SAS® Fraud Management

What does SAS® Fraud Management do?

SAS Fraud Management is an enterprise fraud detection solution that monitors multiple channels and lines of business in a multitenant capacity on a single platform – including payments (purchases, fund transfers in real time) and events (nonmonetary, account updates and authentication). Using optimized data analytics and machine learning, merchants, payment processors and financial institutions can prevent fraud through real-time responses, as well as quickly triage the highest priority alerts, reducing negative impacts on customers.

Why is SAS® Fraud Management important?

It enables financial institutions and merchants to monitor all payment transactions in real time, maximize insights from external data, and understand fraudulent behavior patterns to make quick decisions on potential fraud to reduce risk to their organization and customers.

For whom is SAS® Fraud Management designed?

The solution is designed for those managing and processing transactions that may be affected by fraudulent behavior and customer service, including the head of fraud, operations or payments in financial services (processors, acquirers, banks, networks such as Visa or Mastercard); merchants; or telecommunications providers.

Substantial revenue is lost to fraud each year, not to mention the impact on reputational risk. But just as important, poor decisions caused by false positives result in unnecessary friction and severely affect customer satisfaction.

As a real-time enterprisewide fraud detection system, SAS Fraud Management incorporates analytics and machine learning based on multiple data sources with a variety of detection requirements. This lets you realize the much sought after – but rarely achieved – goal of preventing and detecting risk across the entire spectrum of fraudulent techniques that today's criminals employ. In addition to significantly reducing potential losses from fraud and improving the customer experience, the SAS solution can also lower the operational costs of fighting fraud. It does this through a flexible, enterprisewide platform that responds faster to new threats as they arise, allowing businesses to deploy new fraud prevention strategies faster.

Benefits

- **Make faster and better informed, risk-based decisions**. As a 100 percent, real-time, enterprisewide solution, SAS Fraud Management lowers the operational costs of fighting fraud by responding faster to new threats as they arise. Payments, transactions and/or events can be scored and decisioned on demand with millisecond response time even at the highest of TPS.

- **Increase operational efficiency**. Between call centers and alert management, the total cost of identifying a fraudulent transaction is high. By using SAS Fraud Management's self-adapting technology and data hub, you can prioritize alerts and lower false positives, saving your organization time and money.

- **Reduce revenue loss**. Find fraud early through embedded industry-leading machine learning capabilities that allow you to adapt to changes in customer transactions and fraudulent behavior. Our approach significantly improves the industry KPIs for value and case detection rates by scoring 100 percent of transactions in real time – minimizing your losses.

- **Achieve high levels of customer satisfaction**. False positives resulting in declined transactions can severely affect customer satisfaction. With data analytics and machine learning from SAS, you can quickly identify in real time the highest priority alerts and most critical risks that justify review to reduce the potential negative impacts on customers.

Capabilities

100% real-time scoring and decisioning

SAS delivers in-memory processing to achieve the banking industry's highest throughput and lowest latency of response, handling any data in real time. Using SAS, you can ensure business rules are best prepared to quickly issue decisions back to your systems to prevent loss before it happens. Powerful machine learning modeling controls allow for 100 percent real-time analytics execution and customer-specific rules to provide a response time in the millisecond range, as well as near-real-time and batch processing.

