



Credit Suisse Develops and Deploys SOX 404 Compliance Solution using SQL Server 2005

Overview

Country or Region: Switzerland
Industry: Financial Services - Banking

Customer Profile

Based in Zurich, Switzerland, Credit Suisse operates in more than 50 countries, providing clients with investment banking, private banking, and asset management services.

Business Situation

Credit Suisse needed an application to help it comply with the U.S. Securities Exchange Commission (SEC) Sarbanes-Oxley Act of 2002 (SOX) requiring implementation and documentation of internal controls to help ensure financial integrity.

Solution

Credit Suisse created an internal SOX compliance solution based on Microsoft® SQL Server™ 2005 database with browser-based access through a portal supported by Microsoft Windows® SharePoint® Services version 2.0.

Benefits

- Ad hoc reporting
- Integrated solution
- Centralized deployment
- Ease of use

“Building our solution on the Microsoft Application Platform helps Credit Suisse to efficiently manage SOX 404 regulatory requirements across our global operations.”

Rudolf A. Bless, Chief Accounting Officer, Credit Suisse

Credit Suisse, based in Zurich, Switzerland, provides investment banking, private banking, and asset management services to clients in more than 50 countries. Because its shares are traded on the New York Stock Exchange, the company had to comply with regulations specifying internal controls introduced by the U.S. Securities and Exchange Commission (SEC) Sarbanes-Oxley Act of 2002 (SOX) Section 404. With more than 45,000 employees working around the world, Credit Suisse needed a SOX 404 compliance solution that was scalable and that could integrate with its line of business operations. Credit Suisse developed a SOX 404 compliance application based on Microsoft® SQL Server™ 2005 database and accessed across the Web through a portal supported by Microsoft Office SharePoint® Services. The solution was developed using Microsoft Visual Studio® 2005 and the Microsoft .NET Framework.



Fast Facts

Global operations	50+ countries
Global employment	40,000
Revenue (fiscal year 2006)	U.S.\$9.1 billion
Relational database management system	Microsoft® SQL Server™ 2005 Enterprise Edition
Operating system	Microsoft Windows Server® 2003 Enterprise Edition
Portal support	Microsoft SharePoint® Services version 2.0 with upgrade planned to SharePoint Technologies version 3.0
Development environment	Microsoft Visual Studio® 2005 and Microsoft .NET Framework
Application development need	Sarbanes-Oxley 404 compliance solution
Number of application users	4,000
Reporting tool for recurring reports	SQL Server Reporting Services
Reporting tool for ad hoc queries	SQL Server 2005 Report Builder

with SOX 404 created a significant challenge, requiring deployment of a solution that could securely store millions of documents from around the world, while providing an audit track to record document creation, viewing, editing, and reporting.

Credit Suisse decided that rather than creating a parallel system for tracking SOX compliance, the best solution would incorporate the elements of SOX compliance into the company's line of business processes. However, creating such a unified solution was a challenge because Credit Suisse had experienced rapid growth in recent decades.

Deployment of its SOX compliance solution would represent the first time a single application had spanned all of its worldwide operations. The company needed an application infrastructure that was connected and adaptable to meet current as well as future compliance regulations. Adding to the challenge was the looming deadline by the SEC requiring SOX compliance. Credit Suisse wanted a solution that would unify its global operations—and it wanted it quickly.

Solution

Credit Suisse considered several commercially available SOX 404 compliance solutions, but couldn't find one that it could unify reports from its disparate global operations, nor scale to meet its needs. The company decided to create its own in-house solution for this business critical application. Because of its satisfaction with previous deployments of Microsoft servers and technology, it chose to create its SOX 404 compliance tool using the Microsoft® Application Platform.

