

SOLUTION BRIEF

Gemalto's SafeNet HSMs for eInvoicing

Powering eInvoicing systems with industry compliant hardware security modules for maximum integrity, accuracy, and security

Overview

Trust is a critical requirement for the feasibility of eInvoicing. Digital signatures, powered by encryption and public key infrastructure (PKI), represent the means for establishing trust in eInvoicing. Digital signatures give all parties the confidence required to trust that invoices come from known entities, and that they have not been altered in transit. In turn, these digital signatures need to have foolproof, comprehensive security mechanisms to protect them. If digital signatures are in any way compromised, the entire eInvoicing infrastructure will be compromised. This is where hardware security modules (HSMs) come into play.

The Role of HSMs in eInvoicing

Cryptographic keys are used to lock and unlock access to digitalized information. Even if the strongest encryption algorithm is used, security is still weak if cryptographic keys are not adequately secured. HSMs are dedicated systems that physically and logically secure the cryptographic keys and cryptographic processing that are at the heart of digital signatures. HSMs support the following functions:

- > **Lifecycle management**, including key generation, distribution, rotation, storage, termination, and archival.
- > **Cryptographic processing**, which produces the dual benefits of isolating and offloading cryptographic processing from application servers.

eInvoices are digitally signed with a secure private signing key, which requires an HSM capable of performing certificate authority management tasks. The HSM stores the keys within the secure confines of the appliance throughout the key lifecycle. The HSM enables the organization to secure digitally certified invoices and to cryptographically bind the identity of the certifying party to the invoice. By

storing cryptographic keys in a centralized, hardened device, HSMs can eliminate the risks associated with having these assets housed on disparate, poorly secured platforms. In addition, this centralization can significantly streamline security administration.

The Benefits of E-invoicing with SafeNet HSMs

Gemalto offers a broad set of HSMs that are ideally suited to the demands of eInvoicing infrastructures. By employing SafeNet HSMs, organizations can realize a range of benefits:

Enhance Security and Ensure Compliance

SafeNet HSMs deliver sophisticated security capabilities that enable businesses to enjoy maximum security in their eInvoicing implementations, ensuring optimal trust in the entire invoicing lifecycle. SafeNet HSMs address the following critical requirements:

- > **Certification.** Many SafeNet HSMs meet the demanding requirements of FIPS and Common Criteria certification.
- > **Compliance.** SafeNet HSMs offer the robust security capabilities that ensure compliance with the European Directive on Invoicing, Brazil Nota Fiscal (NF-e), and other regulations.
- > **Multiple signatures.** With SafeNet HSMs managing digital signatures, organizations can manage multiple signatures per invoice.

Optimize Operational Performance

By leveraging SafeNet HSMs in a secure eInvoicing deployment, organizations can realize significant gains in operational performance:

- > **Efficient retrieval and processing** By working with electronic files, businesses can more quickly generate, locate, retrieve, and process invoices.
- > **Elimination of time consuming, inefficient paper-based processes.** Secure eInvoicing systems enable businesses to eliminate a host of manual, error-prone processes associated with the handling and distribution of paper invoices.
- > **Improve vendor relations.** By ensuring trust and optimizing speed and efficiency throughout the invoicing process, businesses can improve relationships with vendors.
- > **Reduced errors and reconciliation times.** With eInvoicing, businesses can improve accuracy in invoice generation and approval processes, and, in the event of questions or disputes with a given invoice, businesses can much more quickly reconcile those issues and accelerate payment cycles.

- > **Efficiency through back office integration.** With a secure eInvoicing system in place, organizations are well-equipped to integrate digital invoicing process with other backend applications, such as procurement and enterprise resource planning, which can lead to further efficiency and accuracy gains.

Reduce Cost

With Gemalto powering eInvoicing systems, businesses can realize an array of cost saving benefits. For example, by centralizing cryptographic keys and policy management on SafeNet HSMs, businesses can significantly reduce the administration associated with managing digital signatures in a distributed, disparate fashion. Also, by eliminating the need to file paper invoices, businesses can reduce the overhead and expense of paper invoice storage costs. Finally, the digitization of invoices leads to significant reductions in the time and staffing costs associated with paper-based invoicing processing.

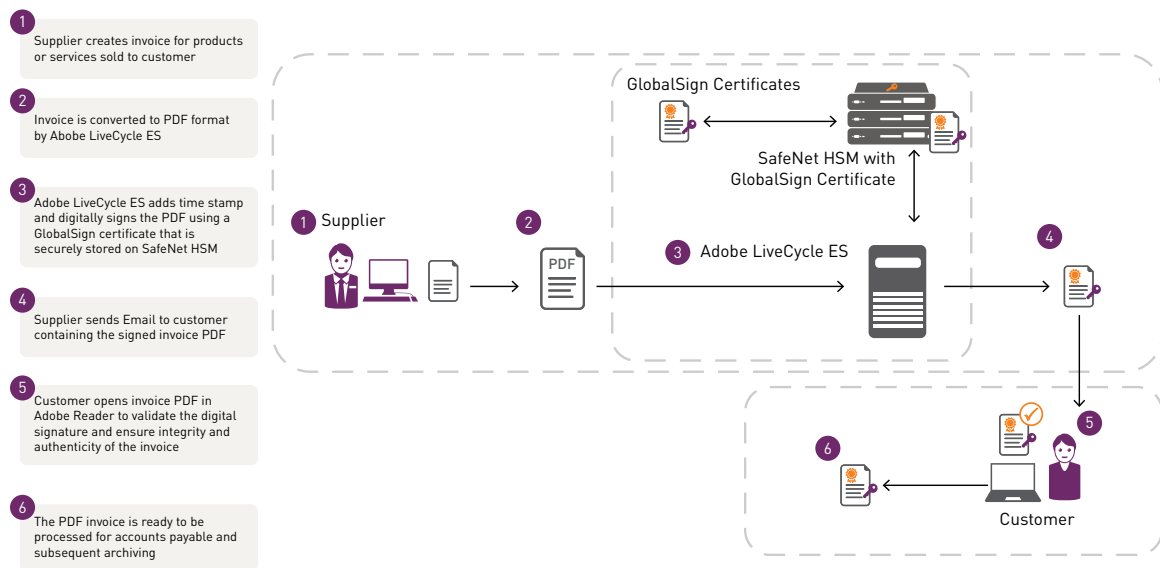


Figure 1 SafeNet HSMS in an eInvoicing Environment

About Gemalto's SafeNet Identity and Data Protection Solutions

Gemalto's portfolio of Identity and Data Protection solutions offers one of the most complete portfolios of enterprise security solutions in the world, enabling its customers to enjoy industry-leading protection of data, digital identities, payments, and transactions—from the edge to the core. Gemalto's SafeNet Identity and Data Protection solutions enable enterprises across many verticals, including major financial institutions and governments, to take a data-centric approach to security by utilizing innovative encryption methods, best-in-class crypto management techniques, and strong authentication and identity management solutions to protect what matters, where it matters. Through these solutions, Gemalto helps organizations achieve compliance with stringent data privacy regulations and ensure that sensitive corporate assets, customer information, and digital transactions are safe from exposure and manipulation in order to protect customer trust in an increasingly digital world.

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