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| OverviewCountry or Region: NorwayIndustry: InsuranceCustomer ProfileVital Forsikring ASA, a part of DnB NOR ASA, serves the pension and life insurance needs of individuals and corporations in Norway.Business SituationWith new pension laws expected to dramatically increase its business, Vital needed a cost-effective way to give clients anytime, self-service access to its expanding pension product line.SolutionVital is developing a new pension application using Microsoft® Visual Studio® 2005 and Microsoft SQL Server™ 2005.Benefits* Powerful, integrated development system and database
* Better uptime, scalability
* Improved performance
 |  |  | “Visual Studio 2005 is so comprehensive and tightly integrated with SQL Server 2005. It’s more effective and standardized than before.”Kjell J. Sivertsen, Chief Information Officer, Vital Forsikring ASA |
|  |  | Vital Forsikring ASA, part of DnB NOR ASA, is Norway’s largest privately owned provider of pension and life insurance. Soon-to-be-implemented pension laws in Norway are expected to increase the number of new pension insurance subscribers. Anticipating the new legislation to take effect in January 2006, Vital wanted to be ready with convenient ways for customers to access its expanding pension product offerings. By using Microsoft® Visual Studio® 2005 and SQL Server™ 2005, programmers delivered a feature-rich pension application that provides better scalability and performance. Developers enjoyed increased productivity, and Vital is poised to meet the needs of hundreds of thousands of new individual and corporate pension insurance subscribers with a reliable, cost-effective solution. |
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| Fast Facts |
| Key technologies | Microsoft SQL Server 2005 Microsoft Visual Studio 2005 |
| Development language | Microsoft Visual C# |
| Project team | * 20 developers
* 10 testers
* 15 requirements specifiers
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| Maximum number of concurrent connections, peak (estimated) | 50,000 |
| Number of tables | Approximately 40 |
| Number of rows in largest table (estimated) | 216 million |

Situation

Since merging with Gjensidige NOR Spareforsikring ASA in March 2004, Vital Forsikring ASA (Vital) is Norway's largest privately owned life and pension insurance company. Vital is a part of DnB NOR ASA, the largest financial services group in the country. With offices in Trondheim, Bergen, and Oslo, Vital serves the life and pension insurance needs of approximately 6,800 corporate clients and 700,000 individual customers. As of March 2005, Vital has assets of 182 billion Norway Kroners (NOK).

Although Norwegians employed in the public sector are covered by pension plans, many individuals—up to 60 percent—in the private commercial sector are not covered by such plans. Vital fills the gap by offering a range of plans and products, including long-term savings, pensions, annuities, and unit-linked investment funds.

Recent changes in pension laws are expected to have a considerable impact on the pension market and to increase the number of new Vital customers. New products, increased requests for self-service, and greater interest in being able to select among a variety of products and services—all have created a need for more rapid, affordable development of new portals and the ability to scale.

Vital had to be ready for the implementation of the new pension legislation and, although its IT department is already an agile organization, the company nevertheless wanted to improve productivity and time-to-market for solutions. Vital needed a flexible development environment and a powerful, easily scalable database.

Solution

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| “Developers are more efficient, and produce better quality code the first time, resulting in fewer bug fixes and shorter development.”Kjell J. Sivertsen, Chief Information Officer, Vital Forsikring ASA |

The Vital development team is building a pension application by using the Microsoft® Visual Studio® 2005 development system and Microsoft SQL Server™ 2005, which is part of Microsoft Windows Server System™ integrated server software. The development team is using the Microsoft Visual C#® development tool.

The project team consists of 20 developers, 10 testers, and 15 requirements specifiers. The pension application is on schedule to be deployed January 1, 2006.

The database servers run on two Dell 64-bit servers, each with 32 GB of RAM and 4 processors. There are 14 application servers, each with 16 GB of RAM. The presentation layer runs on two 64-bit servers.

The Pension Application

The pension application includes functionality for establishing pension agreements, registering employees, invoicing, managing investments, issuing payment of retirement pensions, and administering disability insurance.

Application users are primarily internal case handlers, administrators working within companies subscribing to plans offered through Vital, and individuals enrolled in pension plans through Vital.

In the coming years, the pension application is expected to support 300,000 users, with an anticipated peak number of concurrent connections to the SQL Server 2005 database of 50,000.

Design Goals

Because of the increase in the customers who will be accessing the new pension offerings online, Vital needs constant availability. Anticipating this need led Vital to use a clustered solution, which allows administrators to upgrade one node while the other node remains online.

In addition, because Vital has different environments for development, testing, quality assurance, and production, a streamlined deployment is essential.

“We like the new Integration Services and Analysis Services components in SQL Server 2005,” remarks Kjell J. Sivertsen, Chief Information Officer at Vital. “Integration Services generates MSI [Microsoft Windows® Installer] packages that make it easy to roll new code and change packages through the various environments.”

Figure 1. The Vital Pension Application uses a service-oriented architecture (SOA) to connect users and information from myriad systems.