Working with Microsoft Gold Certified Partner Pacific Northwest Software, Credit Suisse created its enterprisewide SOX 404 compliance solution called Management

Situation

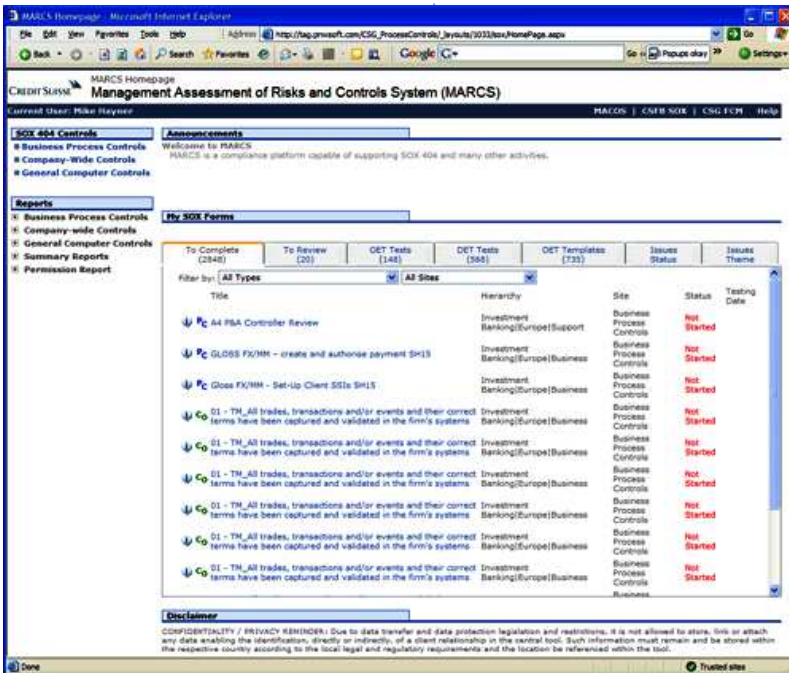
As one of the world's leading banks, Credit Suisse, based in Zurich, Switzerland, provides its clients with investment banking, private banking and asset management services worldwide. Credit Suisse, which generated 2006 revenue of U.S.\$9.1 billion, is active in over 50 countries and employs approximately 40,000 people.

With its shares traded on the New York Stock Exchange, Credit Suisse was required to comply with the U.S. Securities Exchange Commission (SEC) Sarbanes-Oxley Act of 2002 (SOX), including Section 404 of SOX which requires public companies to implement internal controls for their financial statement preparation systems, monitor the controls and issue periodic reports on their effectiveness.

The SEC implemented SOX 404 to protect investors by increasing financial transparency of publicly held companies. For global operations such as Credit Suisse, complying

“... the Microsoft Application Platform gave us the database, reporting tools, portal, and development environment we needed to create a completely integrated [SOX 404 compliance] solution.”

Phil Devaney, Director, Credit Suisse



Uniform Solution – MARCS provides a uniform solution to help ensure SOX 404 compliance across Credit Suisse operations.

Assessment of Risks and Controls System (MARCS). MARCS was designed to give all groups within the company a standard set of forms that guide end-users through the various steps Credit Suisse created to help ensure SOX 404 compliance.

Building on the Microsoft Application Platform, Credit Suisse gained the foundation for organizational agility and business success it needed, including the ability to manage its SOX 404 compliance data across its global enterprise. The result is a pragmatic real-world solution to support the company's evolving business processes.

MARCS has been deployed to more than 100 separate legal entities that comprise Credit Suisse, and is used by about 10 percent of the company's 45,000 employees.

The MARCS solution is deployed using Microsoft SQL Server™ 2005 Enterprise

Edition database running on Microsoft Windows Server® 2003 Enterprise Edition operating system. The solution was created using the Microsoft Visual Studio® 2005 development system and the Microsoft .NET Framework version 1.1. The .NET Framework is an integral component of the Microsoft Windows operating system that provides a programming model and runtime for Web services and Web applications. The solution architecture includes:

