Using a knowledge graph, a commercial bank is giving analysts full insight into 15 million data points to resolve risk incidents faster

The Challenge

A global bank with nearly $900 billion in total assets must prepare for a wide variety of risk events, running from phishing attacks to a laptop left on a subway car. When these events occur, operational risk analysts need to sift through 25,000 controls – measures instituted to prevent risk events – to identify what control should have prevented the risk and how to manage these risks in the future. Historically, relevant data was stored across 15 separate applications, forcing analysts to run ad-hoc reports in Excel. This was not only time-consuming but also made it impossible for analysts to know if they had captured all data related to a particular incident. When analysts made decisions with incomplete information, they left the bank exposed to future risk events and possible financial loss.

The Solution

The bank implemented a broad, reusable semantic layer to identify relationships across the various applications involved in risk management, including incident reporting, control registries and IT asset management systems. By leveraging virtualization within Stardog, the bank tapped into existing data lakes without disrupting legacy processes. Now, analysts can can traverse the linked information in the knowledge graph to uncover dependencies within the data and identify root causes of particular incidents. Furthermore, using machine learning and a classification model, the system lists and ranks likely controls to be involved in a risk incident.

Stardog's Enterprise Knowledge Graph platform delivers:

- Answers to complex "what-if" questions on theoretical risk
- A Digital Twin of your physical network, allowing you to easily evaluate dependencies between data sources
- A lightweight, cost-effective platform that sits atop existing IT infrastructure, without duplicating data

The Results

Today, the bank is able to more confidently execute its corporate strategy thanks to a robust risk management solution. With a knowledge graph, analysts are able to more quickly identify and resolve the root cause of an incident. With a better understanding of risk events, the bank can measure the cost of a particular incident and account for it in strategic planning. Most importantly, the bank is able to minimize the number of risk events that jeopardize customer data and financial resources and proactively report these risks to federal regulators.

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