Exasol
The analytics database

Nuqleous

nuqleous RETAIL INTELLIGENCE

Business Intelligence acceleration underpins 50% annual business growth

Nuqleous experienced fast growth in recent years but faced challenges creating infrastructure that could scale at the speed of opportunity. Since partnering with Exasol, this is no longer an issue.

Challenge
Handling larger and more complex datasets for bigger clients

Solution
Exasol enables scalability without compromising on speed or performance

Benefits
Refined analytics for empowered retail decision making

> *"I love working with Exasol – it feels like an agile startup where the team is very hands-on and has a deep understanding of the technology needs of companies that have products like ours."*
>
> **Paul Springmann, Founder and President at Nuqleous**

<5 seconds
Real-time query response

85%
Reduction in data load times

20%
Greater ETL compression

Operating out of Bentonville, Arkansas, Nuqleous began as a retail consulting and services organization. In 2018, Nuqleous transformed into a retail analytics Software as a Service (SaaS) company delivering digital products to the world's most recognizable brands.

By leveraging decades of retail experience and best practices, Nuqleous continues to develop technology solutions that help retail and consumer product companies streamline their business practices so they can operate with enhanced agility and increased efficiency.

"Our mantra is that we want to help large companies move with agility and give smaller companies the capabilities of the larger players," says Founder and President Paul Springmann.

One of the technology solutions Nuqleous has developed is Spotlight, a retail data collection and analytics platform. Spotlight is an automation tool that collects extensive data and delivers actionable insights and rich content for its users to analyze and help drive value into their business.

But providing in-depth analytics to a growing number of users put an enormous strain on the company's SQL-based data warehouse.
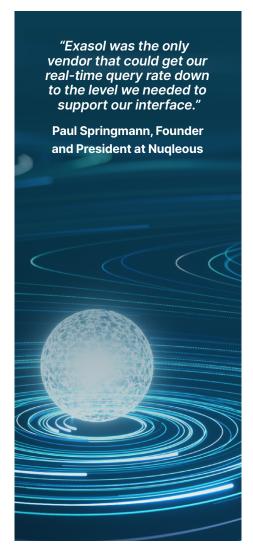
The challenge

Since 2018, the company has seen 50% growth year on year. Nuqleous was operating a SQL server-based warehouse; however, to get the performance it needed in its analytics layer, the company built huge pre-calculated OLAP cubes for customers.

But as Nuqleous started attracting larger customers that needed more resources and memory requirements, it took too much time to build the OLAP cubes.

Growth in the number and size of customers also meant larger and more complex datasets, typically of around 1-2TB each. With these large, complex datasets, Nuqleous was running into the limits of what it could host on its SQL server. The company needed to keep data load and click times within agreed SLAs to continue providing a high-quality analytics service.

After conducting Proof of Concepts (PoCs) with several vendors, Nuqleous began working on implementing a solution with Exasol that went live in August 2020.

"Exasol was the only vendor that could get our real-time query rate down to the level we needed to support our interface."

Paul Springmann, Founder and President at Nuqleous

The solution

Exasol allows Nuqleous to continue using the same data warehouse structure but now with some important differences. By converting the ETL pipeline to Python scripts running directly against the Exasol database, the team leverages the power of the Exasol platform to its maximum. This approach has cut load times by 85%, providing more flexibility - especially when data or files are received late in the day.

The flexibility of Exasol allows Nuqleous to adjust and simplify its data model so that many aggregations are performed on the fly by the in-memory database in a fraction of the time it used to take for Nuqleous to build cubes.

With Spotlight pulling between 10 -15 different data sources for each customer with an average of 25 users each, the ability to scale without compromising performance is key to sustaining the company's growth rate.

The benefits

Refined analytics for empowered retail decision making

• Improved real-time query response

Accurately querying any set of data without impacting performance delivers improved experiences for the company's growing list of customers. "We do still have some complex queries," says Paul, "but the difference now is that we have the confidence we can execute them effectively and provide an answer without throwing more resources at it."

• Cost-effective and evolving

By not needing to maintain or tune the database, Nuqleous can dedicate more resources to building its applications, retooling its data model, and improving its products' user interface and capabilities. And, Exasol's monthly pricing structure allows Paul to accurately control his costs and see exactly how the company can continue to scale. "We are currently involved in the PoC for the next Exasol upgrade," says Paul. "Separating compute and storage is a big opportunity for us as it will allow us to offer customers direct access to a data schema."

• Not a typical relationship

From the start, the Nuqleous team saw that the Exasol approach was a little different from others in the industry. "Most of the time, when we are trying to buy software, it is incredibly sales-centric," says Paul. "With Exasol, it was refreshing to focus on trying to fix the actual problem we were having. The team really worked hard to make sure Exasol was a viable option for us and have continued to support us." Nuqleous is looking to integrate machine learning into its products like Spotlight to add even more value for its customers. This integration means more data, more customers, and a continued partnership with Exasol.

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