Document Sealing

Build strong evidence of document integrity, authenticity, and non-repudiation using Entrust Verified Signing Solutions

OVERVIEW

What is document sealing?

Document sealing means applying a digital seal on an electronic document – usually a PDF. A digital seal is also called a corporate signature, business signature, or company signature. It's the electronic equivalent of rubber-stamping a document.

The sealing process may be manual (operated by a person using an application) or automated (triggered by a back-end system as part of a workflow).

Why digitally seal documents?

There are two main use cases:

1. **For document authenticity** (verifying the document belongs to your organization), integrity (verifying the content has not been modified) and non-repudiation (so the document's existence cannot be denied).
2. **As part of an electronic signature process** – The signatories' signatures must be recorded in an audit trail, but you can also add a digital seal, either for each signatory once they sign, or on top of the e-signature(s) of your documents, as a way to "close" the document when all signatories have signed.

Use Cases

- Quotes and invoices
- Bank statements
- Contracts and agreements
- Utility bills
- Tax declarations and other tax-related material
- Permits and licenses
- Certifications, accreditations, and diplomas
- Corporate communications
- Blueprints and related engineering or architecture documents

Learn more about Entrust Verified Signing Solutions at entrust.com

Document Sealing

KEY FEATURES & BENEFITS

Improved document security

A digital seal acts like a digital padlock on a PDF document. Once it's in place, any modification of the content will invalidate the seal, leaving a visual proof of document tampering.

Better document control and ownership

Digital seals are generated using a trusted digital certificate, which contains verified organization details. Your corporate name and address will be embedded into each PDF document you seal.

Stronger evidence in case of dispute

Digital seals and timestamps on PDF documents that use the long-term validation (LTV) standard give a strong proof of the existence of the document from the exact date and time it was timestamped. This proof sits within the document and can be checked by anyone using a compatible PDF reader such as Adobe Acrobat Reader.

Alignment with eIDAS

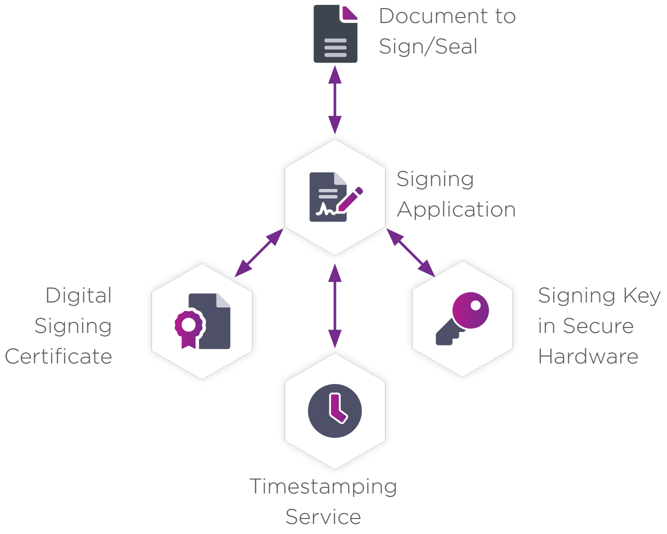
Entrust is an eIDAS-Qualified Trust Service Provider (QTSP). We can help you generated advanced seals using qualified European Union Trusted Lists (EUTL) certificates.

HOW IT WORKS

How does document sealing work?

Document sealing is a cryptographic operation on a document. It requires the following elements:

- A **document to sign/seal**, in a format that supports digital signatures/seals (PDF is the global standard)
- A **signing application** or a toolkit to generate the signature
- A **digital signing certificate** (also called document signing certificate) issued by a public certification authority (CA), or in the EU, a Qualified Trust Service Provider (QTSP)
- Digital certificates are based on public key infrastructure (PKI) and are linked to a **signing key** (also called a private key), which must be generated and stored in **secure hardware** such as a secure USB token or a hardware security module (HSM)
- A **timestamping service**, based on timestamping certificates



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Document Sealing

DEPLOYMENT MODELS

Choose the model that's right for you

Entrust has all the components, expertise, and services to help you build your ideal sealing process.

