



## ***Premera Consolidates Platforms to Gain Market Responsiveness Advantage***

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**Bob Crownhart**  
 Director of Technical Infrastructure  
 Premera



**T**o deliver on the promise of a new corporate vision, Premera Blue Cross needed a new cost-effective technology platform with the agility, reliability, and scalability to meet market demands. The technology solution was part of a larger effort to create a more efficient organization that could provide new choices to the market, improve on traditional products, and establish more effective self-service capabilities for its customers and agents. In 2001, Premera deployed Microsoft Windows 2000 Datacenter Server and SQL Server 2000 running on Unisys ES7000 enterprise servers. Having used the new platform to build Premera Dimensions™, an evolutionary approach to health coverage, Premera is taking a leadership role in redefining and reinventing how the industry provides health insurance.

CUSTOMER PROFILE	BUSINESS SITUATION	SOLUTION	BENEFITS
Premera Blue Cross, headquartered in Mountlake Terrace, Washington, is an independent regional health plan providing members, employers, providers, and brokers with high-quality health coverage and related services. The company serves more than 1.2 million members.	The previous system—an IBM mainframe application running IMS and DB2—did not provide the flexibility needed to meet market demands. It would have been difficult for Premera to modify the system to meet the needs of the new corporate vision.	Premera Blue Cross implemented Microsoft® Windows® 2000 Datacenter Server with Microsoft Cluster Services and Microsoft SQL Server™ on Unisys ES7000 enterprise servers to support the Facet application, by TriZetto, in handling claims processing and to gain the ability to deliver on its new business strategy.	<ul style="list-style-type: none"> <li>▪ Ease of management resulting from an integrated single vendor solution</li> <li>▪ Reduction in application development time from months to weeks</li> <li>▪ Geographic failover with 30-minute synchronization</li> <li>▪ Scalable to 1.2 million or more Dimension members</li> <li>▪ Ability to quickly and easily add new applications.</li> </ul>

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## Situation

Premera Blue Cross, headquartered in Mountlake Terrace, Washington, is an independent regional health plan providing members, employers, providers, and brokers with high-quality health coverage and related services. Operating in Washington as Premera Blue Cross, and in Alaska as Premera Blue Cross Blue Shield of Alaska, the company serves more than 1.2 million members. Premera Blue Cross is a part of the Premera family of companies, which employ about 3,250 people and had consolidated revenues of U.S. \$2.6 billion in 2002.

Premera, like the rest of the health care industry, is emerging from three decades of attempts to control health care costs, including changing benefit plans, layered and complicated software implementations, managed care and health maintenance organizations (HMOs), and consolidation among companies. These changes left Premera and its competitors with redundant claims and membership engines on which they ran their businesses.

These disparate back-end systems presented many business and technology challenges to Premera. Insurance is highly regulated, and the steady flow of mandates required Premera to apply new changes continuously to each of its different systems. In addition, customers of multiple Premera products administered on different systems could not receive seamless service and reporting, which hindered Premera's ability to serve the market. From a technology standpoint, many of those systems were on multiple platforms and were old technologies that could not provide Web interfaces. Moreover, because they could not integrate with one another cross-platform, they were difficult to extend. These disparate systems also fragmented Premera's knowledgebase because they used different productivity

suites, operating systems, databases, and programming languages.

Premera's information technology (IT) department has two central functions: to provide the transaction engine that processes membership and claims, and to provide systems for data analysis of trends in health care costs and other vital types of information. Both functions operated predominantly in IMS/DB2 on an IBM mainframe, with some mid-range UNIX components (RS6000 AIX) handling transactions. Premera used the OS/390 operating system and IMS for the transaction system; it used DB2 for retrospective data warehouse analysis. In addition, there was an assortment of other technologies used for specialized systems. This previous system did not provide the flexibility needed to meet market demands.

In 2000, Premera began looking for new product offerings to help control health care costs and enhance collaboration between Premera and its health-care providers. Premera is looking for ways to simplify administration, reduce paperwork, enhance service, and empower consumers. Many of the potential new offerings involve e-business. By bringing self-service capabilities—that are broadly available in industries like online banking and retail—to the health care industry, Premera could develop new ways of providing choice to members at reduced cost. However, such development was impossible in an environment of redundant agent-processing systems.

