



Edge Tokenization

Processing customer credit card information electronically comes with high risks and requirements. Meeting the stringent Payment Card Industry (PCI) compliance standards takes repeated efforts, significant investment, and regular maintenance. That translates to high costs to any corporation handling credit card data, and PCI audit requirements create a routine impact on IT resources.

This important requirement has been an accepted cost of doing business for years. It is estimated that maintaining PCI compliance costs companies between \$200,000 and \$2,000,000 or more annually. But the true risk to companies is a breach of this information. Fines and liability, along with major impacts to brand recognition and corporate reputation, are a real possibility.

Making matters worse, malicious activity targeting these records is at an all time high. Global network threats are more organized and larger scale than ever before. 2009 marked a record year for card data breaches, with close to \$150M in records compromised in approximately 600 different card breach events. These breaches are made possible by ever-growing complexity in web content, more aggressive time to market requirements, and new web development methods, all of which introduce potential new vulnerabilities to IT infrastructure.

Akamai has developed its Edge Tokenization offering for online transactions to provide value-added support for this critical function. By leveraging Akamai, merchants need not process or store their consumer's credit card credentials for online transactions that pass through Akamai's EdgePlatform, replacing them instead with a non-reversible and random token identifier that Akamai obtains for the merchant at the edge through an interaction with a payment gateway. Seamlessly and undistruptive to existing infrastructure, Akamai's EdgePlatform identifies and removes credit card-related data as transaction requests pass through its edge servers. Through direct partnerships with leading payment gateway providers, Akamai redirects this high-risk data without ever storing it to disk locally. Once replaced with an anonymous token, the transaction continues to the merchant's origin infrastructure, without impacting flow or system functionality. The result is that the merchant processes and stores only unique tokens, not consumer credit card data, thereby reducing PCI compliance requirements.

How Edge Tokenization Works

Edge Tokenization leverages the distributed and extremely scalable EdgePlatform, comprised of tens of thousands of servers located in over one thousand networks globally. As consumer data is passed into the EdgePlatform it is identified and through strict integration with authorized tokenization gateways replaced with an anonymous token. The token and true card number are stored in a secured data vault managed by the tokenization provider. Tokenization is offered as a feature of many payment gateway providers as part of their gateway interface. Akamai interacts with existing payment gateway APIs to tokenize card and card holder information without ever storing that higher-risk data to disk. Because this transaction occurs on Akamai's level 1 PCI compliant network, this replacement occurs securely and close to the end user, which further reduces potential in-flight risks. Moreover, by leveraging Akamai's renowned availability and performance scalability delivered by its dynamic web acceleration, transactions occur securely at scale without impact to transaction time or end-user experience, even in the case of network path failures or outages.

