The Auric Guide to Tokenization

Tokenized Credit Card Storage in a PCI Compliant Storage Location

Payment Processing Simplified®

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What is Merchant PCI Compliance?
In 2006 the Payment Card Industry Security Standards Council (PCI SSC) was formed to address the ongoing evolution of Data Security Standards within the Payment Card Industry. Their efforts produced The Payment Card Industry Data Security Standard (PCI DSS), a proprietary informational credit card merchant account security standard for businesses, merchants and organizations that handle cardholder information for credit cards, debit cards, ATMs, prepaid, POS and e-wallet sales.

When merchants comply with PCI DSS credit card merchant account guidelines, they limit their liability exposure. The risk associated with non-compliance of cardholder data storage can be substantial. For more information please refer to the Why Comply With PCI page on the Auric Systems International website.

This white paper is for businesses and merchants that store, process or transmit credit card information. It presents options for securely and cost-effectively streamlining the payment process while keeping compliant with PCI credit card storage standards.

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Credit Card Encryption
Credit card encryption can refer to the broad term meaning that the credit card is encrypted or it can refer to the more complex encrypted credit card payment cycle. The encrypted card payment cycle is comprised of separate parts, such as tokenization and off-site data storage.

What is Tokenization?
Created to further enhance credit card security, tokenization is part of the larger credit card merchant services process. After the Primary Account Number (PAN) is encrypted, tokenization replaces the credit card holder’s PAN with a surrogate value called a ‘token’.

The Tokenizer function provides an interface to the method or technical process of generating tokens called Token Generation. Reversing this process and restoring the token to its associated value is called de-tokenization.

Credit card tokenization and de-tokenization should occur within a secure, robust monitoring environment with a clearly defined tokenization process cycle that allows for approved applications to submit tokenization and de-tokenization requests.

Token Storage
After the encrypted PAN is tokenized (separating the token from user identifiable information and from all other details on the cardholders PCI data transaction), PCI storage rules require secure off-site token storage to retain a credit card merchant’s good standing as a PCI compliant service.

PaymentVault™ The Auric Systems International Solution
Processor Side Tokenization and Storage vs PaymentVault™: During a single payment transaction, tokens can be generated in various ways depending on their technology and the algorithms they use. These algorithms can produce a mathematically reversible cryptographic function with a strong cryptographic key, or a one-way, non-reversible cryptographic function (e.g., a hash function with strong, secret salt). The challenge of using this method is when a token is generated as a result of using a hash...
function, it is very possible for a hacker to reconstruct the original PAN data if they have access to both the truncated and hashed version of the PAN.

**SECURE:** PaymentVault™ token generation effectively separates the payment keys. The merchant has the key to the encryption without direct access to data storage. The data is stored separately in a secure PCI compliant storage location.

**COMPLIANT TOKEN GENERATION:** PaymentVault™ uses an assignment through an index function sequence number with a randomly generated number, not mathematically derived from the PAN.

**FLEXIBLE:** PaymentVault™ provides processor independent tokenization storage; meaning merchant data portability is assured regardless of which payment processor or credit card payment gateway a merchant uses.

**SAFE:** PaymentVault™ provides both logical and physical separation from the customer’s PAN. This significantly reduces merchant liability.

**OPPORTUNITIES:** PaymentVault™ helps to expand business opportunities through repeat sales, while providing loyal customers with timesaving convenience.

Using PaymentVault™, merchants can safely access recurring billing scenarios, supporting new business and revenue opportunities by securely sharing sensitive customer data with trusted business partners.

**COST STRUCTURES FLAT MONTHLY FEE vs PER TRANSACTION FEES:** PaymentVault™ will not surprise merchants with costly per transaction fees. PaymentVault’s flat rate monthly fees are ideal for budgets that require accurate and dependable forecasting.

When companies provide a secure PCI compliant off-site token storage for their credit card customers, everyone wins. PCI DSS tokenization guidelines state that a merchant’s level of responsibility for their tokenization solution can vary, based on the extent to which they manage it themselves or outsource some or all of their tokenization solution components.
When the tokenization technology is a proven, secure, industry respected solution, the option to outsource merchant debit and credit card storage has cost-effective advantages.

Auric Systems International provides out of the box software solutions and custom PCI compliance credit card services. Auric will reduce paperwork, save time and address potential credit card number storage liabilities.

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About Auric Systems International

Auric Systems International, a trusted leader in PCI compliant solutions, has been producing payment transaction processing software applications since 1994. Experienced in helping thousands of companies with unique billing, payment and compliance projects, Auric Systems International brings security, flexibility, and simplicity to PCI compliant payment technology.

A Level 1 PCI DSS Validated Service Provider, Auric Systems International is proficient in PCI business process, design and implementation. Auric software, services and solutions are deployed by businesses that range in size from small businesses to Fortune 100 enterprises. Auric Systems International payment transaction technology has processed billions of dollars and millions of transactions securely, flexibly and efficiently.

Auric Systems International develops client/server and web-based applications that cover a range of business platforms currently in use today. From payment applications and database performance to cryptographic key management and tokenized credit card storage, Auric has PCI compliant solutions to meet your payment processing needs.

Visit us at: AuricSystems.com