

INFLECTION

Inflection Integrates Tokenization
to Protect Customer Data

Inflection

As ecommerce, social connections, privacy, and data security become the focal points of our online lives, B2B and B2C companies are creating commerce platforms to manage the millions of daily people-to-people connections and their associated payment transactions.

Among the companies tackling this multifaceted business problem is Silicon Valley-based Inflection. The eight-year-old company's identity-protection and records-access websites are used by both businesses and consumers to research, protect, and maintain personally identifiable information.

Customers subscribe to Inflection services and purchase its products online using payment cards for single purchases or to set up recurring billing. With trust at the heart of its mission, Inflection is keenly aware of its obligation to protect its customers' information.

"Respect for user preferences and privacy is core to what we do," said Matt Muller, who leads Inflection's 20-person Trust team. "Our commitment to protecting our customers' identities requires that we make sure the information they entrust to us stays secure."

As the rate of attacks on even the most sophisticated organizations increases, removing all payment and personal data is a key way to ensure that a successful data breach results in the data thieves getting nothing of value. On top of that, all ecommerce sites that accept payment card data must conform to PCI compliance. Keeping IT and financial systems in PCI compliance is complex, very costly in terms of manpower, and unfortunately, is no guarantee against a data breach.



Tokenization Reduces PCI Costs, Improves Security

Early in 2015, Inflection set out to ratchet up the security of its online payment processing and reduce the scope and costs of its PCI compliance. An interdepartmental team from Finance, Trust, and Engineering began the search for a tokenization platform that could readily integrate with the company's innovative STORM platform, which provides a secure foundation for the company's identity protection and records access services.

"When we started looking at technologies to protect our customers' payment and personal information, tokenization was at the top of the list for its ability to completely remove cardholder data from our systems," Muller said.

Once all cardholder data is tokenized and stored in secure cloud data vaults, that data would not be exposed even if a breach of Inflection's systems occurred. It also vastly reduces the cost and effort of PCI compliance.

Jeremy Wood, VP of Finance at Inflection, said that the company's PCI challenge was "to find a cloud security platform that could take over the role of integrator by working with our existing payment processing, fraud detection, and card refresh vendors while removing all cardholder data from the Inflection systems."

While payment processors and other vendors offer rudimentary tokenization, keeping all the payment card vendors synchronized both in real-time and in batch processing modes requires a flexible tokenization partner with the willingness and capability to adapt to an organization's processes. And while most payment processors only tokenize payment data related to their cards and banks, Inflection needed a tokenization vendor that was payment-processor agnostic. The combined requirements of flexibility, open integration with service providers, and the ability to support any payment processor led the Inflection team to choose the TokenEx Cloud Security Platform.

"With every vendor other than TokenEx, we had to basically hand them the keys to our ability to integrate with existing partners, restricting the way we work and limiting our choice of payment vendors," said Nachi Sendowski, Chief Architect at Inflection. "We had to take their whole package and forfeit the way we do integration. The willingness of TokenEx to be the integrator of our vendors is unique."

"The TokenEx customer references we talked to were off the charts with satisfaction on service and support," Woods said. "It was amazing. The other aspect that convinced us to go with TokenEx was their ability to tokenize personally identifiable information. TokenEx was the only provider we looked at that can tokenize all types of data."

-JEREMY WOOD / INFLECTION VP OF FINANCE

Weaving a Web of Integration with TokenEx

Once the decision was made to use the TokenEx Cloud Security Platform, integration began in February with an Inflection team of three engineers, two quality-assurance members, and a project manager. The first step was to tokenize the existing primary account numbers (PANs) stored in Inflection systems and store them in the TokenEx cloud data vaults. This one-time batch process replaced all PANs with tokens that are only useful for transactions between Token-Ex and Inflection.

Next, the TokenEx Web Services API was integrated with the STORM platform.

"We integrated TokenEx SOAP Web APIs directly into our payment streams," Lead Platform Engineer Avanti Ketkar said. "Using TokenEx client-side encryption, the customer PAN is encrypted immediately at the point of payment. The result is passed to TokenEx to tokenize and vault. Only TokenEx has the private key to decrypt the PAN, and the actual PAN is never stored in our systems, even in memory."

This one step reduces the scope of PCI compliance to a minimal number of controls. Since all of Inflection's websites and products are built on STORM, the integration with TokenEx was effective immediately across the platform.

Fraud detection and prevention is a critical step in all payment processing at Inflection. TokenEx natively incorporates Inflection's existing fraud-prevention vendors into its Web Services API, so for each payment, Inflection is able to have the transaction analyzed in real-time for signs of fraud. Once again, no PANs are transmitted or received, minimizing any chance of data theft.

Inflection also integrates with third-party chargeback vendors to ensure that existing subscription payments are valid.

"With TokenEx acting as the central point of integration, we can continue to operate our business as usual, sending batch files of tokens for the cards we want to refresh or help prevent chargebacks, and TokenEx sends the batch files of payment data to the vendors," Ketkar said. "We get the same responses back that we are used to, but we never touch the actual PAN data. The ability of TokenEx to be the middleman with all the vendors we need to work with is a huge plus."

Testing of the complete payment-processing cycle began with the existing payment stream operating in parallel.

"We turned on the TokenEx integration on May 6 to test for one day," Ketkar said. "We had one technical glitch that caused some card brands to be rejected. TokenEx fixed the issue over the weekend and pushed it to production by Monday morning. One of the great things about this implementation is that TokenEx has phenomenal tech support. Even during the evaluation process, they were answering questions quickly and making changes to support the way we work."

"With other vendors, a fix can take a month just to push to a sandbox environment, never mind production," Muller said. "It's refreshing when a vendor treats your processes as critically as you do. And even though this seems like a standard implementation, it was surprising to us to see how few tokenization vendors

have the flexibility of TokenEx. In fact, there were no other vendors who could actually be the complete integrator and readily work with all our third-party services. The customizability of TokenEx is one of its greatest strengths."

Once the initial test was completed and the technical glitch quickly resolved, the TokenEx payment stream was turned back on. With all the third-party vendor integrations finished by the end of May, the existing processing stream was switched off entirely. All payment processing now flows through TokenEx. No cardholder data is stored or transmitted by Inflection systems during transactions. Complete tokenization was accomplished in just eight weeks.

Reaching the goal of tokenizing all cardholder data in such a short timeframe is a tribute to the synergy of the Inflection and TokenEx teams, the privacy and security controls of the STORM platform, and the flexibility of the TokenEx Cloud Security Platform. Now come the benefits through greater security of cardholder data, reduced risk of losing data through potential breaches, and savings through significantly reduced scope of PCI compliance.

"We estimate, even at this early stage, that our PCI compliance cost will be reduced by at least 30 percent, which includes reduced costs for supporting PCI hardware and software upgrades," Wood said.

Cardholder Data Secured, Private Data Next

"Inflection takes privacy seriously because we understand the value and sensitivity of personal information," Muller said. "We work hard to create awareness and transparency around responsible privacy frameworks with a holistic approach that marries technology and empathy."

Selecting TokenEx's Cloud Security Platform resulted from a search for the most flexible and open tokenization platform that would work with the way Inflection's systems operate. Tokenization of PII data is a natural next step for Inflection as the company continues building identity management and protection applications for the STORM platform.

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To learn more about tokenization and how TokenEx can help you to secure any sensitive data set and achieve compliance, contact us at www.tokenex.com or email us directly at: info@tokenex.com.