

EVIDEN

Code Signing

Protect software delivery with code signing by IDnomic Sign

IDnomic Sign is an overall solution to create and verify electronic signatures for code signing. It manages all the lifecycle of cryptographic keys and provides a complete API for seamless integration into industrial systems.

A platform for industrial code signing

Code signing is a security practice where a digital signature is applied to software code to verify its authenticity and integrity. Industrial companies rely on code signing to ensure that the software running their critical systems has not been tampered with or compromised. This safeguards against malicious attacks, and unauthorized modifications and ensures the trustworthiness of the code.

Malicious attacks can seriously jeopardize essential services in industrial companies, and according to a UL publication, "firmware has historically been one of the most over-

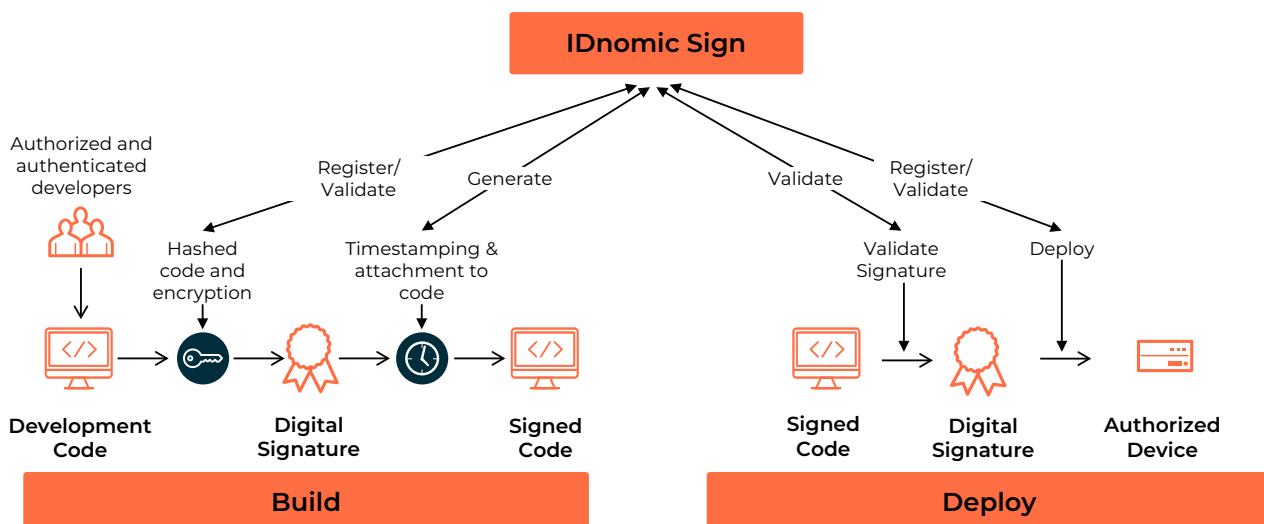
looked aspects of device security, making it particularly vulnerable to bad actors."¹

The National Vulnerability Database maintained by the U.S. National Institute of Standards and Technology (NIST) shows that attacks on firmware have risen by 500% since 2018.

A Microsoft-commissioned study found that 83% of enterprise IT decision-makers have had their systems hit with a firmware attack in the past two years but that only 29% of the average security budget is dedicated to protecting the firmware level.²

By confirming the source and integrity of software through code signing, industrial companies enhance the overall security of their operations, mitigate risks of cyber threats, and maintain the reliability of their industrial processes.

IDnomic Sign offers our customers a flexible, highly secure, and robust platform for industrial code signing, available as on-premise solution or cloud-based "as a service" and supporting all major signature standards.



1. UL NEWS STORY, 14/12 2021

2. <https://www.embedded.com/staying-ahead-of-rising-firmware-attacks/>

Case study

Our client, a top player in transportation and high-speed train manufacturing, has implemented cybersecurity to protect train and rail device firmware. To ensure a robust solution, the company opted for “Code Signing as a Service” for secure code deployment in complex infrastructures prioritizing safety. Teaming up with IDnomic PKI for digital identity management, IDnomic Sign ensures code integrity during device updates, preserving the firmware’s original state.

