

PKI Ensures Fair, Fast and Secure e-Procurement

**TATA CONSULTANCY SERVICES**

Introduction of electronic tendering has led to transparency of the procurement process, while bringing in benefits of Internet connectivity of anytime/anywhere access. Managed PKI Services and PKI-Enabling technology provided an out of box solution that brought convenience and security in a completely digitized e-Procurement system.

| Profile

Catering to nearly all the industry segments, Applitech Tendercity shares information rights from issuing to bidding of tenders. The site successfully hosts tenders of over 7000 companies from all over India including Delhi Jal Board, Bharat Sanchar Nigam Limited, IFFCO, MTNL and VSNL.

| Business Situation

Every year Tendercity tracks over a lakh tenders floated annually. A web-based system promised a convenient, fast and smooth tendering process. Given the security concerns associated with online transactions, it was imperative to ensure a secure and tamperproof web application for e-Procurement.

| 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-procurement process.

| Benefits

Improved efficiency, reduced processing time, access to procurement information and reports, a ready database were achieved from this secure web based application. Increased transparency brought in fair, free and fearless participation.

Tendercity, the e-Procurement specialist

Launched in 2000, Applitech Tendercity, an e-Procurement specialist hosts and maintains India's 'Most Preferred e-Procurement Zone' (www.mpez.net), which has successfully enabled Rs. 2.5 billion worth of e-Procurement. It is also a popular site across the tendering and bidding lobbies of the country. The site serves as a platform to carry through the process and helps both the authorities and bidders in smooth execution of the tendering process. Additionally, Tendercity also maintains websites of major government bodies like Sardar Sarovar Narmada Nigam Limited, Gujarat Housing Board, Gujarat Water Supply and Sewerage Board, Ahmedabad Municipal Corporation and Gujarat State Police Housing Corporation.

Tendering is the most preferred route of procurement among government departments and public sector units. The tendering process does almost 90% of the procurement. Every year Tendercity tracks over a lakh tenders floated annually. The need was to completely digitize the process of tendering, which would help achieve maximum transparency, reduce operational costs and time, and eliminate cumbersome paper work, thus bringing efficiency in the steps involved. With a web-based system, e-10, that promised a convenient, fast and smooth tendering process, came issues of security.

e-Procurement system replaced the outdated evaluation process, which was not only prone to errors but also cumbersome, time consuming, laborious and expensive. Tendercity supports the modules of E-Tendering, E-Auction and E-Catalogues.

Risks in e-Tendering

Given the high stakes involved in bids and tenders, ensuring fairness and accountability yet maintaining confidentiality of bids and vendors in the process are of paramount importance.

Tata Consultancy Services - Certifying Authority (TCS-CA) worked on a Managed Public Key Infrastructure (PKI) technology solution to remove security related bottlenecks. Managed PKI Services provided an out of the box solution for generation, distribution and management of Digital Certificates for end users. A completely scalable, web-based solution, this involved no additional development and had minimal set up time.

Managed PKI Services and PKI-Enabling provided security to Tendercity's web based e10 E-Procurement application. TCS' FormSigner was integrated seamlessly with the existing e-10 application to provide integrity, authenticity and non-repudiation for online transactions.

Digital certificates integrated

Under Managed PKI services, Tendercity became a Registration Authority (RA) under the TCS-CA Trust Network. Tendercity was then able to issue digital certificates to various users. With the PKI-Enabling of the e10 application using TCS' FormSigner, e-Procurement participants would be able to use their digital certificates to digitally sign tender documents, technical and price bids. These legally recognized digital signatures would tie each transaction to its owner

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

and ensure that bids/tenders were not tampered with after submission. Digital Certificates would also be used to facilitate secure login ensuring that only legitimate users are allowed access to confidential information. The PKI-Enabling of e10 therefore facilitated the use of Digital Signatures to secure access control and transactions in e-Procurement.

Saving 15,00,000 pages/year in just one organization

Sardar Sarovar Narmada Nigam Limited, an undertaking of Government of Gujarat, floated on average 300 tenders annually. Each tender document comprised 5 volumes that ran into a minimum of 300 pages. For each tender, 12 such documents were prepared that resulted in 3,600 pages for a tender or approximately 10 lakh A4 pages in a year. Further bids were received from contracts, which were equally bulky and considering 5 bids per tender, this worked out to an additional 5 lakh A4 pages a year. E-procurement saved 15 lakh pages annually for the organization.

e-Procurement has replaced the conventional procurement system. By facilitating online submission of tenders and bids, e-Procurement has eliminated paperwork and caused significant improvements in transparency, efficiency and speed. Additionally, online procurement has reduced processing costs of advertising, preparing, printing and disseminating tender documents, and then processing bids - both in terms of money and time. Adopting applications like e-Procurement can be projected as a way of making headway on good governance.