BUSINESS BENEFITS

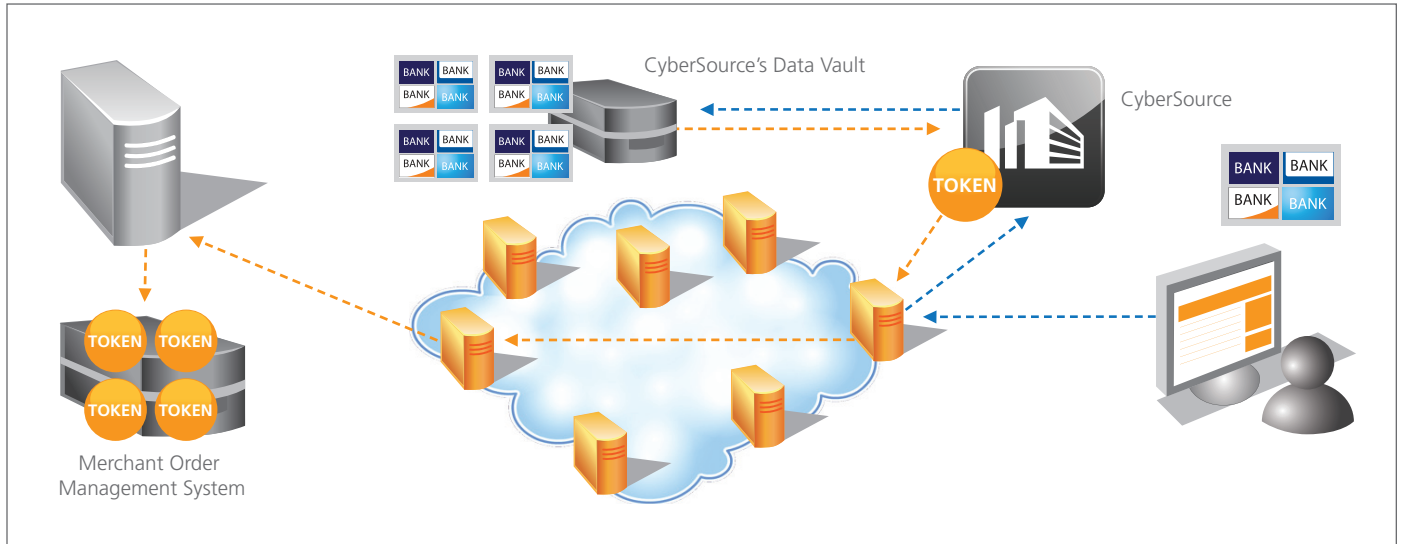
- Mitigate business risks and improve brand and customer confidence by bolstering site's security triad – Confidentiality, Integrity, and Availability
- Reduces PCI compliance requirements for online transactions that pass through Akamai's edge servers
- Leverages Akamai's Level 1 PCI Compliant Network
- Enables web retailers to transact securely and at scale, without sacrificing performance
- Tight integration with leading payment gateway providers
 - Turn-key integration with leading payment gateways at launch
 - Third party payment gateway support available through professional services customization
- Preserves payment gateway functionality.
- Credit card data is never stored on retailer infrastructure
- Integrates into existing workflow, no requirement to leverage externally hosted sites or form fields – guaranteeing look, feel, and flow remains consistent
- Accelerates critical commerce transactions on Akamai's high-performance and highly resilient EdgePlatform



The Akamai Difference

Standard tokenization is an available feature direct from gateway payment providers. But utilizing standard tokenization still requires that credit cards must first be handled and stored on the merchant's infrastructure prior to being tokenized. Akamai's Edge Tokenization handles the token exchange at the edge, before any data has entered the merchant's infrastructure, all on a fully compliant Level 1 PCI audited network. By exchanging credit card data prior to transactions landing on the merchant's infrastructure, Akamai plays a key role in helping to reduce and potentially remove ecommerce and online transaction activity from PCI scope.

Other non-Akamai tokenization options for off-loading PCI transactions include re-directing the traffic to externally hosted and processed web pages, or inserting third party fields into existing ecommerce workflows. Both methods require merchants to outsource this business critical transaction to uncontrolled, non-customized, and un-reliable infrastructures. With Edge Tokenization, customers do not require workflow changes, externally hosted sites, or form fields. PCI Transactions are accelerated (not degraded) and failure resilient thanks to Akamai's EdgePlatform.



With Edge Tokenization Akamai's Edge Servers take the following actions:

- As a consumer on a merchant's website completes and submits a transaction, Akamai's secure edge servers recognize the POST action of the customer web page that contains payment data.
- Akamai quickly parses that POST data to retrieve the payment information, such as card number, expiration date, CVI/CVV code and other required information.
- Akamai then securely completes a call to a tokenization API, passing the PCI sensitive information to the payment gateway.
- Akamai then securely receives back the anonymous token from the gateway's tokenization API.
- Seamlessly and transparently, the card number in the POST body is replaced with the new token.
- Akamai then forwards the modified POST request to the origin web application server.
- Akamai then ensures edge server memory is completely flushed of any actual card data.

The Akamai Difference

Akamai® is the leading cloud platform for helping enterprises provide secure, high-performing user experiences on any device, anywhere. At the core of the company's solutions is the Akamai Intelligent Platform™ providing extensive reach, coupled with unmatched reliability, security, visibility and expertise. Akamai removes the complexities of connecting the increasingly mobile world, supporting 24/7 consumer demand, and enabling enterprises to securely leverage the cloud. To learn more about how Akamai is accelerating the pace of innovation in a hyperconnected world, please visit www.akamai.com and follow @Akamai on Twitter.

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