SCS Case Study

SCS Creates a New Service-oriented Data Management Architecture

Solution Snapshot

Business Situation: The client needed a more cohesive and robust data delivery mechanism for moving business information between internal software systems.

Multi-Point Solution: With their diligence and combined software development expertise, the SCS and client teams designed and developed a new Web-based data service which provides several different entry points each representing a particular business segment. This made the movement and consolidation of data easier to manage and provides a more centralized access point for data coming from and going to multiple systems within the client's business model.

Technologies Used: SCS built a new Web service named Cross System Data Service which utilizes a service-oriented architecture to provide a more cohesive central point for data moving from one system to another. Cross System Data Service was developed with C# and ASP.NET. This solution uses Microsoft's Entity Framework for database access and generates the solution deployment package with Visual Studio 2013.

Benefits: The new Cross System Data Service provides a multi-use central point web service with several categorized access points. Since the solution is built from a service-oriented architectural point of view, it can easily facilitate maintenance and future upgrades.

The Client

The client is a global investment advisor.

The Challenge

The client needed a new web service that could manage cross-systems data flow between third-party programs and its own in-house software in an accurate manner while also being able to report any issues that would arise in a convenient format for both users and IT staff alike. To solve these complex challenges, the client partnered with Superior Consulting Services (SCS) in order to utilize their expertise in third-party applications and software development tools.

The Solution

SCS implemented a number of strategies to achieve a custom solution for the client's Cross System Data Service web service. With a considerable amount of time and diligence, SCS and the software team at the client worked together to develop this system from the ground up. This solution now consolidates and normalizes data from various internal systems at the client. It

also provides data obfuscation so that a sensible data class is provided to each of the systems and applications with which the service interacts.

Solution Details

For the new web service, SCS and the client designed the new platform around the client's network. Cross System Data Service is a Web service that is deployed under IIS on a Windows 2012 server and was developed using C# and ASP.NET. The new product uses Microsoft's Entity Framework for the data access layer in order to eliminate most of the data access coding that would otherwise be required. This new solution also generates the deployment package using Visual Studio 2013 to provide improved application installation performance. Visual Studio's SQL Schema utility can be used to create configuration file "transform" scripts to prepare the solution for deployment to a production environment. Depending on the environment in which this new product is used, the scripts may need some "hand" tailoring, but not to the extent as was previously required. This moderate level of manual commands allows for custom solutions to be implemented as needed while creating a greater ease of use for the support staff.

The new Cross System Data Service was developed to communicate with several different Web servers and access multiple databases. At the same time it was programmed so that maintenance and enhancements can be performed with greater ease in the future.

The Result

This new solution provides an efficient, secure, and robust platform for the handling of data movement and processing across multiple systems.

SCS assisted in designing and developing a new Web service called Cross System Data Service. Before the new Cross System Data Service was designed and implemented, the Client relied on various console applications, third-party software and batch files, and disparate web services to accomplish essential business tasks for its investors. This eclectic patchwork was prone to error situations that were difficult to troubleshoot. Today, Cross System Data Service handles many of these tasks in one place and is used any time data needs to be retrieved, transformed, and distributed to other software components within the Client's network and outside the network that the Client supports.

Several independent Web Service entry points were created in Cross System Data Service. Each entry point provides data movement for a particular business segment, and multiple process services are available for each of these entry points. In this way, Cross System Data Service consolidates all of these processes into one convenient central point that makes software maintenance and the movement of data from system to system much more efficient. SCS also designed Cross System Data Service from a service-oriented architectural standpoint that makes adding new entry points and upgrading to new services quicker and easier for the client's staff.

This new solution helps assist the client in the success of its present and future business investments in a number of ways while also delivering a remedy to previous problems by doing the following:

- Provides a web service program to create a central access point for data retrieval, transformation and distribution within the client's business network.

- Creates a more fluid data management and data movement mechanism that provides a common service point for various business processes.

Contact

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