Benefits

Vital is staking a burgeoning pension market on cutting-edge Microsoft technologies, including SQL Server 2005 and Visual Studio 2005. An integrated development system and database improve productivity and time-to-market and enable Vital to offer reliable solutions, thus improving Vital’s market position and lowering cost per transaction.

Powerful, Integrated Development System and Database

The Vital development team enjoys many benefits from the integrated development environment in Visual Studio 2005, including improved developer productivity. “Visual Studio 2005 is so comprehensive and tightly integrated with SQL Server 2005. It’s more effective and standardized than before,” says Sivertsen.

The team at Vital developed new object libraries, which enabled them to reuse a lot of code. Sivertsen says, “We’ve created container objects, so we can loop on the packages. Object libraries reduce development time considerably.”

Developers are benefiting from Visual Studio 2005 Server Explorer server management console and improved IntelliSense® technology, which provides an array of options that make language references easily accessible. Says Sivertsen, “Developers are more efficient, and produce better quality code the first time, resulting in fewer bug fixes and shorter development.”

Various new or improved features in SQL Server 2005 are helping Vital create a better product faster. Vital finds the following features particularly beneficial:

* Cross-Tier and Cross-Language Debugging are “very useful” according to Sivertsen. “These features make it easy to debug across multiple layers.”
* SQL Server 2005 Business Intelligence Development Studio is “a very useful, comprehensive tool,” Sivertsen remarks.

Vital is integrating business intelligence (BI) functionality throughout the application on top of SQL Server 2005 and plans to add more BI capabilities in the future.

Better Uptime, Scalability

With the pension application expected to support 300,000 users, Vital is relying on the ability of SQL Server 2005 to scale easily and to support users whenever they need it, any day of the week, night, or day.

Vital’s previous system was down for processing, maintenance, and upgrades for eight hours each day. The new pension application is available 24 hours a day, seven days a week, and Vital is pleased with SQL Server’s reliability.

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| “We expect [planned] migrations to lower costs even further, improve database stability, and reduce the administration and maintenance burden considerably.”Kjell J. Sivertsen, Chief Information Officer, Vital Forsikring ASA |

Says Sivertsen, “SQL Server 2005 supports a superior service level and is highly reliable. SQL Server 2005 satisfies our requirements by a good margin.”

“We have goal of 99.95 percent uptime on our infrastructure, and we expect that SQL Server 2005 will help us meet this objective,” Sivertsen adds.

Vital is also building surveillance systems using Microsoft Operations Manager 2000, which is also part of Windows Server System, so it can further enhance uptime and reliability by proactively identifying issues before they cause an outage.

“It is difficult to accurately determine time saved, but SQL Server 2005 is considerably easier to develop for and easier to deploy than our previous OS 390 platform,” remarks Sivertsen.

Improved Performance

SQL Server 2005 is meeting Vital’s need for a reliable, high-performance, scalable solution, and will support the company’s goals for the foreseeable future.

“We are very pleased with the performance levels that SQL Server supports. With SQL Server 2005, we can replicate data from the data warehouse to several other applications, allowing us to reuse data without delaying the data warehouse itself. We’re able to use the same data warehouse across our enterprise for building reports, analyzing and mining data, and customer relationship management.”

Eventually, Vital wants to use the data warehouse to trigger activities. For instance, if sales of a particular product were to fall below a certain threshold, the solution would trigger an e-mail message notifying the Vice President of Sales.

To further extend the benefits of SQL Server, Vital has aggressive plans for migrating the existing data warehouse on SQL Server 2000 to SQL Server 2005 and migrating and consolidating databases from SYBASE to SQL Server 2005.

“We expect these migrations to lower costs even further, improve database stability, and reduce the administration and maintenance burden considerably,” says Sivertsen.

Microsoft Windows Server System

Microsoft Windows Server System is a line of integrated and manageable server software designed to reduce the complexity and cost of IT. Windows Server System enables you to spend less time and budget on managing your systems so that you can focus your resources on other priorities for you and your business.

For more information about Windows Server System, go to:

[www.microsoft.com/windowsserversystem](http://www.microsoft.com/windowsserversystem)

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| Software and Services* Microsoft Windows Server System™
* Microsoft SQL Server 2005
* Microsoft Operations Manager 2000
* Microsoft Visual Studio 2005
 | * Technologies
* Microsoft Visual C#

Hardware* Dell servers
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For more information about Vital Forsikring ASA products and services, visit the Web site at:
[www.vital.no](http://www.vital.no)

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](http://www.microsoft.com/sqlserver)

Microsoft Visual Studio 2005

Microsoft Visual Studio 2005 is the world’s most popular development environment for designing, developing, and testing next-generation Windows®-based solutions and Web applications and services. By improving the development experience for Windows, the Web, mobile devices, and Microsoft Office, Visual Studio 2005 helps organizations deliver a variety of solutions more productively than ever before. Visual Studio Team System expands the product line with new software tools that enable greater communication and collaboration throughout the development life cycle. With Visual Studio 2005, businesses can deliver modern service-oriented solutions more efficiently.

For more information on Visual Studio 2005, go to:
[msdn.microsoft.com/vstudio](http://msdn.microsoft.com/vstudio/howtobuy)

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