Enterprise solution on a single platform

With SAS you can share a single installation of the solution among independent departments within an organization – known as a multitenant configur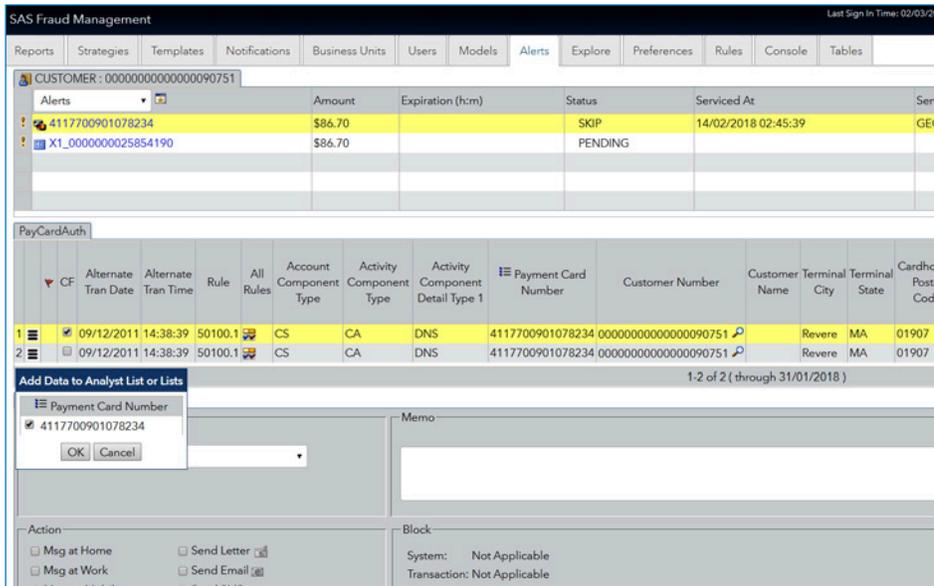ation. Our end-to-end detection and prevention solution can support multiple business lines, channels and payment types. With this approach, you can reduce implementation and integration times, and you'll have support across the organization with scalability to adapt as infrastructure and business needs change.
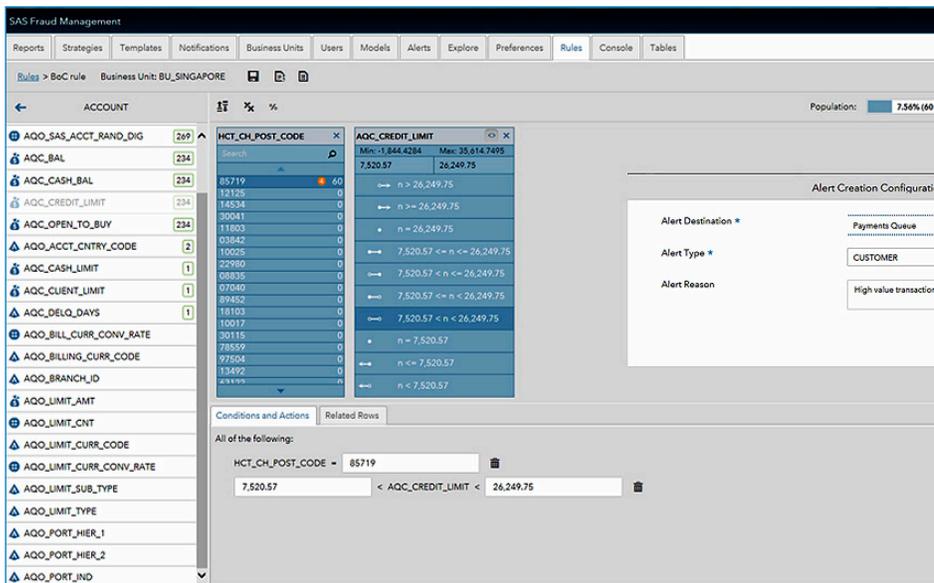
SAS® Business Orchestration Services

SAS Business Orchestration Services is intelligent middleware designed to support real-time/millisecond request and response event/message processing. It's integrated with the SAS Fraud Management solution and includes options to transform and enrich messages and transactions. Able to send any message type, in any format, from new and existing systems, it offers industry recognized safeguarding concepts such as Store and Forward as well as Stand-In Processing. This component acts as middleware to facilitate interactions between systems and processes while maintaining flexibility.

Simplified data management

Integrate all your data – whether internal, external, third party or from multiple sources – with one solution that's flexible enough to handle it. SAS integrates an expanding domain of new data types and sources seamlessly, from in-house to data in the cloud. Additionally, several external messaging interfaces allow streamlined business process management (BPM) for fulfillment updates, as well as communications systems, enterprise case management (ECM) and reporting systems.

Send and receive data in any message type, in any format, with minimum customization and modification to existing systems.

- SAS lets you transform and enrich payments, events, messages, transactions and nonmonetary broker responses to and from customer systems, manage SLAs and store and forward stand-in responses.

