Case Study

KERBEROS
Compliance · Management · Systeme

KERBEROS Compliance Management Systems

Money Laundering Prevention with Neo4j

INDUSTRY
Legal Technology

USE CASE
Risk Management / Anti-Money Laundering

CHALLENGE
– High compliance requirements and documentation requirements
– Opaque networks for multi-tier companies (e.g. franchise systems)

SOLUTION
– Graph-based Compliance Management System
– Automated case management for the detection of money laundering
– Audit-proof compliance through real-time documentation

OUTCOMES
– Quick and easy processing of suspected cases
– Easy adaptation to regulatory changes

The system provider KERBEROS developed a compliance management system for sports betting companies and real estate agencies in order to react more quickly to suspected money laundering. Using the Neo4j graph database and application platform Structr, complex organizational structures are viewed in detail and complex legal obligations stay controlled and in compliance.

The Company

KERBEROS is a leading regulatory tech company for the prevention of money laundering in the non-financial sector (so-called "Reg-Tech"). The company supports associations and companies in complying with all the requirements of the Money Laundering Act (AMLA): from analysis and advice to implementation. As an extended arm, KERBEROS implements these legal obligations for companies in accordance with the highest compliance standards.

The Challenge

The German Federal Ministry of Finance estimates that up to 100 billion euros are illegally generated in Germany every year through money laundering. Criminals in particular use so-called "risk industries," such as the real estate sector or gambling industry. Operators are subject to strict documentation and auditing requirements, and they must demonstrate transparency in how security and detection systems are implemented in their organizations. Affected market participants turned to compliance expert KERBEROS for an IT solution to check and document suspected cases of money laundering and, if necessary, report them to the authorities. Hence we started looking at a purpose-fit database that could help us achieve this."

The Strategy

The enormous number of suspected cases requires a high degree of automation, so the solution should have an interface to the FIU (German Central Financial Transaction Investigation Unit) reporting office and be flexibly adaptable – e.g. in case of changes in the law or new market participants. There was no standard solution of this kind on the market.

Together with Structr, KERBEROS developed a completely new compliance management application.

"Risk management is about process clarity, speed and accuracy," explains Christian Tsambikakis, Managing Director of KERBEROS. "Three aspects were therefore decisive for us when choosing the right database: a fast query, a flexibly adaptable data model without performance limitations and the simple presentation of highly complex interrelationships."

Case Study

In order to shed light on the environment of a suspicious person or company, for example, all participating companies must be visible from the parent company to the individual, small outlets – including owners, shareholders and locations. The data model can be adapted flexibly without any performance restrictions. Documentation is also a central requirement of the solution. Wherever there is a relationship between company and person, this is documented (e.g. ID document, rental agreement).

As a data model, this relationship network is clearly a graph and predestined for the use of a graph database like Neo4j. In the graph, important relationships can be specifically queried: Who exactly is behind which company? And who is the actual beneficiary of a business relationship?

The Solution

Tsambikakis is also convinced of this: "With Neo4j as the database, and Structr as the development and application platform, we have found the perfect technology mix to store and retrieve our graph data in an ideal form. With each additional development module and each new dataset, the 'power' of this tandem became ever clearer."

Currently, the solution maps approximately 150,000 people, companies and documents, as well as approximately 750,000 relationships between these entities. If suspicious transactions are detected, this "case" is analyzed together with all relevant information and documents in the graph. Instead of taking a superficial look at relationships, legal experts can also uncover relationships only apparent at the second or third level.

The newly developed compliance management system allows documentation at the touch of a button, e.g. during decision-making ("business deal with person X," "dissolve contract with Y"). Each snapshot of the graph may be saved as a PDF file and securely archived externally via an interface – traceable documentation of information available at a certain point in time.

The Result

KERBEROS benefits in particular from the initial decision for a flexible model that maps large heterogeneous amounts of data. The graph-based system accesses different data sources via interfaces. Legal experts can see whether all requirements have been met in a color-coded status report and derive if any further action is necessary. In case management, a suspicion can be substantiated, resulting in immediate reporting to the authorities.

In addition to its flexibility and scalability, the clear visualization of these complex relationship networks is a real advantage. Legislative changes can be implemented in the shortest possible time. At the same time, lawyers can be closely involved in the development processes, e.g. when it comes to implementing compliance checking rules in software code.

"With Structr as the development and application platform and Neo4j as the database, we have found the perfect technology to store and retrieve our graph data in an ideal form. With each further development component and each new data set the "power" of this tandem became more and more clear."

– Christian Tsambikakis,
Managing Director
of KERBEROS

Neo4j is the leader in graph database technology. As the world's most widely deployed graph database, we help global brands – including Comcast, NASA, UBS, and Volvo Cars – to reveal and predict how people, processes and systems are interrelated.

Using this relationships-first approach, applications built with Neo4j tackle connected data challenges such as analytics and artificial intelligence, fraud detection, real-time recommendations, and knowledge graphs. Find out more at neo4j.com.

Questions about Neo4j?

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