The key for Premera was to consolidate its business applications. Premera chose a single new packaged claims application—Facets by TriZetto—and was given an option of which platform to run the application on. In choosing a platform, Premera wanted to take advantage of the new distributed computing world, as well as regain the advantages of the old

centralized mainframe world: stability and ease of management.

## Solution

“We believed that Microsoft, in partnership with Unisys, would deliver and create the highly centralized, scalable, reliable environment that we needed for our transaction engine and be best able to provide it in a way that creates an integrated solution all the way out to the desktop,” says Al Smit, Chief Information Officer (CIO) of Premera. “The Windows® and ES7000 server platform offers a better price/performance, and this choice reduces the number of platforms that we have to support.”

Premera chose to consolidate on the Microsoft® Windows 2000 Datacenter Server™ operating system to not only take advantage of its distributed capabilities, but also its stability and ease of management. In 2000, Premera consulted with Unisys and Microsoft for help in using Microsoft Windows 2000 Datacenter Server and Microsoft SQL Server™ 2000 to replace its IMS/DB2-based environment. “This gave us the answer for the transaction engine component, and we are now evaluating whether we can also migrate the other major component, the data analysis engine, to this platform,” says Smit.

## Choosing Microsoft

During its evaluation, Premera looked at the UNIX and Windows operating systems, and at Sybase, Oracle, SQL Server, and many other alternatives. “The three best processing alternatives revolved around Sybase, SQL Server, and Oracle,” says Smit. “But in my opinion, there’s a distinct advantage with the Microsoft-based alternative because Microsoft includes so many components that we couldn’t get from Sybase or Oracle. For example, Microsoft SQL Server 2000 includes integrated management tools, development

tools, reporting services, analysis services and xml support right ‘out of the box’. And, Microsoft’s collaboration with Unisys yields much more integration of the processing platform—you don’t see much of that coming from Sybase/Oracle.”

Bob Crownhart, Director of Technical Infrastructure at Premera, adds, “We already had internal staff skilled in developing Microsoft-based solutions for e-mail, file and print services, and other client/server applications tied to Microsoft databases. These skill sets are easily found and relatively inexpensive in the marketplace when compared to those of Oracle and Sybase database administrators.” In addition, licensing the software for the Windows-based systems was less expensive than for UNIX, and SQL Server was much cheaper than Sybase or Oracle according to Crownhart. Therefore, Premera determined that the Microsoft and Unisys-based solution was the most attractive alternative.

From the Windows Server family, Premera selected Windows 2000 Datacenter Server as the operating system to support SQL Server 2000, which is the heart of Premera’s new distributed system, called Dimensions. Premera selected Windows 2000 Datacenter Server because it supports eight-way vertical scaling and beyond. This was important because Premera plans to grow their system beyond eight processors with the Dimensions application. The distributed environment surrounding Dimensions comprises primarily servers running Windows 2000 Advanced Server, with some running Windows 2000 Server. These servers support the application and run the business logic. Premera uses Citrix to deliver the application to the desktop.

## Hardware Configuration

Premera uses Unisys ES7000 enterprise servers with sixteen-way partitions that are running in an active/passive cluster mode

“In terms of application support and development, I’d say this ES7000 and Datacenter Server-based platform and the tools that we’re using to support it allow me to deliver solutions for my internal business customers and our external customers much more quickly. The tools are more integrated, they’re more intuitive to use than our older tools, and I can deliver solutions in a matter of weeks rather than months.”

### Dave Young

Vice President – Customer Service  
Systems  
Premera

to support the primary application in production. They use the Spokane, Washington, location as a hot site for disaster recovery of the application. The smaller systems are set on HP ProLiant servers. Premera mainly uses DL380s with some DL580s for a four-way solution. For Citrix, Premera has a mixture of DL360s and DL380s. Systems that have significant data-storage needs use HP Storage Works. The storage solution is a storage area network (SAN): all fiber, skinny tree design, and redundant. All servers connecting to the SAN have dual host bus adapters for throughput and failover.

