Visa Processing Website
Encore SQL Performance Assessment (ESPA)

Case Study

Solution Overview

Industry
Visa Processing Services

Business Solution
Online Transaction Processing / Web Site

Architecture
Microsoft Windows
Microsoft SQL Server
.NET

Products Used
Microsoft Windows 2003
Microsoft SQL Server 2005
HTML
.NET

Development Resources
Encore Consulting Services, Inc.

Development Time and Cost
10 days, one person

Benefits
Must improved application performance
Better security
Best practices to streamline future
development

A corporate visa processing company was interested in improving the performance and security of their SQL Server 2005 database.

This is a Chicago-based company that streamlines the immigration process for corporations and their foreign employees by combining comprehensive legal expertise, unparalleled customer service and patented, groundbreaking technologies.

The company uses a custom-developed system designed to run their core business and also serve as the extranet site for their clients. The web-based system was written in .NET and SQL Server. Over the years, the system has been extended and enhanced. They wanted to take some time to make sure their SQL Server environment and the way the application code was accessing it was as secure and efficient as possible.

Solution Challenge

The goals of the 10-day SQL Assessment consisted of the following:

1. Trace the SQL statements currently in use, analyze them and make performance tuning recommendations

2. Examine the top SQL statements and stored procedures in use and make recommendations for improving performance

3. Analyze the current SQL Server environment and suggest improvements in architecture and configuration of the system

4. Provide best practices for configuration and future development

5. Make any other suggestions to improve the SQL Server environment.

The Solution

Encore ran a tool on the company production environment to capture all the SQL statements processed by the server in a typical day. We then analyzed the results and provided recommendations on changes that could be made to the database and the application queries to improve the performance. Encore also examined the configuration and environment of the SQL Server system and provided them with recommendations on improving stability and security as well as future configurations for

expansion. Encore also produced a statistics report on the database tables in use and an XML schema of the database – both to assist in development.

From these tasks, a recommendations document was delivered that included a recommendation for security changes, a service pack update, new database indexes, statistics around the database tables in use, and several re-written stored procedures. Also delivered were best practices recommendations for future application development around SQL Server. The visa processing company implemented most of the recommendations immediately.

The Benefit

The company implemented most of the performance recommendations soon after Encore provided them. They saw immediate improvements in the performance of the web site. They are also following the best practices recommendations and producing more efficient database access code.