

Enterprise Vulnerability Management Solution

Our team helped the client develop a cybersecurity platform designed to find and showcase detailed analytics on exposures and vulnerabilities. The system provides clients with fast, accurate insights into their security posture, enabling proactive risk management and improved cyber resilience.

*Certain details are covered by an NDA and cannot be disclosed.



INDUSTRY	TEAM SIZE	TYPE	TECHNOLOGIES	SERVICES:
Cybersecurity	10+ specialists	Data Integration, Data Analytics, Automated Testing, BI Dashboard Development	Node.js, NestJS, React (TypeScript), SQL, MongoDB, Microfrontend, Microservices, Kafka, Redis, Jenkins	Full-cycle Development, Database Migration, Backend Refactoring, Query Optimization, Unit Test Coverage
REGION				
EMEA				

Challenge

The client required a high-performance analytics application capable of handling millions of records and delivering near real-time query results

Key challenges:

- Designing queries optimized for extremely large data sets.
- Ensuring application performance at scale without compromising accuracy.
- Supporting the rapid development of new features while maintaining system stability.

Solution & functionality

To address these challenges, the development team implemented a comprehensive **refactoring and optimization strategy**:



Moved data from **MongoDB to PostgreSQL** to achieve faster query performance



Optimized service architecture using **microservices** and **microfrontend** principles



Achieved 100% **unit test coverage**, ensuring reliability and reducing regression risks



Introduced **Kafka** for asynchronous processing and **Redis** for caching

The solution was tailored to the client's needs by prioritizing **query speed, data accuracy, and flexibility** for feature expansion.

Our team migrated the system from MongoDB to SQL, optimized queries, and refactored the backend using microservices. With 100% unit test coverage, the platform now provides faster insights, continuous validation of security controls, and integration with vulnerability intelligence sources.



Tech stack

Technologies used

Node.js, NestJS, React (TypeScript), SQL, MongoDB, Microfrontend, Microservices, Kafka, Redis, CI/CD pipelines (Jenkins)

Cross-team communication

Slack and Microsoft Teams

Results and business value

The improvements delivered tangible business outcomes:

01

Queries became multiple times faster, dramatically improving user experience.

02

Strong unit test coverage allowed safe and quick rollout of new functionality.

03

Optimized database structure, reduced infrastructure overhead, and maintenance costs.

04

The client can now access vulnerability analytics in real-time, strengthening their ability to proactively mitigate risks.

Do you have a similar project need?