### Ongoing Deployment

To support its vision for a new suite of health-coverage products and processes, Premera decided in April 2000 to implement an entirely new processing solution for the company and began exploring options. The new product suite is called Premera Dimensions™. The first business process went live on the new solution in June 2002; one-sixth of Premera's book of business moved to the new platform when Dimensions was launched market-wide in January 2003. The migration is expected to be complete by 2005. With the platform up and running, the focus is now on tuning for capacity as well as extending the functionality and configuring the TriZetto application. In addition, Premera is evaluating moving the data analysis and data warehouse components to a Windows Server based ES7000 platform.

### Consolidating and Extending Core Applications

Having licensed Facets, a packaged application from TriZetto, to handle claims management, Premera is consolidating other redundant claims management systems into Facets to simplify their infrastructure. By extending Facets to accommodate the additional functionality, Premera expects to consolidate all redundant systems. "In the future we plan

to use the .NET Framework (software that connects people, information, systems, and devices through the use of XML web services) to easily add functionality to Facets that addresses, for example, how a claim gets paid, how a member gets added, or how a customer service call gets handled," says Dave Young, Vice President – Customer Service Systems at Premera.

### Benefits

By implementing the Windows 2000 Datacenter Server platform on Unisys ES7000 enterprise servers to support the Facets application, Premera gained the ability to deliver on its new business strategy and respond more quickly to changing market demands. The company can now quickly and easily add new insurance products. The new Dimensions infrastructure has the agility, reliability, and scalability to meet market demands.

### Simplification

In the process of implementing the new platform, Premera has been able to simplify its infrastructure as well. "We anticipate being able to eliminate five or six applications that are running redundant claims and system engines," says Smit. "We expect to move a couple RS6000 platforms and a Hewlett-Packard platform out of the environment and to dramatically downsize our mainframe capacity."

"We also proved that the Unisys ES7000 with Windows 2000 Datacenter Server could easily handle a large database engine and service multiple requesters," says Crownhart. "Prior to Dimensions and the Windows Server platform, our client/server environment ran multiple installations of SQL Server. Now we're using a single database engine that can service multiple instances or databases within SQL Server and provide high availability."

## Integrated, Single-Vendor Solution

“From my perspective, the number one benefit is that I now have a single vendor. Microsoft provides all the tools I need, from the keyboard to the mainframe transaction engine, so that I can get back to the simplicity of the world of mainframes and coaxial cable,” says Smit. “Now I have a very well integrated, easier-to-manage environment because I have Microsoft, a very strong vendor, delivering from end to end.”

## Availability and Reliability

Using SQL Clustering and Log Shipping, the hot site in Spokane provides Premera with geographic failover and rapid disaster recovery. If systems go down in Mountlake Terrace Premera can be up and running from the Spokane office within 30 minutes. To prevent such a catastrophic event from occurring in the first place, Premera also has sixteen-way partitions that run in an active/passive cluster mode to add redundancies to the database.

## Scalability

Because Windows 2000 Datacenter Server supports up to 32-way vertical scaling, it

provides more than enough scalability for Premera’s Dimensions product. This is important because Premera estimates that within three years, Dimensions will be handling 1.2 million members. As of May 2003, Dimensions has more than 170,000 members on the system. Premera expects to scale Dimensions to 500,000 by 2004; to 750,000 by 2005; and then to 1.2 million members by 2006.

## Faster Application Development

The new platform is much more agile than the previous because it integrates easily with other platforms and the internet and unifies the development environment. “In terms of application support and development, I’d say this platform and the tools that we’re using to support it allow me to deliver solutions for my internal business customers and our external customers much more quickly,” says Young. “They’re more integrated, they’re more intuitive to use than our older tools, and I can deliver solutions in a matter of weeks rather than months.”

## Software and Services

Microsoft® Windows® 2000  
Datacenter Server  
Microsoft Cluster Services  
Microsoft SQL Server™ 2000  
Microsoft Visual Studio® 6

### Hardware

Unisys ES7000 enterprise servers  
HP ProLiant  
DL360s/DL380s/DL580s  
HP Storage Works

### Partners

Unisys



## Software for the Agile Business

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