

Versatile and Scalable Code Signing for a software development powerhouse

Overview

This case study focuses on the CodeSign deployment for one of world largest multinational software company having a need of scalable solution to make code signing to be simple and easy to use by multiple teams.

Aujas Solution

Aujas CodeSign offered an automated code signing solution with easy integration and options to submit file signing parallelly, easily extendable & scalable having a secure key management along with role based secure access.

- ✓ **Signing ~12 million files per year**
- ✓ **Tightly integrated with build process, signing process is leak free**
- ✓ **Enterprise-grade malware scanner to inspect files for malware**
- ✓ **Cross platform and multiple certificate (standard, EV and self signed certificates) support**

Introduction

One of the world's largest pure-play enterprise software company building a range of software from variety of desktop applications to mobile applications serving clients across the globe supporting multiple domain ranging from Banking, Telecom, Automotive, Finance and many more.

The company has over ~ 40,000 customers worldwide providing innovative digital products, transforming various businesses from various domain.

The Business Need

Being one of the world's largest enterprise software provider, it is essential that the release/update received at the customer's end are authentic. Despite various security controls and processes in place, conclusively proving and establishing the authorship of the code has been elusive and require circuitous methods to survive audits.

Signing software cryptographically establishes the authorship of the software and provides assurance that software has not been tampered with post release along with the traceability of authorship.

Code signing is effective way of doing so but the code signing process should be secure, scalable and leakage proof.

Organization realized the need of an automated and centralized Code signing system which is essential for the success of the code signing process.

The business required a robust solution to make code signing to be simple and easy to use by multiple DevOps teams, with easy workflow approval to do quick signing of different file formats concurrently and scanning for Malware/Virus before signing.

- 1. Developer Friendly Code signing solution** – A robust solution to make code signing simple and easy to be used by multiple DevOps teams across the organization. A solution that can centralized the Code Signing process at organization level with securely maintaining the signing keys along with simple workflows with ease of enforcing the code signing policies across the organization.
- 2. Comprehensive file type and OS support** – As variety of software application and products are built and supported, signing was required for different file formats like Windows, Windows, rpm, GPG signing, Android, iOS, Docker, Windows native driver files, etc.
- 3. Signing large volume and large size files** – A solution for signing files large up to 5 GB and is capable of handling average volume more than 10 million per year
- 4. Processing multiple files at the same time** – A system capable of parallel processing multiple files, supporting multiple formats efficiently with high throughput and stable performance at the same time.
- 5. Malware scanning before signing** – Solution with inbuilt capability of scanning each and every file for malware before proceeding with code signing. A leakage proof system with a zero probability of a single file missing the scanning process and moving ahead with digital signing. As the organization wanted to make sure that every product/software/update released to their customer is entirely safe, authentic and free from any malware, spyware, virus or more.

About Aujas



- An NSE Group Company
- World's 2nd largest stock exchange



- North America | EMEA | Asia Pacific
- 23 countries
- 600 cybersecurity engineers



- Security Engineering
- Application Security
- Managed Detection and Response
- Risk, Compliance and Data Protection
- Identity and Access

Aujas Solution

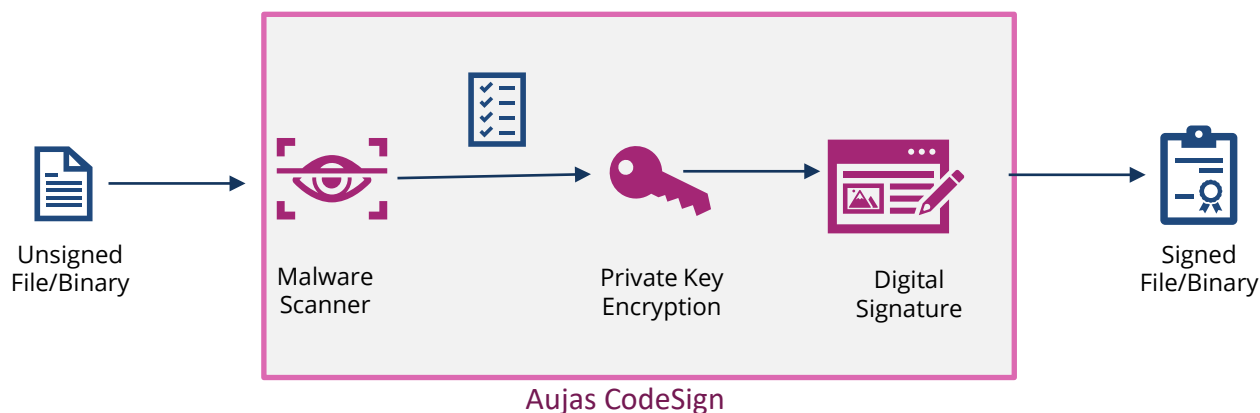
CodeSign by Aujas is a **secure, automated, and DevOps ready solution** that ensures **the integrity of software applications, protects the signing keys, with full audit trails, and helps combat malware..** CodeSign once integrated with the DevOps pipeline of the customer established authorship of software, provided assurance and certified that software has not been tampered with post release.

Aujas CodeSign offered a SaaS based solution with **easy CLI integration** and option to **submit file signing parallelly** supporting large files. Aujas's solution built using microservice based architecture was easily extendable and scalable based on the customer's demand. CodeSign integrated CloudHSM to secure the keys used for code signing and supported **fully automated monitoring & alerting of cloud infrastructure.**

As a result, the code signing process for the company became far more **efficient** while remaining **secure.**

Salient Features:

- Fully Automated code signing solution
- Build & Release Integration
- Windows, Linux, and MacOS Support
- Over 50 filetypes supported. Plugin based support for new file types.
- Includes Basic signing, GPG signing, Force signing, Append signing, MAGE, WHQL and many more!
- Integrated Malware Protection Scan
- Certificate and Key Management
- Support for HSMS & secure key management
- Built-in Workflows and Audit Trail of approvals and signing actions



Aujas CodeSign solution workflow

Benefits and Learning

Aujas CodeSign solution helped in providing the guarantee to the end user that enterprise software (provided by our customer) running in their production server is **authentic and inspired confidence in the end user.**

CodeSign is seamlessly signing average **1 million files per month** of various sizes and types.

CodeSign is tightly and **seamlessly integrated** with build process which made the **code signing activity invisible for the DevOps and development teams** hence the signing process is neither an overhead for development teams nor it slows down the DevOps process.

CodeSign by Aujas not only made the signing software, updates or executable easy but also took care of **policy enforcement, access control, certificate management, secure key storage, and provides a one-stop solution** for all application code signing needs irrespective of file types and platform.

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