



ENTRUST

Certicamara verifies the accuracy of electronic records with time stamps

Using Entrust solutions, Certicamara helps the Colombian government prevent fraud and corruption with auditable digital time stamps.

Established in 2004, Certicamara provides secure online transaction processing solutions to businesses and government organizations within Colombia. Its customers have increasingly found that they needed a solution that not only verified the identities of servers and organizations in electronic interactions. They also wanted to be able to verify—using a tamper-proof method—when an interaction took place and that data within the transaction was not modified. In response to its customers' needs, Certicamara developed a time stamping service that uses the Entrust nShield® hardware security modules (HSMs) and nShield Time Stamping Option Pack to attest the time and origin of electronic records.

“For many types of electronic transactions, processes, and submissions, it is important to know the exact time that they occurred,” says Leonardo Maldonado, system administrator for Certicamara. “This is especially true for digitally signed electronic documents. Time stamping is the answer. Part of the Entrust portfolio provides the secure time stamping that enables our business and government customers to protect their processes from fraud and manipulation.”



The Entrust nShield Time Stamping Option Pack provides the secure time stamping that enables our business and government customers to protect their processes from fraud and manipulation. >>

- Leonardo Maldonado, Certicamara



THE ADVANTAGE OF TAMPER-PROOF APPLIANCES

Many business and official government processes are time-sensitive. With fines and fees, governments usually impose a deadline for payment. In traditional paper-based transactions, signatures and physical time stamps serve to authenticate when processes occurred. Electronic processes rely on a similar method, wherein a software application or a hardware appliance digitally signs electronic records with a time.

Not all digital time stamping methods are equally secure and easy to integrate. With software-based methods, digital stamps are issued by a server using a time source within the server. Both the stamp and time could be manipulated by a hacker or an insider. Appliance-based time-stamping is far more secure because stamp issuance and timekeeping take place within a protected, tamper-resistant environment that is validated to Common Criteria EAL 4+ and FIPS 140-2 Level 3 for security. Neither insiders nor hackers can interfere with the digital signing process.

PERFORMANCE MATTERS

Ceticamara tested a number of hardware-based time stamping solutions before selecting Entrust nShield HSMs together with nShield Time Stamping Option Pack.

Two factors convinced the company to select the Entrust solution. The primary reason was performance. In addition, Ceticamara has a long – and highly successful – history of using Entrust nShield HSMs. Chacon explains, “You don’t want a stamping process that slows a transaction. The Entrust nShield Time Stamping Option Pack stamps electronic records with a digital signature in about 10 milliseconds. Our other options could not match that, and slower processing would have negatively impacted the number of simultaneous users the system could efficiently support. Plus, we have used Entrust nShield HSMs to protect our user authentication processes for more than five years. They have provided problem-free security.”

EASY IMPLEMENTATION

The Entrust nShield Time Stamping Option Pack provided a Java and C language development framework for integrating time stamping into Ceticamara’s existing application environment. The Entrust nShield Time Stamping Option Pack supplies auditable and accurate time to the server. Now customers that use Ceticamara’s secure network for processing transactions and other electronic records can take advantage of time stamping too.



« **We believe that digital signatures and time stamps are actually more secure than paper and physical signatures. Handwriting can be forged, but the Entrust nShield Time Stamping Option Pack protects our signing process from forgery, manipulation, and tampering.** »

- Alex Chacon, Certcamara

“We were very impressed with the Entrust nShield Time Stamping Option Pack,” notes Chacon. “It made integrating time stamping with our business applications easy. It also allowed for flexible implementation. Today, our customers have the option of adding secure, auditable time stamping to all their processes or to specific transactions.”

STAMPING OUT CORRUPTION

Many of Certcamara’s customers immediately saw the benefit of securely verifying electronic records with auditable time stamps. For instance, Colombia’s Ministry of Transportation, a longtime Certcamara customer, added secure time stamping to its online vehicle registration process, and the Ministry of Finance opted to include secure time stamps on the online transactions it facilitates for Colombian financial institutions.

Time stamping is also enabling new processes. The government of Colombia is currently implementing a purchasing process that will use time stamps to help prevent corruption.

Government contractors will need to submit bids to supply goods and services through the Certcamara system. The Entrust nShield Time Stamping Option Pack will digitally sign each bid, making it impossible to bribe anyone to look at competing bids early or to fraudulently submit a bid after the official deadline.

“The Entrust nShield Time Stamping Option Pack will sign bids with a digital certificate showing the exact time they are submitted,” explains Maldonado. “No one will be able to manipulate the bidding rules. It’s a simple way to protect against corruption while enabling more efficient electronic processes.”

MORE SERVICES, MORE SECURITY

With its Entrust-powered time stamping services, Certcamara believes that it is better positioned to fulfill the need for accurate, auditable electronic records in Colombia.



Certicamara

BENEFITS WITH ENTRUST

- Providing auditable time stamping for electronic records
- Enabling efficient, cost-effective electronic processes
- Helping to prevent fraud and corruption
- Integrating time stamping with applications quickly and easily

“Time stamping is a simple way to verify many legally important aspects of electronic processes,” says Chacon. “It allows our customers to confidently move away from inefficient paper-based ways of doing business even for processes that must be auditable and verifiable. In fact, we believe that digital signatures and time stamps are actually more secure than paper and physical signatures. Handwriting can be forged, but the Entrust nShield HSM and nShield Time Stamping Option Pack protects our signing process from forgery, manipulation, and tampering.”

ABOUT ENTRUST

Entrust keeps the world moving safely by enabling trusted identities, payments and data protection. Today more than ever, people demand seamless, secure experiences, whether they're crossing borders, making a purchase, accessing e-government services or logging into corporate networks. Entrust offers an unmatched breadth of digital security and credential issuance solutions at the very heart of all these interactions. With more than 2,500 colleagues, a network of global partners, and customers in over 150 countries, it's no wonder the world's most entrusted organizations trust us.



Learn more at

entrust.com/HSM



ENTRUST