SMS VALET®

Encryption VS. Tokenization

> “Tokenization hides consumers’ confidential account information during digital transactions, making digital payments more secure for everyone, everywhere.”
>
> *– Visa USA*

- Mathematically transforms plain text into cipher text using an encryption algorithm and key
- Format-preserving encryption schemes come with a tradeoff of lower strength
- Original data leaves the organization, but in encrypted form

- Randomly generates a token value for plain text and stores the mapping in a database
- Format can be maintained without any diminished strength of the security
- Original data never leaves the organization, satisfying certain compliance requirements
- Considered by payment experts to be more cost-effective and secure way to safeguard sensitive information

ENCRYPTION

Encryption is the process of using an algorithm to transform plain text information into a non-readable form called cipher text. An algorithm and an encryption key are both required to decrypt the information and return it to its original plain text format. Today, SSL encryption is commonly used to protect information as it’s transmitted on the Internet.

TOKENIZATION

Tokenization is the process of turning a meaningful piece of data, such as an account number, into a random string of characters that has no meaningful value if breached. Tokens serve as reference to the original data, but cannot be used to guess those values. There is no key, or algorithm, that can be used to derive the original data for a token.

USE CASES FOR ENCRYPTION AND TOKENIZATION

The most common use case for tokenization is protecting payment card data so merchants can reduce their obligations under PCI DSS. Encryption can also be used to secure account data, but because the data is still present, albeit in cipher text format, the organization must ensure the entire technology infrastructure used to store and transmit this data is fully compliant with PCI DSS requirements.

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