

To boost lagging application performance, CooperVision had been spending millions of dollars on additional hardware. Precise showed the vision giant how to fine-tune performance and get the most from its existing investment using Precise i³ for SQL Server software. Users are complaining much less frequently, while programmers are fixing problems in custom code in three days instead of 10.

Inability to pinpoint bottlenecks is expensive

Anyone who wears contacts knows CooperVision, the third largest manufacturer of contact lenses in the world. The company's global data center is located in Rochester, New York, and has facilities throughout the world. CooperVision is the market leader in toric soft lenses, which are becoming increasingly popular for correcting astigmatism, a common vision problem.

Rick Schantz, CooperVision's Senior Database Administrator, was having his own vision problem: He couldn't get a clear picture of application performance. More than an inconvenience, this problem was costing the company in a number of ways, as he explains: "As CooperVision added employees, our applications slowed down. So we threw hardware at the problem, installing three hardware platforms in four years. With a major acquisition on the horizon, management was concerned about our ability to deal with the increased user load. The worst part was that we had no visibility into the problem: We couldn't tell why performance was degrading and we couldn't predict when we would need more hardware. We were flying blind."

Avoiding million-dollar hardware upgrades

CooperVision was particularly eager to avoid buying more hardware. The company uses Baan financial software as a key enterprise application. Baan data is stored in a SQL Server database, hosted by clustered Unisys ES7000 servers running Windows Data Center Server 2003. The Unisys

Organization Profile

CooperVision (www.coopervision.com) is the third-largest contact lens maker in the world and the number one manufacturer of toric lenses, with facilities in 12 countries on five continents

Industry

Healthcare

Solution

Application Performance Management, Threat Management

"Precise i³ for SQL Server gives us a high-level picture of our environment, as well as a detailed dive into the SQL code. Now we can anticipate problems, rather than react to them."

Rick Schantz

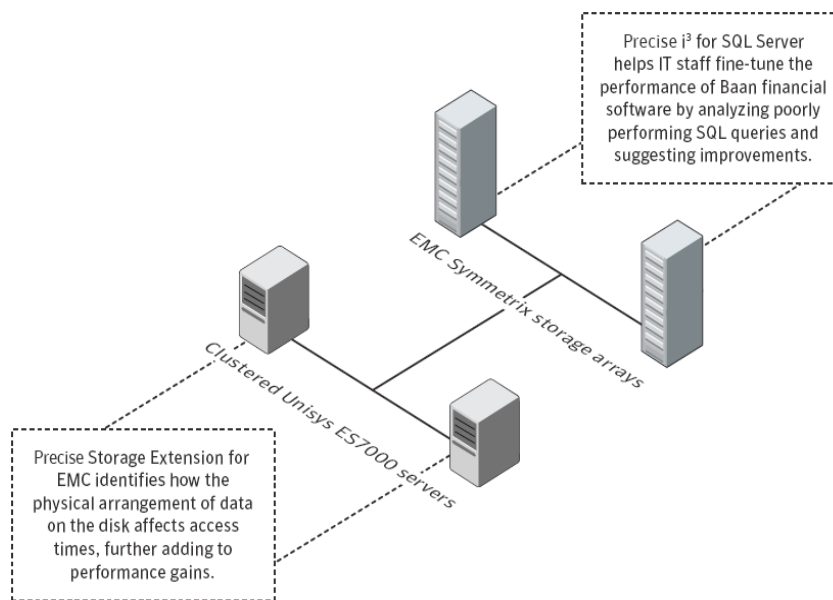
Database Administrator
CooperVision

Precise i³ for SQL Server software helps CooperVision predict the impact of growth in the user base

servers have plenty of horsepower to run 64-bit SQL-based applications, but they are also expensive, up to one million dollars per server. "At that price, I can't buy another server every time a user complains about poor response time," says Schantz. "Beyond that, I need to make accurate predictions. If my Vice President of Global IT needs to assess the impact of adding 400 users in Europe, I must have an answer. We wanted a tool that could look deeply into our database and storage as well as broadly across the entire infrastructure."

In March 2005, Schantz turned for advice to his Baan rep, who touted Precise i³™ for SQL Server as the best tool for the task. This advice came just a day after Schantz had received a promotional flyer from Microsoft recommending Precise i³ for tuning SQL databases. "My boss gave me the go-ahead to try it out," he remembers. "So we downloaded a free demo version of Precise i³ for SQL Server software, installed it with a little help from our Precise rep and a few of his friends, and started collecting application performance data."

**CooperVision
Application Performance Management Architecture**



Working with real-world data, not simulations or samples

In fact, the ability to monitor and analyze real data with low overhead was a key selling point for CooperVision. Competing products use simulated loads and sampled data, or consume a large fraction of the available processing power for monitoring. Precise i³ captures real application performance data continuously, with low CPU overhead, which frees valuable computer processing capacity for business-critical applications. "Having a monitoring tool that gobbles up 10 to 20 percent of your processing power is just a nonstarter," Schantz explains. "Precise i³ for SQL Server uses less than 1 percent even in continuous mode, so we never

miss an event. I can live with that level of overhead if the tool solves my problems.”

