Financial Data Spreadsheet in Java

Leading Indian Credit Rating and Financial Information Company

The problem:

The company compiles and offers financial data about various listed companies, to its clients. They wanted to distribute a platform-independent system to their clients that is accessible through a Web browser but still has interface similar to MS Excel worksheet for displaying the data, so that, if required, the user may directly perform some computations on the data.

The Solution:

We developed a script for transferring the data from MS SQL Server to PostgreSQL so that it can be freely distributed to clients, and developed the user interface as a Java SWING applet deployed on Jakarta Tomcat 5.0 Web server. The applet used OpenOffice APIs to load the company financial data in an Excel-like interface in Java. The system also supports importing/exporting of data from/to MS Excel, and saving of the data in different formats. We used JSP pages for non-core tasks like user authentication and registration.

Technology Environment

PostgreSQL, Java 1.4.2,

Jakarta Tomcat 5.0, Open Office, JSP, SWING

Challenges & Solutions

1. Display numeric financial data for various companies accessible through Web browser with interface similar to MS Excel
   Integrated open office with the Java client applet using open office APIs to display Excel sheet interface in Java.

2. Encryption of Data

   Used PostgreSQL as backend RDBMS ensuring that the data is saved in the format used by PostgreSQL and is accessible only through SQL queries

3. Freely distributable database management system in order to save licensing cost per client

   Used free and open source PostgreSQL as RDBMS, that follows BSD license

Team Size: 3

Duration: 2 months