

Meter Management System

Client Background

The Customer is a global engineering and manufacturing company with offices in more than 15 countries. Their portfolio of products includes parking meters and services, telecommunication voice and data products and communication solutions for the utility markets.

Client's Challenge

The customer in order to manage its business information had an online data retrieval engine. Significant growth in business found the existing system unable to scale as needed.

Some of the challenges that the client faced with its existing system included:

Inadequate Performance: The existing system did not handle large volumes of data well. As a result, response times of the system were becoming unacceptable. This had a major customer impact, since this tool was used by the client's customers to view/manage their transaction data.

Lack of Scalability: The existing system had limited functionality for configuring and managing the application. As a result it was exceedingly difficult to add new customers or projects. This was a major pain area for the client because they were unable to use the system and keep pace with their growth.

Obsolete Security techniques: The clients aging system had older security techniques and algorithms that had not been updated to newer standards and developments. Security was a major concern since a lot of customer sensitive information was hosted on the client's system.

The Our Approach

We worked with the client's process experts to define the requirements and architect an effective solution. We chose an appropriate technology platform to address the challenges faced by the client. We leveraged the capabilities of newer technology platforms to solve issues faced by the client.

Search and Retrieval Indexing: We through reorganized database structure and indexing techniques improved the performance of the system significantly.

Dynamic Configuration: The system that we built allowed the creation of dynamic user-defined configurations within the system. Thus adding new customers/projects became much easier. Role based security with flexibility of defining security levels per customer.

Security: Different mechanisms were used in the design of the new system to enhance the overall security of the solution - including stronger password policies, greater resilience to most common hacking and hijacking mechanisms and common authorization management.

Real time data synchronization: we provided an integration services solution of SQL server for reporting data. The client could get business specific information based on reporting data.

Successful outcomes and results

Use of layered development framework which provides benefits of separation, independence and reusability

- Screen level configuration facility
- Rights in the system are managed at a component or page level as well as at a view or edit level.
- Import and export of data from and to the MMS system
- Audit trail of the changes done to the configuration data
- Dashboard charts provides real time picture of various operations of Meters
- Application is multilingual
- New report design resulted in higher value added information to the client
- With this new system in place, the client was able to meet the execution challenges for its growing number of customers

Technology used

- ASP.NET 3.5 with C#
- Microsoft SQL Server 2008R2

- SQL Server Integration services
- Microsoft Charts
- DevEx Controls