- **Presentation Tier.** Credit Suisse users interact with the solution using a Web browser, accessing MARCS forms from a portal using Microsoft Windows SharePoint® Services version 2.0, and set for upgrade to SharePoint Technologies version 3.0. Business rules guiding SOX 404 compliance are built into the XML-based forms hosted using SharePoint Services. Role-based access is administered using Microsoft Active Directory® directory service, which is integrated with SharePoint Server to provide role-based access rights to data. Active Directory played a key role in providing a unified solution, helping to integrate what had been 50 separate directories across its global operations.
- **Database Tier.** Using SharePoint Services, data is moved to the SQL Server 2005 relational database using SQL Server 2005 Integration Services. The database currently has 200 gigabytes (GB) of information hosted on a single instance of SQL Server.
- **Reporting Tier.** Recurring reports are created using SQL Server 2005 Reporting Services, a comprehensive, server-based solution for creating, managing, and delivering real-time information to support daily operations and decisions. Ad hoc reporting—which was deemed essential for the solution—is performed using SQL Server 2005 Report Builder.

“SQL Server 2005 gave us the scalability and integration point to create a single place from which Credit Suisse executives could see exactly how SOX requirements were being met throughout their global operations.”

Phil Devaney, Director, Credit Suisse

The solution, which provides an Enterprisewide data platform for SOX, was deployed using HP ProLiant BL20p blade servers for the presentation tier and HP ProLiant BL45p blade servers for the database and reporting tiers.

Benefits

Using the Microsoft Application Platform to create its MARCS SOX 404 compliance solution enabled Credit Suisse to complete its solution ahead of schedule, and has provided a number of benefits including support for ad hoc reporting, an integrated solution, centralized deployment, and ease of use.

Credit Suisse Rudolf A. Bless, Chief Accounting Officer at Credit Suisse, says, “Building our solution on the Microsoft Application Platform helps Credit Suisse to efficiently manage SOX 404 regulatory requirements across our global operations.”

Support for Ad hoc Reporting

An essential part of the solution was the Report Builder feature of SQL Server 2005. Report Builder, the new ad hoc reporting tool, gives Credit Suisse employees the ability to create their own reports and explore corporate data to get a more complete view of the company’s SOX compliance. Report Builder, which works with SQL Server 2005 Reporting Services, incorporates a user-friendly business query model that enables users to easily create reports that support drilling down to supporting data for searches.

“The ability to perform ad hoc reporting against the data using Report Builder turned into one of the biggest benefits of our Sarbanes Oxley solution,” says Phil Devaney, Director at Credit Suisse. “Ad hoc reporting is an absolute requirement because we support such a wide array of users, each with their own data needs. When senior executives need information, you don’t want to make them wait a week while somebody’s writing a

custom report. Report Builder makes ad hoc reporting so easy that our internal customers don’t have to ask for help anymore. They create their own reports as needed. We’ve gotten great reviews from our internal users because of the ad hoc reporting they can do on their own.”

Report Builder is integrated with Microsoft Active Directory to implement role-based access to data, helping to ensure that when a user creates an ad hoc report, the results only include data they are allowed to see according to Credit Suisse business rules.

Integrated Solution

The tight integration of the Microsoft Application Platform helped Credit Suisse create and deploy its MARCS SOX 404 solution in time to meet the U.S. government’s compliance deadline. A significant feature of MARCS is that it is completely integrated with the company’s line of business operations.

“Creating a SOX 404 solution was a major undertaking because the legislation required documentation of processes and controls to a level that typically hadn’t been required previously” says Devaney. “We wanted to embed our SOX activities into the business line and so needed a SOX 404 solution that would naturally integrate with our normal business activities. This was a big challenge, but the Microsoft Application Platform gave us the database, reporting tools, portal, and development environment we needed to create a completely integrated solution.”

The solution has given Credit Suisse the flexibility to meet future needs. The scalability of the database, combined with the view into data gained from Report Builder, combined with the easy accessibility of SharePoint Services, and the rapid development that is possible using Visual Studio and the .NET Framework, together give Credit Suisse the

“The Microsoft Application Platform was key in creating a centralized SOX compliance solution that could have served our global operations.”