- External integration capabilities include virtual analyst, ECM/BPM and in-stream bidirectional alert data requests and responses.

Alert Servicing: Provides the ability to insert risk items into a hot list.

Rule Authoring: Guided rules to click and drag rule definition with fraud risk indicators and instant simulation.

Integrate device data for a full analytical approach

SAS partners with external data providers to provide SAS Fraud Management customers a full analytical approach to solving payment and identity fraud. These data providers collect and maintain device data for consortium usage for their direct customers and resellers on devices used for authentication, payment and applications in industries such as financial services, retail, telecommunications and payment processing. The orchestration capabilities of SAS Fraud Management then integrate contextual data into computational and decision capabilities.

The integration of these data sources into fraud monitoring is an essential component to addressing application and identity fraud. Our end-to-end process uses this information to prevent and detect fraud faster within an organization – saving you time and money.

Advanced analytics and machine learning

The solution uses the power of SAS advanced analytics to generate real-time responses, allowing decisions that minimize risk. Embedded robust profiling and machine learning capabilities allow you to adapt to changes in customer transactions and fraudulent behavior. Our powerful real-time decisioning solution provides advanced analytics modeling controls, a rule authoring application interface, and an alert triage workstation applicable to any real-time transaction/event decisioning use case.

Patented signature-based analysis technology can be used to accurately identify suspicious behavior. It captures customer behavior patterns from every source and evaluates that contextual information every time a transaction is processed, helping you understand how customers transact.

Key Features

100% real-time scoring and decisioning
- Handle any data in real time.
- Process transactions through a model and business rules to return decisions.
- Banking industry's highest throughput and lowest latency; maximize throughput (over 10,000 TPS) and minimize response time (less than 50 ms).
- Deploy custom-built machine learning models and full champion-challenger capability to ease transitions between models.
- Powerful modeling harness to deploy your own custom-built machine learning models.
- Enterprise solution on a single SAS platform.
- Logical or physical multitenant capability (a single installation of the solution among independent departments within an organization).

Security
- SSL/TLS.
- Industry-standard encryption algorithms (AES, RC2 using 128-bit keys, RC4, DES, Triple DES using 168-bit keys).
- Role-based access control.
- Audit information/trail configurable for content.
- Detail level and format.
- Integration with organization's authentication services (LDAP, AD, etc.).
- Single sign-on (SSO) integration capabilities.
- Integrate with tokenization providers for proper security of sensitive data.

System administration and maintenance
- Monitoring consoles, dashboards and interfaces.
- Extensive logging and debugging for components.
- System alerts.
- Utilities to apply patches and hot fixes.

Simplified data management
- Smart middleware layer to scale and throttle depending on throughput.
- Single interface into solution from several client source systems or third-party data providers.
- Transforms and enriches a customer transaction prior to sending it to the solution.
- Receives responses from the solution and sends them back to your system.
- Manages the SLAs of the transactions and stand-in responses.
- Extendable message specification allows you to map any data into the system.
- Support for all message web services protocols: Advanced Messaging Queuing Protocol (AQMP), sockets, file-based, JMS, JSON, REST APIs.
- Manager workbench: manage user access, multiple tenants and business units.
- Separation of data, rules and alerts control per operational requirements.

Alert management

From a single screen, handle alert resolution, manage payment and risk decisions, perform hot listing and blocking, and conduct downstream fulfillment actions. Users can search, create, investigate and triage alerts; add memo notes, blocks and other actions; and apply transaction-level fraud markers.

Key Features (continued)

Industry-leading advanced analytics and embedded machine learning
- Dynamic customer segmentation provides peer group analysis to support confidence of risk identification.
- Patented signature-based analytics uses learning neural network models to detect risk exposure and fraud with less customer friction.
- Self-learning models adapt to changing patterns in behavior.
- Patented multientity signatures.

Alert management
- Rules authoring, estimation, simulation and life cycle management.
- Alert triage and fulfillment interface provides for analyst effectiveness and productivity.

Alert Disposition and Fulfillment: Resolve alerts and apply blocks.