

Digital Signatures AND TRUST



In our previous article, we explained how modern-day digital signature technology is based on ancient security systems. In our example, we demonstrated how military commanders from one army could secure documents with their private lock. These documents were therefore restricted to only those who had access to a matching, shared (public) key that unlocked them, a method known as asymmetric key encryption. As an added security measure, only trusted staff could engrave a commander's lock (certificate) with his identity as a means to prove the origin (author) of the locked documents and to protect their content (integrity). However, no official safeguards were in place as to how the commander's key could be issued and managed meaning that it was more vulnerable to theft and forgery by those less trustworthy such as spies or, as they are known today, crackers and hackers. In this article, we will look at how trust is a fundamental component of digital signature management.

TRUST IS NOT TECHNOLOGY

The concept of trust is not a feature of the digital signature technology. Rather, it is the result of how its components are managed. In other words, trust implies how the keys and locks are issued, managed, and protected. It insists that those who issue keys and locks are trustworthy with the private information they administer. It requires that the name and contact information of the owner is engraved on the key and lock instead of attaching to them a simple name tag that can easily be removed or tampered with. This engraved information is referred to as a certificate because it contains certified information. Finally, trust also expects the public key to be protected against hackers.

NOTARIUS IS TECHNOLOGY YOU CAN TRUST

Trust is an integral element of the Notarius digital signature technology. In partnership with professional associations, companies or directly with individuals, Notarius works to ensure that all locks and keys are issued using certified information that is both correct and valid. Keeping user information up to date such as professional title designation or employee status is essential to managing the service effectively while maintaining a high level of trust. As a result, whenever a user is barred, fired, or suspended, or if they resign or retire, their new status is better enforced so that anyone who is not supposed to use a digital signature does not. Moreover, ID authentication is always required which is not the case of many other digital signature service providers who instead allow people to self-issue their own keys and certificates. This practice makes it easy for hackers to forge new keys and certificates using your credentials.

The infrastructure that Notarius uses to issue and manage digital keys and certificates is a protected environment that is certified ISO 27001:2005. The ISO 27001 standard stipulates that adequate and proportionate security controls must be selected to protect information assets, thus inspiring confidence in users and in the public.

Additionally, Notarius provides its users with all the necessary tools to effectively safeguard their private signature keys against unauthorized use. This is another important area in which Notarius distinguishes itself from other digital signature service providers. Again, many service providers, even those who take care to secure their infrastructure and have proper ID authentication processes in place, leave it to the end user to protect their private keys and certificates.

Information security and integrity have always been important issues. Today's business realities mandate that information be secure for matters of public safety, professional or contractual liability, and professional or business integrity. Until recently, handwritten signatures were trusted as the only valid mark of authentication for paper documents because their inherent uniqueness made them difficult to reproduce. Consequently, many still question the need to collectively switch to digitally signed electronic documents. In our next article, we will explore the benefits of changing over to digital signatures.



For more information, contact us by phone at 1-888-588-0011.
sales@notarius.com

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SIGNATURE