Cyber Crime – FRAUD

Improving Fraud Detection with Trovares Deep Graph Analytics & Insights

Trovares
Seriously Scalable

Executive Summary

Bad actors are creative, inventive, and nefarious people, often supported by governments looking to gain an advantage, relentless in their pursuit of fraudulent activity – every minute of every day. Loss of money, identity, your security, and intellectual property are but a few dimensions of Fraud. Fraud, and even more significantly, cyber events, can steal vast sums from Government programs, breach Government networks, threaten national security and lead to a loss of international and economic reputation. Cyber criminals threaten our way of life. Fraud, and Cyber-attacks of enormous scale threaten every industry and organization. No person and no industry is immune to risk, and Financial Fraud is a multi-trillion-dollar problem. With more online transactions than ever before, ". . . suspected global digital fraud attempts[1] in financial services increased 149%. In the U.S. when comparing Q4 2020 to Q1 2021." (TransUnion August 11, 2021)

Problem

Current solutions fall short in protecting your organizations from Fraud. Current tools are typically designed to protect against credit card fraud during an online transaction and work best when they know where to look in a graph. Unfortunately, more sophisticated fraud operations require searching for behaviors where you don't know what you are looking for at first, but, after probing the data, filtering away noise, you will recognize a potentially fraudulent pattern when you find it.

Today's cybersecurity managers have limited data visibility using current tools like Splunk, constrained by the cost of "joins" when asking analytical queries of network and log data. Trovares is designed to scale up to provide the most optimal and efficient way to ask questions of connected data, analytical queries that will traverse entire graphs as they narrow the search space across billions of records.

Solution

Trovares xGT brings greater visibility to an Enterprise's data by leveraging their existing investment in database systems of record.

Trovares xGT is a new technology with innovative methods to strengthen your current solutions. By applying our patented Graph Analytics & Insight Technology at speeds that come from Trovares' HPC heritage, the Trovares graph search tool extends the range of your existing tools, allowing more complex analytical queries to be run.

With Trovares xGT, a Data Scientist can react more quickly to sophisticated threats with superior performance, deep analytics, and profound insights that only Graph can provide. Data Scientists can deploy their applications quickly using the Developer Edition from their laptop, but deployable to the largest memory servers available on premises or in the cloud.

SOLUTION

Trovares xGT

Graph Insight Engine with the Fastest Path to Insights and Protection against Cyber Intrusions – With Deep Analysis & Insights that only Trovares xGT can provide at Enterprise Scale

With Trovares patented xGT Graph technology, data can be unified from all sources throughout the organization at speeds greatly exceeding that of current market options. We apply Graph Properties to power Data Insights and Analytics with the incremental value that only "Graph" can provide. All without the need to replace any of your existing IT, Database, and Data investments.

Trovares xGT supports Planetary Scale Graph requirements with our patented, "Seriously Scalable" architecture.

xGT For Fraud

- Snowshoeing
- Phishing
- Credit Card Fraud
- Identify Theft
- Money Laundering
- Ransomware
- Insurance Fraud

xGT For Cyber Crime

- Data Breach
- Lateral Movement
- Compromised Devices
- Advanced Malware
- Rogue Users
- Insider Threat
- Dark Web
- Blockchain Hacking
- Network Disruption

Fraud Use Case

Tax accountants submit tax returns to State and Federal Governments on behalf of their clients. Often, a requested tax refund may be paid without further inspection if automated systems flag no suspicions about the return. One type of Fraud can occur when multiple tax refunds are sent to the same bank account. Auditors may want to ask the question: Does this behavior exist in our data? There is often time to stop such payments if this fraudulent behavior is identified quickly enough. With Trovares xGT, an auditor can ask this question using the Cypher query language to express a query like:

- Find all occurrences of a preparer using the same bank account for refunds as the one used for their own return.

Answers can be grouped by preparer, by city, or by state and are displayed in decreasing order by the sum of client refund amounts quickly identifying the most egregious actors.

Summary: Cyber and Fraud

Trovares xGT was developed and purpose built for the Department of Defense. It is ideally suited for applications with large datasets and time constraints such as cyber security and fraud detection. In cyber, 20 terabytes of log data per day is commonplace for many companies. That is why daily scans for threats are becoming more challenging.

Fraud detection, by comparison, requires pattern matching on very large datasets of transaction data. The fraud risk grows with every hour that data is not examined for indicators of fraud. xGT lets companies search all their log transactions data daily, and with the deepest insights that only Graph and Trovares can provide.

GET STARTED

Try our xGT Enterprise version with our free download.
https://github.com/trovares/pyxgt

Contact us for a demonstration on how cyber, fraud and other applications can benefit from Trovares xGT performance
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About Trovares

Trovares is a leader in enterprise scale graph analytics for mission critical applications. Our xGT product uses extreme parallelism, optimization, and SMP servers to return query results many times faster than conventional query engines and is considered a leader in high-performance analytics. Graph provides unique insight capabilities, and why its success.

The Gartner Group Stated: "By 2025, graph technologies will be used in 80% of data and analytics innovations, up from 10% in 2021, facilitating rapid decision making across the enterprise."