are great if you want to know everything about a specific individual, but they simply don't work at this scale, and when you need to be able to search that linked data very quickly.***

Tilo

How TiloRes solved Regis24's data challenge

In TiloRes, Regis24 found a data infrastructure technology that could assemble their complex data entities (based on hundreds of millions of datasets!) and allow near-real time searching. As the solution is based on serverless technology, Regis24 could scale their operations at ease and without limit. If an ecommerce or payment customer suddenly has an increased demand for data, such as during an event like Black Friday, Regis24's TiloRes infrastructure is able to scale with them.

From a technical standpoint, Daniel was particularly impressed by the scaling:

> *The unlimited scaling is quite impressive. Sometimes we have imported a few tens of millions of datasets in one go using Tilo's serverless ETL tool, and TiloRes just handles it with no problems. The data is* ***ingested, deduplicated and assembled to entities and available for searching nearly instantly****.*

The matching of the data was easily configured in TiloRes based on rules developed by Regis24's data science team.

> *"Our data scientists have been working on data matching for years, so we were quite confident that our rules were working well. It was easy for us to recreate our previous matching rules in TiloRes. Nevertheless, while testing the software before importing all our data, we were able to fine-tune our rules to improve the matching rate."*

The "transitive hop" challenge

Daniel explained that Regis24, like most companies that process data for risk or fraud prevention, has especially complex data that must be searchable instantly.

> *Imagine you have a new entity A, that is connected to entity B, that is connected to entity C; Entity C has the interesting meta-data you want to be able to use in your risk or fraud AI algorithm. You need to be able to search with the new entity A, and be able to find the connected entity C as fast as entity B. This searching is called a "transitive hop" as you "hop" from one data point to another related one. This is where existing technologies really fall flat: the search time increases as these "transitive hops" increase.*

Tilo

TiloRes is able to solve this challenge, by always returning search results in <150ms, no matter how many transitive hops need to be traversed.

> *It's really a game changer for fraud and risk data analysis," says Daniel, "Thanks to TiloRes, we can run our own Identity Check and Payment Score models on much richer data, which leads to a better product. With TiloRes we can provide superior results for our customers.*

Conforming with data protection

As a European consumer credit bureau, complying with GDPR data protection laws is critical. Regis24's head of IT confirms, "Complying with GDPR is arguably the most important part of our business. We need to be extremely confident that the data we supply is accurate, auditable, and can be corrected or deleted if necessary."

A number of TiloRes's features were particularly important for Regis24 to provide their service with the full confidence that they complied with data protection laws. In particular, the **self-hosting and data provenance** features.

Self-Hosting

TiloRes is installed in Regis24's own account, meaning they still handle all their own data, which makes GDPR compliance simpler, since there is no external data controller or processor to consider.

"Normally, we love hosted services, but for core critical data infrastructure concerning sensitive data, it is much better for us to have the software running in our own cloud account."

Data Provenance

TiloRes is built for data provenance by design. This means that the origin of all data matched to entities is tracked. Auto-deletion rules mean that individual data sets can be deleted according to rules depending on their origin, so that data is never kept for longer than permitted.

"The data provenance control is really important for us. Previously we would have to regularly delete data en masse when required, but now TiloRes just takes care of this for us automatically. TiloRes will even notify our other internal databases, so that data can be deleted from there too."

API convenience for Regis24's customers

Thanks to TiloRes's GraphQL API, both Regis24's own **data scientists and its customers, can configure their own API queries** as they like.

"The GraphQL API is especially loved by the engineers who implement our products that are delivered via TiloRes. It means they can customise their queries as they want and can even generate data aggregates, for example. Another great benefit is that the API is automatically upgraded when we change our data schema, but our clients do not need to re-implement a new API. It saves them time and money."

Conclusion: Regis24 fit for the future thanks to TiloRes

In TiloRes, Regis24 has found a technology that has:

Super-charged their data infrastructure

Eliminated worry about scaling and capacity, which is handled automatically

Enabled them to sell superior products that service the high demands of eCommerce client

Want to learn how TiloRes can work for you?

Email hello@tilotech.io to arrange a Demo of TiloRes
www.tilotech.io

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