



CASE STUDY

Identify3D expands its security offering with Gemalto cloud-based HSM as a service solution

Leading software provider for digital manufacturing selects SafeNet Data Protection On Demand to ensure the security of their customers' IP and the quality of their manufacturing.

The Organization

San Francisco California-based Identify3D provides intellectual property protection, manufacturing repeatability, and traceability in all phases of digital manufacturing to prevent unauthorized distribution, transformation, replication, and production. The company helps retain the original quality of the design by coupling production standards and manufacturing rules (machine, consumable, key set-up parameters) to the design that must be authorized and authenticated before production can occur.

Business Need

Digital manufacturing is on the rise and the need to protect data throughout the supply chain process is critical at every step, but security providers in this relatively new field are mostly startups. Identify3D has a big differentiator—experienced staff, and a focus on security as an integral part of the business process. The team at Identify3D are well versed in the world of security, in particular Hardware Security Modules (HSM). They know their stuff and don't skimp on security. Securing the intellectual property of their customers relies upon this key requirement.

Security is key for Identify3D, with customers across the globe, in a range of different verticals including extremely security-conscious aerospace and defense organizations, as well as automotive and medical devices, at various manufacturing facilities.

"Security is integral to everything we do," said Chief Strategy Officer Stephan Thomas. With other companies in our space, security is bolted on only when the customer asks for it. That's not the way we do things. We start with security."

Doug Peterson, Senior Field Application Engineer is very familiar with SafeNet HSMs and has been using them within previous projects for many years. SafeNet HSM solutions provide Identify3D with a robust encryption, with proven reliability. Prior to engaging with Gemalto for SafeNet Data Protection On Demand Identify3D already used HSMs as the root of trust to protect the company's keys, and on premises at customer facilities, but the company wanted to expand to provide HSM as-a-service solutions.

In addition to the root of trust, Identify3D needed open-source EJBCE Certificate Authority. Gemalto's crypto-agility enables the company to perform better and faster using smaller key sizes enabled by elliptic curves.

Identify3D was looking for an easy-to-use, cloud-based HSM solution for the following use cases

- Certificate authority—to hold its keys
- Management component in the cloud to hold customers' keys

The company also looked at on-premises alternatives and cloud-based options. They were less impressed by other solutions they evaluated that restricted access to the number of keys, or charged per key, which is more costly. What stood out to them was the 99.95% SLA offered by Gemalto, and Gemalto's willingness to work with the team to meet their requirements to be successful. They knew they would not get the same responsiveness from the alternative options.

The Solution

Identify3D chose SafeNet Data Protection On Demand, a cloud-based platform that provides a wide range of on-demand HSM, encryption and key management services through a simple online marketplace. HSM on Demand services include:

- > HSM—Set up a certified key vault for applications or integration requirements using your own HSM on demand service.
- > HSM for Private Key Protection—Secure private keys belonging to Certificate Authorities responsible for establishing PKI trust hierarchy.
- > HSM for Digital Signing—Digitally sign software and firmware packages or electronic documents in order to ensure the integrity of the sender.
- > Oracle TDE Database Key Vault—Ensure that Oracle TDE data encryption keys are encrypted with a master key that resides within the HSM On Demand service for optimal performance and scalability.

Identify3D uses the HSM On Demand services to set up certified key vaults to protect and manage keys.

Evaluation

The team started with a 30-day free trial of SafeNet Data Protection On Demand. They examined SafeNet Data Protection On Demand as a key store and Certificate Authority (CA) in the cloud. As they tested the product, the team found it to be more usable and frictionless, making it easier for them to integrate into customer environments. Gemalto worked closely with the team and made some significant improvements to SafeNet Data Protection On Demand as they went through the evaluation process. As they differentiate themselves in the market and advance their offerings with more crypto-agile solutions, Identify3D is looking into additional use cases including Quantum-ready solutions.

"Gemalto listened to our ideas and stepped up," said Peterson. "Gemalto's willingness to work with what I needed was a huge selling point and was not matched by other vendors we were evaluating."

During the evaluation period, Gemalto enhanced SafeNet Data Protection On Demand, increasing the number of keys that could be stored in each partition from 10 to 100, and added support for more RSA 4096 keys. This was an important feature for Identify3D and was integral to their decision.

The Benefit

The Identify3D team was motivated by the pricing structure of SafeNet Data Protection On Demand. Other cloud-based HSM providers charge significant upfront costs, which are often prohibitive. SafeNet Data Protection On Demand allowed Identify3D to move, store and manage keys in the cloud at a significantly lower cost than other vendors' solutions. The team also pointed out that although other vendors offer similar services as Gemalto, they have more limitations, such as restricted access, controlling the number of keys that can be managed, or charging per key, which can quickly get very expensive.

There are many benefits to deploying and managing encryption, managing keys and hosting HSMs – on-demand and from the cloud, including:

- > Zero upfront investment
- > Cloud-agnostic
- > Up and running in less than 5 minutes
- > OpEx only usage-based billing
- > SLA On Demand - 99.95% availability
- > Automatic failover included
- > Key backups are automatic
- > Key and crypto operation metrics and reporting
- > Elastic, automatic scaling
- > Low TCO
- > Unrivaled peace of mind

SafeNet Data Protection On Demand's HSM and key management services scale up and down automatically as customer requirements change, another notable benefit for Identify3D.

When making business decisions on cloud providers, many of them focus on locking you in as a client and subsequently attempt to sell you on additional services," said Peterson. "Gemalto approached this from the start as a partnership. With Gemalto it's easy to scale, upgrade, move keys around, add new firmware function and support remotely."

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