

## Case study



# Protecting Qualified Digital Certificates with Utimaco HSMs

[The motivation: protecting digital identities for banks, financial institutions, and other digital service providers](#)

In order to exist in today's digital world, we all need our own digital identity. Since various online service providers use their own authentication methods, most of which either lack decent security or provide poor user-experience. We are also witnessing a significant trend of mobility with more than one quarter of worldwide citizens already using smartphones as multi-functional devices.

This, and the fact that in 2016, the new European eIDAS regulation introduced that digital certificates and electronic signatures can be entrusted and managed by a trust service provider on behalf of the signatory, both played crucial parts in Halcom's creation of something new: the cloud certificate "OneID".

## The challenge: storing the private key securely

"In order to be eIDAS-compliant, we had to connect to a trusted Hardware Security Module (HSM) provider", stated Luka Ribičič, Head of Halcom's Certificate Agency. "What was challenging for us is definitely the implementation time. Because of the Utimaco simulator, we were able to test and simulate our solution much sooner and deploy it much faster. This and the flexible pricing model were the main reasons why we have chosen Utimaco's HSM. Because of our satisfaction with Utimaco HSMs at Halcom CA Slovenia, we will cooperate at Halcom CA Serbia as well."

## The solution: private key generation based on Utimaco's HSM

Halcom's OneID aims to make life easier for both providers of digital services and their users. It is designed as a universal identifier that guarantees a great user experience, as well as top-notch security and mobility levels. OneID, the Halcom CA qualified digital certificate in the cloud enables natural and legal persons to store digital certificates issued by Halcom CA and associated private keys on Utimaco HSM devices. Those are used for remote signing of digital documents in XML or PDF formats, based on a What-You-See-Is-What-You-Sign user experience. This prevents fraud, such as Man-In-The-Middle or Man-In-The-Device attacks.

The Utimaco HSM enables secure use of the primary keys and a secure environment for their storage. This way, OneID provides the highest level of security for Halcom's issued qualified digital certificates. On the Utimaco HSM, Halcom is storing private keys of the CA and private keys of cloud certificates for end-users in order to enable fast, simple and safe two-factor authentication, regardless of the user's choice of a browser or an operating system.

## The implementation: securing the storage of private keys

The implementation process was fast, with the aid of the Utimaco HSM simulator, which creates low investment risk. Moreover, Utimaco was quick to respond and flexible in discussing the solution Halcom was interested in. Utimaco truly turned out to be the HSM provider of choice, above all for their flexibility and cost-efficiency.

"During the last year and a half since the beginning of our cooperation, there was no issues with hardware or software equipment", continues Marko Arhar, Head System Administrator at Halcom CA. "The huge benefit was also that they had already done various implementations with our PKI software provider (NeXus), which was crucial for us to get clear instructions ahead."

## About Halcom

Halcom is a leading European financial technology vendor catering to central and commercial banks. The company's one-stop-shop approach allows them to offer technology, infrastructure, support and advisory services, as well as deliver clearing and digital banking solutions out of one hand. Despite its wide product portfolio, Halcom has continuously pioneered innovative industry solutions and won multiple best-in-breed

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product awards over the years. Founded in 1992, today Halcom powers the operations of 2 central banks and clearing houses and 60+ commercial banks in 8 countries across EMEA. More info: [www.halcom.com](http://www.halcom.com)

### About Utimaco

Utimaco is a leading manufacturer of HSMs that provide the Root of Trust to all industries, from financial services and payment to the automotive industry, cloud services and the public sector. We keep cryptographic keys and digital identities safe to protect critical digital infrastructures and high value data assets. Our products enable innovation and support the creation of new business by helping to secure critical business data and transactions.

Founded in 1983, Utimaco HSMs today are deployed across more than 80 countries in more than 1,000 installations. Utimaco employs a total of 200 people, with sales offices in Germany, the US, the UK and Singapore.

For more information, visit <https://hsm.utimaco.com>