IDnomic Sign server

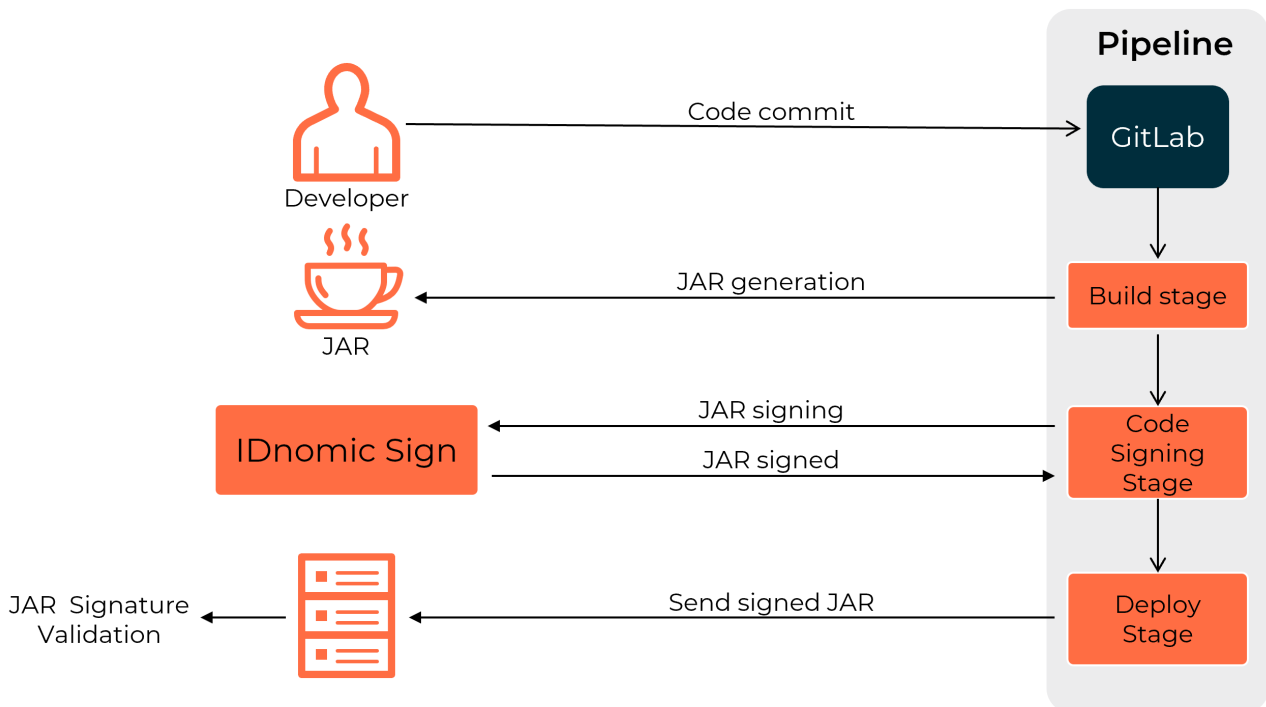
The IDnomic Sign server offers companies the means to implement a secure and centralized electronic signature strategy:

- Lifecycle management of signatories’ cryptographic keys, in order to carry out a remote electronic signature
- Definition by the company, depending on degree of sensitivity, of the signature policy to be applied (formats, signature algorithm, key length, etc.)
- Creation of signatures for legal entities (electronic seal mode) or personal signatures

This server is accessible in Web-services mode (REST API), enabling the electronic signature to be in line with the company’s business applications. The signature server also offers a signature portal which can be used directly by authenticated users on the server to sign and verify documents and to manage signature keys and preferences.

Code signing formats and usage

Today, as there are still lots of proprietary custom formats, IDnomic Sign server allows to perform a raw signature. As part of our roadmap, we plan to have jar, rpm, docker container, azure signature capabilities in specific and easy to use Web services.



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