

e-Filing Tax Returns Made Secure and Trusted



TATA CONSULTANCY SERVICES

Though the Internet can substantially increase ease and convenience, online information exchange without stringent security mechanisms has its associated risks. The Income Tax Department of India introduced e-filing of returns to make the filing process easier for taxpayers. Public Key Infrastructure ensured authentication, data integrity and non-repudiation in the entire e-filing process.

| Profile

The Income Tax Department (ITD) of the Ministry of Finance, Government of India, is committed to providing world-class services to taxpayers in the country, making tax compliance easy and convenient.

| Business Situation

One of the initiatives of the Income Tax Department was the introduction of electronic filing (e-filing) of returns to make the filing process easier for taxpayers as well as to reduce the time required for data entry on receipt of applications.

| Solution

Public Key Infrastructure (PKI), the prime enabler for securing the flow of information on the web, ensured authentication, confidentiality, data integrity and non-repudiation in the entire e-filing process.

| Benefits

Filing returns online was more convenient than before. Security measures like integration of Digital Signatures guaranteed authenticity of the electronic data, ensuring that no party repudiated the transaction.

The Income Tax Department collects tax at least cost, performs allotted duties warranting the highest degree of public confidence while ensuring integrity, efficiency and fairness of the collection machinery.

Taxpayers submitted their income details to the department directly or through intermediaries. On receiving the required documents, assessing officers sent acknowledgements either to taxpayers or to intermediaries, as the case was. Manual steps led to duplication of efforts, making the filing process error prone and time consuming.

The department wanted a system that would make the process of filing tax returns easier for taxpayers as well as reduce the time required for data entry at their end on receipt of the returns. Enabling the filing of returns over the Internet was the most viable answer to the department's needs.

Ensuring security at every step

Though the Internet can substantially increase ease and convenience, online information exchange without stringent security mechanisms has risks associated with each step. Maintaining data confidentiality in a protected transaction environment with authenticated user profiles is of utmost importance in any such critical online process as returns filing. Capturing the authenticity of processing, approving, securing document storage and file retrieval need foolproof methods for a secure transaction to take place.

While the service would be beneficial to the taxpayers, the department had to create an environment wherein the user would feel secure about filing his returns online. With a population that was largely not tech savvy, the success of the entire exercise hinged on whether the department could create a sense of comfort in the users' minds.

In order to provide a quick, secure and cost effective method for the electronic filing of tax returns, the department had to choose a solution that could be supported with its applications, was flexible, secure and easy to use.

Transactions over the Internets have to maintain confidentiality, user authentication, data integrity and non-repudiation. TCS-CA, with its services and products, enables the entities involved in electronic communication to enhance their security environment by undertaking strong security measures through PKI based digital signature technology.

Integration of Digital Certificate technology

The Public Key Infrastructure (PKI) services and products of TCS Certifying Authority (TCS-CA) provided a comprehensive solution for the department's requirements. A solution for strong authentication and integrity of the documents using Digital Certificate-based technology was implemented, which also facilitated a strong access-control mechanism for documents.

The e-filing application was PKI enabled to incorporate digital signatures. Using this tool, the intermediaries would be able to digitally sign documents from any place. The digital signature verification would be done at the department automatically without any human intervention on a 24x7 basis. The digital

About eSecurity Group

The eSecurity Group in the Advanced Technology Centre (ATC) carries out research and development in several areas broadly related to secure communication, encryption and PKI (Public Key Infrastructure) technology. In addition to implementing the latest cryptographic algorithms such as Elliptic Curve Cryptography (ECC), engineers at ATC have developed an entire gamut of PKI related products and solutions. Foremost among these is a complete Public Key Infrastructure (PKI) suite called "Dhruvam", for the issuance of digital certificates, generation and verification of digital signatures, and other aspects of secure transactions.

TCS is a licensed Certifying Authority (CA) and is authorized by the Controller of Certifying Authorities (CCA), Government of India, to issue legally valid digital certificates. Through its Trust Network, TCS-CA provides PKI Services to individuals, companies and government organizations.

About Tata Consultancy Services

Tata Consultancy Services (TCS) is among the leading global information technology consulting, services and business process outsourcing organizations. Pioneer of the flexible global delivery model for IT services that enables organizations to operate more efficiently and produce more value, TCS focuses on delivering technology led business solutions to its international customers across varied industries.

Contact

Tata Consultancy Services Ltd
[Certifying Authority - PKI Services]
Advanced Technology Centre
DeccanPark, 1 - Software Units Layout
Madhapur, Hyderabad 500 081, India
Phone (O): +91 40 66673525
Fax: +91 40 66672222

helpdesk@tcs-ca.tcs.co.in
www.tcs.com

certificates secured the information being transferred and ensured total privacy, integrity and security, through encryption and decryption mechanisms with full acknowledgement and non-repudiation techniques. Authorized personnel from the intermediary banks who performed the online IT returns filing on behalf of the taxpayers were issued Digital Signature Certificates by TCS-CA. The online submissions from these authorized personnel carried legally valid digital signatures as per the Indian IT Act, 2000.

e-Filing helped furnish electronic returns through authorized intermediaries who were called "e-Return Intermediaries". Response time for processing the returns as well as claiming refund dropped significantly. Duplication of efforts was eliminated since data entered by intermediaries was already available in the system for any time use and reference. The online process did not require the taxpayers to be physically present for filing their returns.

Flexibility with the tool

Flexibility of the FormSigner tool made it easy to adapt and integrate with server side applications and web browsers. It could be invoked by web pages to digitally sign name-value pairs in online forms and to submit the information to the server. Consequently, the server would verify the information before accepting it. Thus, issues such as unauthorized access during information transit, data tampering, and denial of involvement were addressed effectively with PKI based solutions making e-filing of returns a secure web based process.

With the integration of FormSigner with ITD's application, authenticity, non-repudiation and integrity of electronic documents was ensured, bringing in the desired security level. Reduction in paper-based transactions minimized costs. Sending documents in electronic format, filing returns and subsequently sending reports as a file became easy.

Increased efficiency and convenience

Filing returns online was more convenient than before. The online system was available 24x7 and hence had no time constraints. Web screens made the process easy for users too. Security measures like SSL (Secure Socket Layer) and 128-bit encryption guard the safety of the data and information. Digital Signatures being treated equivalent to physical signatures, guaranteed authenticity of the electronic data, ensuring that no party repudiated the transaction, while protecting the data against any fraudulent changes.

Thus, complex paper based processes were streamlined resulting in increased efficiencies, reduced costs & an overall increase in the taxpayers' comfort.