CLOUD-BASED SERVICE

Use an out-of-the-box cloud-based document-sealing service using Entrust's publicly trusted certificates and timestamps

- No expertise required
- Pay per use
- Scalable
- Quick deployment

ON-PREM SOLUTION

Design your on-premises, automated document-sealing service using your own certificates

- Full control of hardware
- Perpetual licenses
- Data remains in your environment

HYBRID MODEL

Use a mix of on-premises and as-a-service solutions for a custom deployment

- Keep control of your core infrastructure
- Leverage Entrust's public trust services

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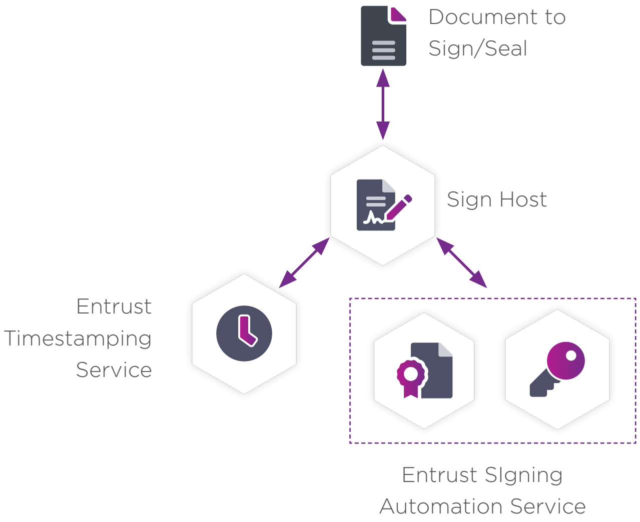
Document Sealing

Entrust cloud-based document sealing service

Our cloud-based document-sealing service uses trusted certificates and timestamps issued by Entrust's public CA and/or QTSP services. Each component of the service can also be sold separately to upgrade or replace an existing service.

- **Sealing workflow:** Managed by Signhost
- **Digital certificate:** Issued by Entrust, stored in Entrust Signing Automation Service
- **Signing key storage:** Managed by Entrust Signing Automation Service
- **Timestamping:** Provided by Entrust Timestamping Authority


Document to Sign/Seal
Sign Host
Entrust Timestamping Service
Entrust SIgning Automation Service

Features and options

Access to the service

Documents can be submitted manually via Signhost's web portal, or automatically via Signhost's REST API. Alternatively, third-party workflows can submit document hashes to be signed directly to the Signing Automation Service using a PKCS #11 connector or a REST API.

Digital certificate type

By default, Signhost comes with a generic (Entrust-branded) Adobe-trusted certificate for document sealing. We offer the option to use a custom certificate issued under your organization's legal name via the Entrust Signing Automation Service.

Certificate types available in the Signing Automation Service:

- Standard, Adobe-trusted certificate (AATL)
- eIDAS-qualified certificate (EUTL) for EU eIDAS advanced seals

Seal type

All digital seals are generated based on the PAdES and long-term validation (LTV) standards. They are trusted by Adobe and considered advanced seals under the EU eIDAS regulation.

Timestamping service

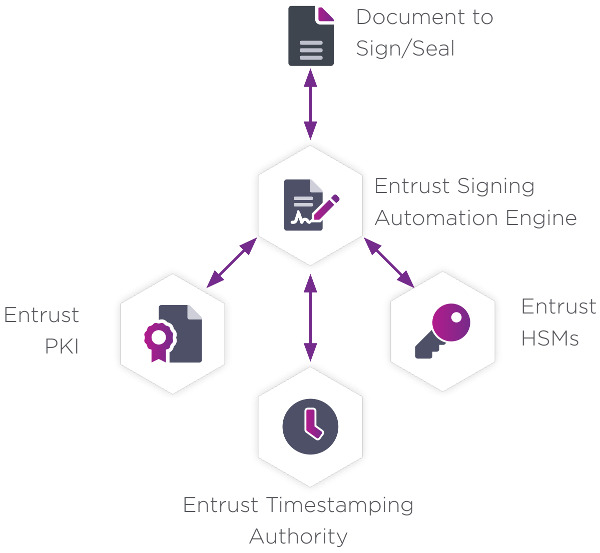
Timestamps are issued by Entrust. We offer a "standard" public timestamping service, as well as an EU eIDAS-qualified timestamping service.

