

SECURITY AT MODO

Modo takes security very seriously because we know that with great payments powers comes great security responsibilities. While reducing friction in payments usually means a decrease in the level of security provided with Modo that is not the case. We can easily manage payments data between systems without compromising on security because security is imperative to creating the best solutions and products possible for your customers.

We have three tools that make up the backbone of our security model, and they are:

1. The Modo Vault
2. Hardware Security Modules and alternate key stores
3. Modo's CryptoProxy

THE MODO VAULT

Currently so much valuable data is being lost each and every day due to fear of the competition. Merchants have all this rich data in item level shopping details, but don't share that information with banks because they don't want consumers to be steered towards competitive merchants. And banks have so much precious information on customer identities, but they don't share it for fear that a merchant might steer the customer to a competitive financial service. At the same time, both banks and merchants want to strengthen their consumer relationships and create the differentiated experiences customers demand. My, my what a pickle we're in. Or maybe not?

HARDWARE SECURITY MODULES AND ALTERNATE KEY STORES

We strive for the best security scientifically possible. How? Modo uses cloud-based Hardware Security Modules (HSMs) which are considered the gold standard for sensitive data and keys. They serve as the foundation of our encryption and other cryptographic functions. HSMs are special purpose boxes that perform cryptography processing. And they are the only provably secure place to keep a secret. (HSMs will literally explode if you try to tamper with them so that all the secrets are burned up in the box. Think Mission Impossible.)

While Modo offers the use of HSMs for protecting all of your data, we can also support alternate key stores like Amazon Key Management Service (KMS) or other software based security modules via Modo's CryptoProxy.

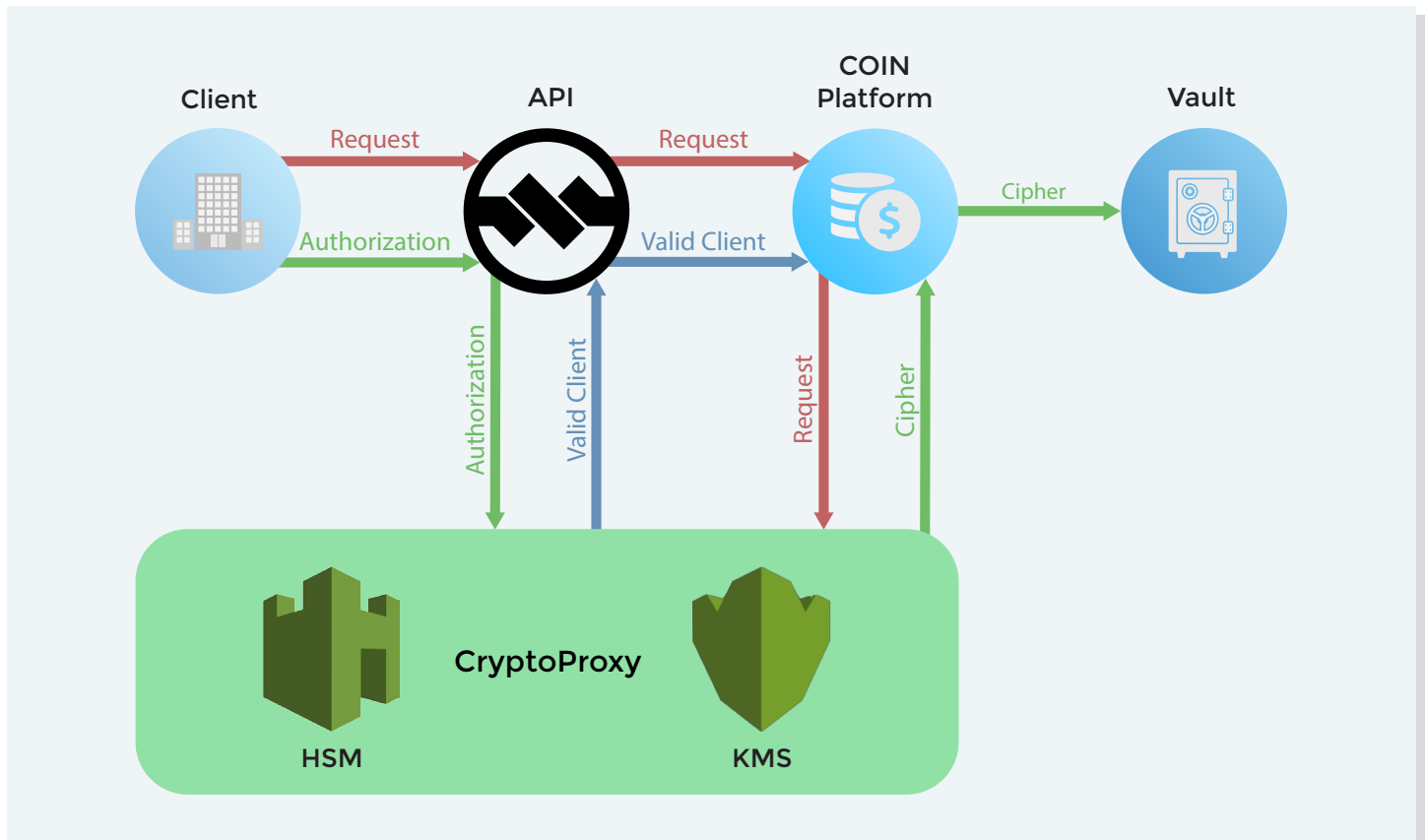
MODO'S CRYPTOPROXY

Modo's CryptoProxy system provides an interface for applications which ensures consistent and secure use of HSMs or other security modules. Modo's CryptoProxy tool manages interactions with security modules across Modo transactions. It ensures secure and consistent routing of all encrypted data regardless of the application or key store. This allows Modo to plug and play with a variety of HSM and HSM-like security modules. Your applications don't need to know what kind

of HSM or other security module is being used. CryptoProxy aggressively destroys in-memory data when its no longer in use so you can rest easy knowing it is never exposed to the outside world.

WHY IS MODO BETTER?

Modo is the better, faster way to connect payment systems. We enable interoperability between disparate systems to connect them without any changes required to any system involved. Interoperability is key to the way we structure everything at Modo. The way we implemented our security allows for security module interoperability. Most solutions build to one version of a specific HSM which may or may meet your requirements. With CryptoProxy, we can swap out one in place of the other instead of having to make changes across many systems to change the security module. We can even support multiple security modules for various systems, which enables separation of security that can be critical. This allows you to decide what kind of security module you want to use and have the option of easily changing it in the future.



When a client application makes a request to Modo, CryptoProxy routes the request to the appropriate key-store for validation. Once validated, the request is released to the Modo platform and CryptoProxy provides the Modo platform with the keys needed to access Vault information to be used for processing.

We're a team of [#paymentsgeeks](#) that are dedicated to doing the most good for the most people by reducing friction in payments. We would love to enable interoperability and reduce payments friction for you. [Reach out to us.](#)