



SafeGuard[®] CryptoServer

Case study: ATOS Worldline

Atos Worldline needed a hardware security module (HSM) that offers its customers the highest level of protection for their data and business processes, but is also flexible and open enough to meet the specific requirements of different industry sectors. With SafeGuard CryptoServer, the company found both, and now provides HSM solutions under its own brand name, Atos SecurityModule.



Business challenge

As a European leader in payments and transactions, Atos Worldline is known for reliable end-to-end payment services (payment issuance and acquisition, payment solutions and card processing), services for financial markets as well as Customer Relationship Management and eServices (internet, voice and mobile solutions). Along with the speed and ease of electronic business processes, Atos Worldline clients also expect each transaction to be fully protected from data theft, industrial espionage, attacks on IT infrastructures, phishing and hacking. When it came time to purchase new hardware security modules (HSMs), Atos Worldline had the customary demands of data confidentiality, integrity, identity authentication, and fully secured systems and keys. But because Atos Worldline services a wide range of vertical markets (including Banks and Securities, Retail, Telecom, Public sector, Transport, Oil & Industry, Press, and Media), it also needed a cryptography solution that is flexible, efficient and customizable enough to address the different requirements of each industry. During a three-month

evaluation period, it became clear that the only solution that meets all of its requirements was the SafeGuard CryptoServer, originally created 14 years ago by Utimaco.

“With the SafeGuard CryptoServer, we were able to get a software development kit (SDK) that lets us design the different interfaces and security measures our customers need,” said Peter Gobien, Team Manager for Security Solutions & Common Development at Atos Worldline

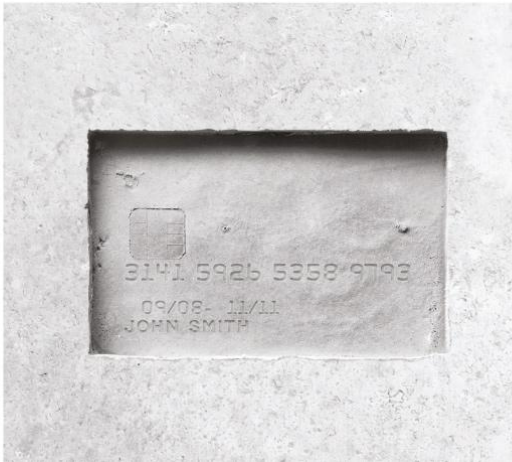
Technology solution

Once the SafeGuard CryptoServer SDK was delivered, developers at Atos Worldline immediately got to work customizing the HSM technology to create specific applications for all of the company's vertical markets. The SDK feature set combines the required functions, procedures and interfaces in a range of ready-to-use solutions.

“Customization turned out to be easier and faster than we expected. Utimaco provided great training and we were able to use standard C and C++ programming. And when a question came up, we were immediately in direct touch with Utimaco

Utimaco's Business Unit “Hardware Security Module”

Since 1994 Utimaco has been developing hardware based security solutions. Today, Utimaco is one of the world's leading manufacturers of innovative and professional solutions for hardware security module technology. Customers and partners value the reliability, simplicity, and long-term investment security of the Utimaco security solutions. Utimaco stands for recognized product quality, user-friendly software, excellent support, and products that effectively meet market requirements. For more information, please visit: <http://hsm.utimaco.com>



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developers through their technical support,” said Gobien.

Throughout the customization period, Atos Worldline relied heavily on CryptoServer’s software emulator (included in the SDK) that allowed developers to thoroughly test and easily debug each application’s integration without the HSM hardware, making sure all requirements were met before implementation. Following implementation, the company found that even customers requiring the highest levels of security and rapidfire key generation reported exceptional performance and efficiency, while meeting stringent national regulations. The SafeGuard CryptoServer software components are updated when needed, providing Atos Worldline with the most up-to-date software components. “It helps us keep up with evolving industry standards. For example, not only does the CryptoServer CS-Series have FIPS 140-2 Level 4 for physical security, but as new standards are released, we are amazed at how quickly Utimaco sends us product updates,” said Reiner Wergen, Product Marketing and Communications Manager at Atos Worldline.

Wergen said, “We’re in the business of transactional services. We’re not interested in investing huge R&D sums to stay on top of HSM solutions. With Utimaco, we got an ideal OEM alternative. They helped us implement the functionality we needed, were willing to integrate our requirements into the Atos branded deliverables, and gave us full control of the firmware. That was everything we needed.”

Business results

With the SafeGuard CryptoServer, Atos Worldline clients are now confident that they have fail-safe security for their data and business processes, with secure generation, storage and processing of cryptographic keys and certificates during encryption and signature procedures. Identity management and PKI environments, database and authentication as well as card-based payment transactions and other payment applications are all securely protected. HSM pools efficiently handle load balancing even during periods of peak traffic, and administration and maintenance can be handled remotely.

Atos Worldline successfully provides customized, scalable HSM solutions to a wide range of industry clients, using the SafeGuard CryptoServer SDK to quickly update each solution when needed, as new standards or regulations are released. For the energy market, for example, Atos Worldline used SafeGuard CryptoServer SDK to create its own high-availability security solution called Worldline ESS (Energy Security Service) to manage HSMs. Atos Worldline also maintains the ability to program in additional functionality, implement its own protocols, and add proprietary and standard cryptographic algorithms whenever required. And it does this all of this under the Atos brand, without having to make the heavy investment in R&D needed to maintain HSM expertise.

Gobien said, “For us, Utimaco was the ideal choice. No one else offered that magic combination of high-level security and flexibility with low maintenance costs.”