



Benefits

- A streamlined workflow
- Secure access to the company's HR SAP database

Business Challenges

- To issue online identities to thousands of employees and partners
- To implement portable workplace IDs
- Deploy email encryption

Solution

- SafeNet's Hardware Security Modules (HSMs)
- SafeNet's Luna CA4 HSMs
- SafeNet's Luna RA

Many leading automotive companies have embraced the Internet as a key venue for marketing, selling, and communicating with their customers, dealerships, and business partners. They are integrating their internal computer systems with those of suppliers, customers and employees in order to trim operations costs, but at the same time must ensure the security of corporate information. Automation of internal workflow as well as the creation of a secure environment for communicating with partners and customers represents a prime opportunity for improving efficiencies. The same technologies used to improve internal workflow can also be applied to secure and modernize the automotive supply chain.

Business Challenge

One large European automaker established 4 main goals and requirements to update business processes into the digital realm:

- Employee and partner identification,
- Employee access control,
- Electronic document security, and
- Secure electronic

One of the first challenges faced by the IT team was to issue online identities to the thousands of people (employees and partners), businesses (suppliers and dealerships), and system components (automated software agents and application servers) that are essential to the operation of a large manufacturing business. The company also needed to implement portable workplace IDs to identify and authenticate employees within a new access control system encompassing both physical plant and electronic documents. Document security was required to comply with legislated government privacy guidelines governing the secure management of personnel records. Finally, the IT team needed to deploy email encryption to ensure that sensitive communication between employees, affiliates, and suppliers, remained confidential.

Solution

Digital certificates were selected as the means for identification and authentication with all of the company's applications and SmartTrust's Certificate Manager was selected as the digital identity software technology for creating and authenticating digital identities. The ID system was then used to issue thousands of Siemens smart cards to employees, each containing a unique digital ID for use as secure and portable identification token. Given the important function of the digital identities, and what was at stake should these identities be compromised, the IT team concluded that standard software-only solutions did not offer sufficient protection for the private encryption keys that would form the core of this identity infrastructure. The clear choice was a hardware solution from SafeNet. SafeNet's Hardware Security Modules (HSMs) were deployed to provide the highest level of protection for sensitive private signing keys.

To ensure trusted digital identities for all the required operational groups, the company deployed a 2-tier identity issuance hierarchy consisting of a central system complemented by four individual subordinate systems respectively dedicated to Process and Server identity certificates, User Identity certificates (software), Signature certificates, and Smart Cards. For each of these systems, SafeNet's Luna CA4 HSMs were used to safeguard the private signing keys used to register and

authenticate each digital identity. This was critical because each root key is uniquely linked to the certificates issued by each subordinate Certificate Authority (CA) System.

Additionally, the smart card issuance system uses SafeNet's Luna RA for securely generating and loading digital identities onto smart cards. The registration of thousands of employees' digital certificates was streamlined through use of existing personnel databases, efficiently overcoming one of the principal problems with mass smart card issuance.

Consider the Benefits

Using a combination of digital certificates, and smartcards combined with the proven security provided by SafeNet's HSMs, the automaker was able to:

- Smoothly issue thousands of digital identity certificates to individuals and devices,
- Introduce a new employee facilities access control system,
- Secure access to the company's Human Resources SAP database, and
- Deploy an encrypted email application.

This was done by implementing a single authentication system, which provided employees with a single identity token and password enabling managed access to all corporate facilities and systems. Each smart card enabled functions such as network access, digital signing, building access and electronic payments within the company. The end result: digital certificates provided the cornerstone to streamline workflow, support online purchases, and even a company-wide electronic time-stamping service used to corroborate the date which a document had been first created or last modified and signed.

Digital certificates also allowed the automaker to streamline and automate its business processes by extending its corporate intranet to suppliers, trade partners, and customers. For example, a centralized system based on Apache web servers being fed from an IBM Websphere backend, allows digitally identified suppliers to access services such as online price negotiation, catalog ordering, purchase orders and fulfillment management. In addition to suppliers, digital certificates are being implemented to ensure the secure exchange of data between the automaker's development partner enabling secure simultaneous engineering development.

Conclusion

The auto company began a successful pilot program to test the feasibility of digital identity applications; the smooth integration and testing that followed were pronounced a resounding success. Current plans include the upcoming issuance of 30,000 new employee smart cards. SafeNet's work with this customer, establishes a successful business model for integrating digital identities with the unique demands of the automotive industry, and further demonstrates how SafeNet HSMs combined with digital certificates and smart cards provide the security necessary for controlled access to company information, secure corporate communications, more efficient workflow and operations both internally and throughout the automotive supply chain.