Case study

Paperless Transformation of an Energy company using emSigner

eMudhra helps an Energy company go paperless and manage and streamline critical processes with ease

Industry
Energy Industry

Business Matters
An Indian multinational company which caters to nearly 30% of India's crude oil demand goes completely paperless by using emsigner's Digital Signature and Workflow capabilities for digitally signing invoices, accounts payable and operational purchasing documents and integrate it with company's existing ERP system

Business Needs
The company wanted to set up digitally signed documents pertaining to operational purchasing, accounts payable and invoices within their existing ERP system while ensuring data integrity, signer authenticity, and regulatory compliance.

Approach
The company should be able to use emSigner with the capability of having the multi-party and real-time signing of invoices. In a phased manner the organization would integrate all its internal as well as external applications with emSigner to facilitate the signing of all other documents.
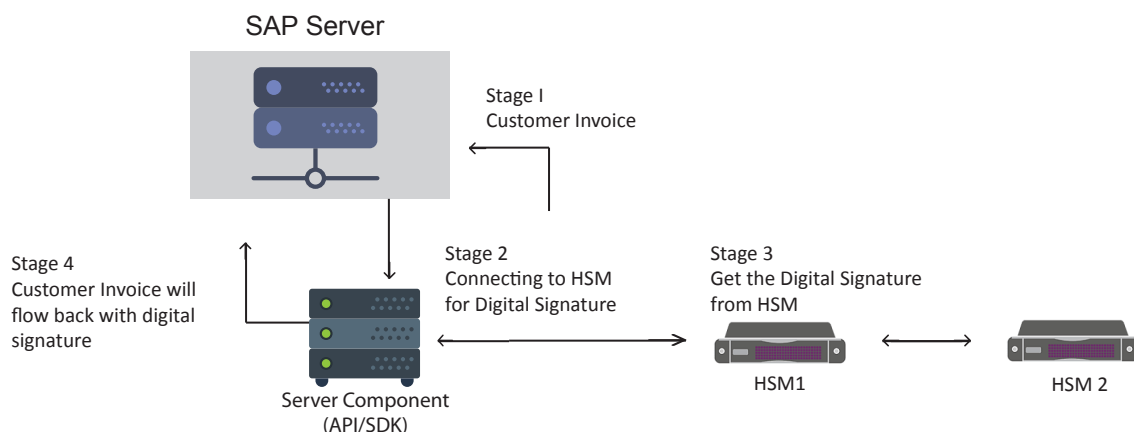
Background
Invoice Details generated during dispatch of product from various facilities across the supply chain required multiple authorities' signature. Each party across the network had to maintain a physical copy of same. This was not only time consuming but also error-prone. Moreover, retrieval of physical documents for a company working on such a large scale was an uphill task.

eMudhra outlined the following key areas where emSigner combined with Digital Signature would significantly improve and streamline the document process of the company

- emSigner would be integrated with the company's existing ERP system using Web services API's

- Digitally signed documents would be instantly archived and retrieved as and when required. This would prevent manual intervention and misplacement of documents

- Departments/Location Managers would be able to approve requests digitally and track real-time status of signature progress. It would be classified into Signed/Pending/Completed/ Declined.This will lead to accurate compliance reporting

Flow Chart Depicting Proposed Solution

SAP Server

Stage I
Customer Invoice

Stage 4
Customer Invoice will flow back with digital signature

Stage 2
Connecting to HSM for Digital Signature

Stage 3
Get the Digital Signature from HSM

Server Component
(API/SDK)

HSM1

HSM 2

emudhra
Trust Delivered

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Digital Signature Technology

The Digital Signature Technology works on the Public Key Infrastructure framework which uses a Cryptographic Key Pair – Private and Public Key for secure access and transmission of Information.

Digital Signatures is generated by the issuer for the client in a secure device.

