software AG

Solution Series: Banking

REAL-TIME FRAUD DETECTION

Protecting assets with real-time data monitoring

Your problem: You have less than one second to flag potential fraud and stop the transaction. When only 0.3 percent of those one-second windows are missed, financial institutions like Visa® suffer losses of more than $10 million yearly. Suddenly, meeting 99.7 percent of Service Level Agreements (SLAs) is just not good enough.

Software AG solution: In real-time fraud monitoring and detection using the Apama Streaming Analytics Platform and in-memory data storage. By keeping the "black list" in-memory—instead of leaving the system to query the database for each transaction—99.995 percent of those one-second SLAs can be met. Reducing the missed windows from 0.3 percent to 0.005 percent could translate to reducing the losses from more than $10 million to under $200,000.

Problem details

Until recently, fraud detection was a backward-looking process, with teams of investigators poring over manual reports after a suspected breach occurred. Then automated systems became available to identify fraud more immediately, based on analytics that identified unusual patterns consistent with loan fraud, wire transfer discrepancies or money laundering. At its simplest, the solution needs to identify suspicious behavior based on metrics such as location, transaction size and transaction frequency—and stop the transaction before the "customer" has left the store with the merchandise.

Now that most financial institutions rely on some sort of automated application to detect fraud, today's challenge is detecting fraud across multiple channels from the millions of customer transactions daily. Many systems simply can't handle the high-speed big data generated by today's financial transactions in real-time. If every incoming transaction requires a simple database query against the black list, it's not long before the entire application is running too slowly to meet the less-than-one-second SLA. If a more complicated set of rules is required to identify unusual behavior, even less fraud is likely to be uncovered in time to act.

If you're responsible for fraud prevention, you're expected to provide the organization the framework to prevent, identify and respond to all fraud-related risks. At its core, your job is to protect company profits from direct fraud losses, indirect losses from penalties and lost revenue associated with detection SLAs that are missed, and the costs of preventing fraud and misconduct.

What's the Software AG difference?

Meeting a one-second SLA for detecting fraud requires state-of-the-art technology. At the heart of our solution is the Apama Streaming Analytics Platform, which provides:

- Out-of-the-box alert scenarios
- Real-time and batch data integration
- High-performance scenario testing tools
- Fully audited workflow and case management
- Pre-defined reports for investigations and operational performance
- Rapid roll out

Software AG's solution

Minimize losses from fraud by reducing time-to-detection

- Real-time monitoring to detect and stop fraud across various banking channels
- Real-time transactional data benchmarked against customer history profiles
- Real-time access to relevant data stored in-memory, speeding response times

Adapt your fraud monitoring in response to new fraud techniques

- Handle massive amounts of data in motion from various data sources
- Balance workloads to maximize asset recovery
- Provide complete auditing transparency and traceability

Identify new "unusual behaviors" through real-time analytics of transactional data, customer behavior and other historical data

- Correlate and identify patterns
- Add new fraud rules "on the fly"
- Update and refine existing fraud rules in real time

Without a real-time automated system for monitoring millions of transactions, you're also the person who gets to explain why 0.3 percent of those one-second windows were missed.

If you're responsible for risk and compliance, you have to strike a balance between the company's required internal controls and governance and fraud prevention's ability to detect problems immediately. Not only company assets but the company's reputation—with the public and with regulators—is on the line. You need real-time visibility across all of your firm's systems to reduce exposure to corporate liability, government sanctions or litigation resulting from violating laws or market expectations.

If you're the CFO, people look to you to manage and report on the overall financial picture. When your institution's fraud prevention measures aren't sufficient, you're left with bad news to report on past performance, unnecessary losses that depress your current stock price, and declining returns on investments and assets. Plus, investments in fraud detection are not trivial. You need a fully integrated, high-level dashboard to track how the organization is managing all aspects of its fraud detection efforts.

The common denominator for each role? Being able to combine current, real-time metrics from big data sources with historical data to identify fraud patterns fast enough to stop it. It's having the full context—typical behaviors, the black list of bad credit card numbers, real-time analytics that reveal new fraud patterns—that's key to successfully combatting fraud.

Critical aspects of a real-time fraud detection solution

1. Minimize losses from fraud by reducing time-to-detection
2. Adapt your fraud monitoring in response to new fraud techniques
3. Identify new "unusual behaviors" through real-time analytics of transactional data, customer behavior and other historical data

ABOUT SOFTWARE AG

Software AG offers the world's first Digital Business Platform. Recognized as a leader by the industry's top analyst firms, Software AG helps you combine existing systems on premises and in the cloud into a single platform to optimize your business and delight your customers. With Software AG, you can rapidly build and deploy digital business applications to exploit real-time market opportunities. Get maximum value from big data, make better decisions with streaming analytics, achieve more with the Internet of Things, and respond faster to shifting regulations and threats with intelligent governance, risk and compliance. The world's top brands trust Software AG to help them rapidly innovate, differentiate and win in the digital world. Learn more at www.SoftwareAG.com.

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