Wolfgang Hirt, Software Engineer, Corporate Systems, Credit Suisse

flexibility it needs to meet whatever regulatory requirements might be mandated in the future.

Centralized Deployment

Credit Suisse used the Microsoft Application Platform to create a centralized deployment that enabled role-based access to its global users through a SharePoint Services portal integrated with SQL Server 2005 on the backend. Credit Suisse viewed a centralized deployment as an essential part of the solution because it helped ensure all employees would be using the same SOX 404 compliance solution, while freeing IT from the administrative and maintenance challenge of deploying and upgrading a client-based solution to desktop computers around the world.

“The diversity of Credit Suisse operations, as well as our heterogeneous IT environment meant that prior to our deployment of MARCS for SOX compliance, we didn’t have a single application that could serve all of our operations globally” says Devaney. “SQL Server 2005 gave us the scalability and integration point to create a single place from which Credit Suisse executives could see exactly how SOX requirements were being met throughout their global operations.”

With SQL Server 2005 at the heart of the centralized deployment, all users, including corporate executives, benefit from having a common data set and uniform procedures for ensuring SOX 404 compliance. “Now that we have one single database, everyone is working with the same information,” says Wolfgang Hirt, Software Engineer, Corporate Systems, at Credit Suisse. “The central database, combined with the Report Builder ad hoc reporting capabilities, gives our executives the ability to check any part of our global operations immediately. The centralized deployment means that reports can be generated within minutes that might

otherwise have taken days, and may not have been as accurate.”

Active Directory played an important role, as Credit Suisse first reduced its global Active Directory domains from 50 to 22, and then created trust relationships between the domains to securely share a user’s identity information. Active Directory trust relationships enable a single sign-on experience for users and deployment of MARCS across all domains.

“Active Directory provides the unification we required to deploy a centralized solution that could be used across all of our operations around the world,” says Hirt. “SQL Server gave us the ability to centralize our data, and SharePoint provides access. The Microsoft Application Platform was key in creating a centralized SOX compliance solution.”

Ease of Use

Ease of use and providing a superior user experience was critical to the success of MARCS. “We have about 4,000 of our employees using MARCS, but for a good portion of these people daily use isn’t required,” says Devaney. “This meant that whatever was deployed needed to be so easy to use that in-depth training wasn’t required. The browser-based solution, with Active Directory integration supporting granular definition of what the user is presented, made it possible to create a user friendly experience that required little training.”

For More Information

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For more information about Pacific Northwest Software products and services, call (877) 467-6976 or visit the Web site at: www.pnwsoft.com

For more information about Credit Suisse products and services, visit the Web site at: www.credit-suisse.com

Microsoft Server Product Portfolio

For more information about the Microsoft server product portfolio, go to: www.microsoft.com/servers/default.mspx

Microsoft SQL Server 2005

Microsoft SQL Server 2005 is comprehensive, integrated data management and analysis software that enables organizations to reliably manage mission-critical information and confidently run today's increasingly complex business applications. By providing high availability, security enhancements, and embedded reporting and data analysis tools, SQL Server 2005 helps companies gain greater insight from their business information and achieve faster results for a competitive advantage. And, because it's part of Windows Server System, SQL Server 2005 is designed to integrate seamlessly with your other server infrastructure investments.

For more information about SQL Server 2005, go to: www.microsoft.com/sqlserver

Software and Services

- Microsoft Servers
 - Microsoft Windows Server 2003 Enterprise Edition
 - Microsoft SQL Server 2005 Enterprise Edition
 - Microsoft Windows SharePoint Services version 2.0
- Microsoft Visual Studio 2005
- Technologies
 - Microsoft Active Directory
 - Microsoft .NET Framework version 1.1
 - Microsoft SQL Server 2005 Reporting Services

Hardware

- HP ProLiant BL20p blade servers for Web access
- HP ProLiant BL45p blade servers for database and reporting

Partners

- Pacific Northwest Software

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