Digital Signature provides the following benefits:

a) Non- Repudiation
b) Integrity
c) Authentication
d) Privacy & Confidentiality

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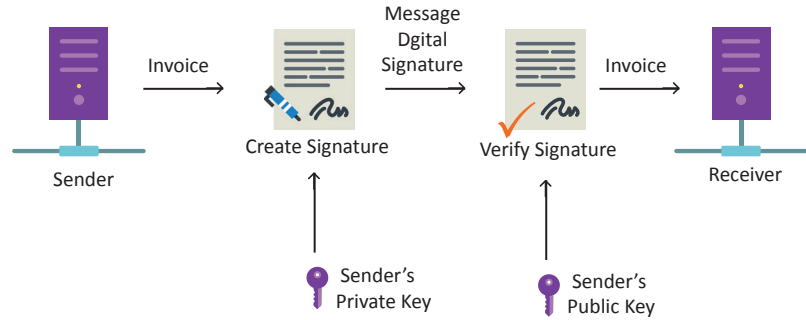
Benefits

The company reaped significant benefits by implementing digital signature based workflow signing.

This includes

- Legal non-repudiation thereby reducing frauds

- Signing and approving documents anywhere, anytime

- Faster turnaround time, increased employees efficiency, productivity, and transparency

- Meeting compliance & regulatory requirements

- Online and Offline signing capabilities

- Importing files from multiple clouds and file storage services like Dropbox, Google drive into emSigner

- Tracking real-time status of signature progress happening on documents initiated for signing

Solution

eMudhra implemented emSigner – Secure Paperless Office solution to enable Digital Signature based approvals for the following workflows

- External flows between dealers and company

- Internal flows between finance and legal department

emSigner was integrated with the company's existing ERP software over Webservices API for digital signing of documents

- For individual signing, individual digital signature certificates were issued to Authorized Signatories

- For Bulk Signing, Class 3 Document Signer Certificate was used which gives a higher risk assurance to relying on parties for a critical use case such as Invoice Signing

- From a security and risk standpoint, a Hardware Security Module was used to store the Class 3 Document Signer certificate

The paperless office solution uses following broad modules:

- **emSigner**
  On-premise Digital Signature enabled workflow management solution used for defining paperless workflows

- **Hardware Security Module:**
  Protect the cryptographic infrastructure of some of the most security-conscious organizations in the world by securely managing, processing, and storing cryptographic keys inside a hardened, tamper-resistant device

- **Class 3 Document Signer Certificate**
  To sign critical documents such as invoices

- **emAS**
  eMudhra authentication server which was used to automatically validate the signed documents that were received by the organization
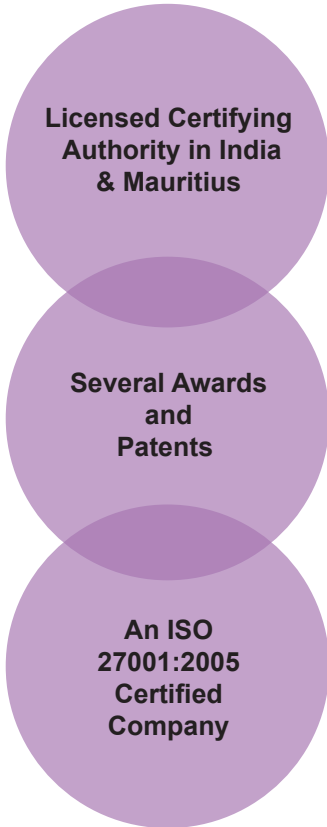
About eMudhra

eMudhra is a technology and digital identity and transaction management company providing solutions which ease financial and statutory needs of consumers. eMudhra was established in 2008 and is a Certifying Authority in India and Mauritius to issue Digital Signature Certificates.

eMudhra's current enterprise and consumer solutions include Digital Signature Certificates, emSigner – Paperless Office Solution, emAS – secure multifactor authentication for banks, emCA for Digital Signature issuance and management and emStream – Voice of Customer Analytics using Semantics.

eMudhra is a market leader in India and has worked with large Banks, Financial Services companies and several Government agencies in India to implement Digital Signature based solutions which include secure access and paperless workflows.

eMudhra won the e-Asia award, an award given by AFACT (A United Nations body) for implementing Digital Signatures based on India's National ID – AADHAAR to bridge Digital Divide.

Licensed Certifying Authority in India & Mauritius

Several Awards and Patents

An ISO 27001:2005 Certified Company

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