Document Sealing

Entrust on-premises components for document sealing (build your own service)

Entrust provides all the individual components (on-premises software) to build your own digital signing service. Each component can be sold standalone to upgrade or replace an existing infrastructure.

- **Sealing workflow:** Managed by Entrust Signing Automation Engine
- **Digital certificate:** Issued through Entrust PKI Solutions
  - PKI: Entrust Certificate Authority
  - OCSP: Entrust Validation Authority
- **Signing key storage**: Managed by Entrust hardware security modules (HSMs)
- **Timestamping:** Provided by Entrust Timestamping Authority


Document to Sign/Seal
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Features and options

Access to the service

Entrust Signing Automation Engine supports multiple communication protocols, including SOAP and REST web services, Java SDK, and SAML

Digital certificate type

Fully customized certificates

Seal type

Multiple standards available: PAdES, XAdES, and CAdES standards, including document, email, and web services signatures

Timestamping service

Deployed in alignment with timestamp protocols IETF RFC 3161 and RFC 5816

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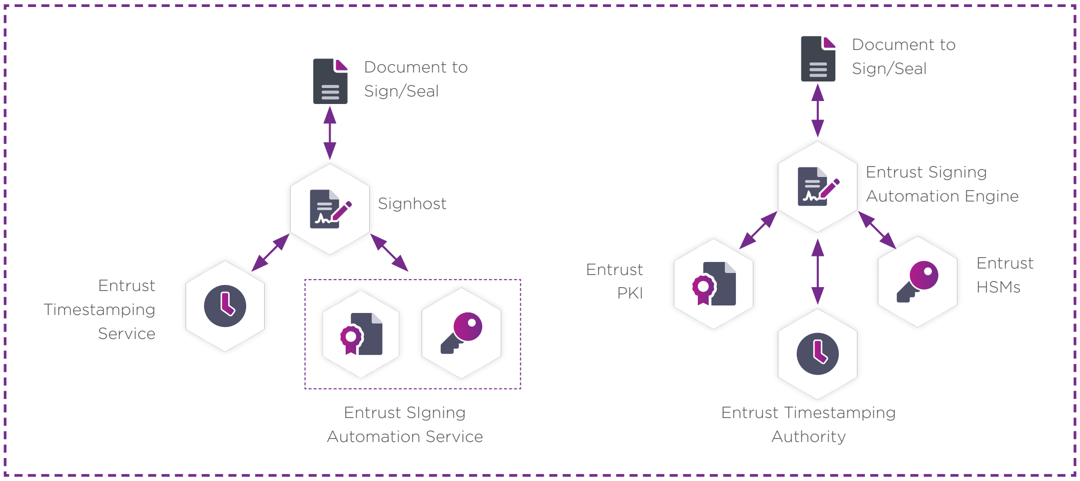
Document Sealing

Entrust hybrid model for document sealing

Use a mix of our cloud-based as-a-service offering and our on-premises solutions for a custom deployment.



Document to Sign/Seal

Signhost

Entrust Timestamping Service

Entrust SIgning Automation Service

Document to Sign/Seal

Entrust Signing Automation Engine

Entrust PKI

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THE ENTRUST ADVANTAGE

Our certifications

No other vendor has Entrust's combined portfolio and expertise. We go through stringent audits and accreditation processes to ensure that our signing solutions are trusted.

We are:

A **publicly trusted certification authority** (CA)

An member of the **Adobe Approved Trust List** (AATL)

An EU **Qualified Trust Service Provider** in the EU Trusted Lists (EUTL)

A member of the **Cloud Signature Consortium** (CSC)

Certification Authorities WebTrust

Adobe Approved Trust List Member

CLOUD SIGNATURE CONSORTIUM

Learn more at
entrust.com

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