



India Updates

Asia PKI Consortium: Special Steering Committee Meeting

Indian Digital Certificate Userbase

- 1 10 Million+ DSC (Long Lived Certificate) Users
- 2 210 Million+ eSign (Short Lived Certificate) Users and growing.
- 3 National Regulator: Controller of Certifying Authorities
- 4 15 Certifying Authorities licensed by Government
- 5 Adopted across the Industry for e-Governance, Banking, Finance, Corporate / Enterprises, etc

Key Features of eSign

- Regulated common set of APIs by Government Regulator
- Wide implementation with numerous signing applications and use cases.
- Short Lived Key Pair, and Short Lived Certificates (30 minutes validity), LTV with CRL

Enrolment / Authentication / eSign Cost

UIDAI / Aadhaar based: v2

- 1.32 Billion Enrolments (96%+ Population)
- Easy Authentication with Aadhaar (National ID) + OTP
- Cost: USD 0.12 per transaction
- Used by one-time signers

CA/TSP acting as KYC Provider (Since 2019): v3

- 4 Mn+ Enrolments. Seamless online enrolment with 5-10K+ users everyday.
- Easy Authentication with PIN + OTP, FIDO, Mobile App, Registered Device, etc
- Cost: USD 0.08 per transaction
- Used by repeated signers

Moving towards online signatures

	DSC in USB Token	eSign (v2) - Aadhaar	eSign (v3) - CA KYC
Certificate Type	Individual / Organization Individual	Individuals	Individual / Organization Individual
Enrolment	Online Paperless Video	Not Required. Aadhaar.	Online Paperless Video
Integration	Client system integration	Online integration (Gateway)	Online integration (Gateway)
Dependency	Desktop OS and crypto token is required	Hardware independent	Hardware independent
Auth / Password	Local Auth. Max 10 failed attempts, certificate reissuance.	Aadhaar OTP Authentication. (needs Mobile seeding)	2FA Online Auth With password reset options
Key Loss	Reissuance if token gets lost.	Not Applicable	Not Applicable
Hardware cost	Yes	No	No
OS Support	Limited OS support by token vendors		
Troubleshooting	Driver and other troubleshooting required	High availability of service	High availability of service
Timestamping and LTV	Signing time from user system	Supported	Supported
Bulk signing	Based on client system configuration	1 documents/transaction	5 documents/transaction
Sign using mobile	No	Yes	Yes
Userbase	10 million+	210 million+	4 million+

India: Major Use Cases of Digital Signature

Use Case	Digital Signature	Adoption
GST Return Signing	JSON data signing	3 - 4 Mn / Mandatory
Income Tax Return Signing	Document Hash / Text data signatures	Large use case
MCA Return Signing	PDF Signature	Large / Mandatory
Tax Letters (IT/GST) / Aadhaar	PDF Signature	Less Signers, More Docs
Tendering Portals	Document Hash / Text data signatures	Mandatory
UIDAI (AUA/KUA/etc)	XML Signatures (xml-dsig)	High Volume
Banking Transactions	XML / Text data signatures	More Transactions
G2B / G2C	PDF Signatures	Increasing
B2B / B2C	PDF Signatures	Increasing
Emails	SMIME CMS Signatures	Low adoption

Other Developments

- Regulator has introduced Remote Key Storage related guidelines.
 - This enables HSM providers and CAs to enable long term key storage on cloud / on-premise HSMs.
 - This provides assurance of Sole Control of the Key by the Individual.
- E-Stamping process.
 - India is also taking big leap towards e-stamping process.
 - E-stamping is an essential process in digital contracts.
 - Digitally signed government stamp document can be generated and used by the parties.
 - The process is enabled and protected by PKI



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