And Precise i³ did solve CooperVision’s problems, in dramatic fashion. After the tool had gathered data for several days, Rick and his group tested the Precise i³ features. He relates what happened next: “Precise i³ identified a number of SQL queries that were performing poorly. The worst one took 20 minutes to complete. Precise i³ recommended that we create three new indexes. We did so, and ran the same query again. This time it executed in 6 seconds!” Based on that experience, CooperVision purchased the Precise i³ software license from Computer Resolutions and opted for a basic support contract from Precise Technical Support.

Schantz and his team continued to find and fix poorly performing queries using Precise i³. Some were in custom code, so Schantz used Precise i³ reports to communicate with CooperVision’s application programmers. “Having detailed reports speeds up the time it takes to resolve a performance problem,” Schantz relates. “Before, we could tell the programmers that we had a problem, but not much about it. They would go to the user and try to find out what that person had been doing at the time, which keystrokes, which modules—it was hit-and-miss troubleshooting, slow and time-consuming.”

“With Precise i³, we give the programmer a printout of the code with a big red circle around the offending SQL query, as well as detailed statistics on how long it takes to execute,” Schantz continues. “That process has cut the average problem resolution time from 10 days to three, a 70 percent reduction. The programmers were so impressed, they’re now using the tool themselves to troubleshoot their code during the development process.”

Going to school on application performance

While Schantz found that Precise i³ for SQL Server is easy to install and intuitive to use, he needed to use the full power of the tool. So he and three other CooperVision IT staffers went to school, onsite, with Precise Education Services. The course was no dry PowerPoint presentation, but rather three days of real-world, hands-on training. “The Precise instructor took us through just about every part of Precise i³, even helping us to configure the tool for our environment,” recalls Schantz. “We learned about features that would help us fine-tune performance even more, and do it more efficiently. Precise Education Services showed us how take full advantage of the power of Precise i³ for SQL Server.”

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Rick Schantz

Database Administrator
CooperVision

SOLUTION AT A GLANCE

Business Drivers

- Improve responsiveness of key enterprise financial application
- Extend life of existing server hardware and delay or avoid additional purchases
- Enhance effectiveness of database administrators and programmers
- Support increased load on information infrastructure due to acquisitions

Technology Challenges

- Pinpoint source of long access times for database queries
- Minimize CPU overhead of monitoring tool
- Expand performance management to all tiers of infrastructure

Solution

Monitor application performance and identify problems to SQL code level

Precise Products

- Precise i³ for SQL Server
- Precise Storage Extension for EMC

Technology Environment

- Application: ERP solution software Infor iBaanI
- Database: Microsoft Windows Server 200, Microsoft SQL Server Enterprise Edition (64 bit)
- Servers: Clustered Unisys ES7000 Real-Time Capacity enterprise servers running Microsoft Cluster Service Intel Itanium 2-based processors
- Storage: EMC Symmetrix DMX Series storage solution EMC CLARiion storage, EMC DMX 1000 with 3.6 Terbyte of Mirrored Disk space and total of 14 raw TB of space

Precise Services

- Precise Extended Support
- Precise Education Services

Precise Partner

- Computer resolutions

Storage can be the culprit

Application slowdowns are not always the fault of the application: Sometimes the problem can be in the way the data is physically stored on the disk.

Precise has an answer for that issue, too: Precise Storage Extension for EMC. It collects performance metrics from CooperVision's EMC Symmetric DMX storage systems and correlates that data with database information gathered from the SQL Server. "Thanks to Precise Storage Extension for EMC, I can locate storage-related bottlenecks quickly and improve end-user response times by optimizing the placement of data on the disk arrays," Schantz says.

The fine-tuning of the SQL database and EMC storage is paying off: CooperVision's users are happier with the response for Baan applications, and they complain much less frequently. "We used to get two or three complaints a day," Schantz remembers. "Now I get one a week, at most." One reason is that, thanks to Precise i³ for SQL Server, he doesn't have to wait for users to tell him there's a problem. "Precise i³ for SQL Server gives us a high-level picture of our environment, as well as a detailed dive into the SQL code. Now we can anticipate problems, rather than react to them."

Better resource planning based on history

With a wealth of historical performance data and sophisticated reporting tools, Precise i³ gives Schantz confidence that he can respond to changes in the company's needs: "When my Vice President of Global IT asks me what it would take to support 400 new users in Europe, I can say, "Based on our last experience adding 250 users in the U.K., I predict we'll need two more storage disks, four more CPUs, and another application server." By giving us a clear view of the past, Precise i³ for SQL Server helps us look ahead and plan the evolution of our infrastructure much better than we could before."

Schantz now plans to expand his use of Precise i³ to monitor and analyze the full end-to-end performance of Baan across all tiers of the CooperVision infrastructure. "When we roll out Precise i³ fully, I'll be able to monitor the transaction from the time the user presses Enter halfway around the world, through the Web, application, and database servers, all the way to the storage array, and back again," he explains. "That's what I call 20-20 vision in application performance management."

More customer success stories can be found at: www.precise.com

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Database Administrator
CooperVision

Application Performance

- 100% performance improvement in billing information system
- 80% faster internal benefits open enrollment online application process

User Satisfaction

- 90% reduction in average number of user complaints (from 10 to one per week)
- Ability to anticipate problems, and fix them, before users notice any degradation in performance

Problem Resolution

- 70% reduction in average time to fix programming problems (from 10 to three days)

Forecasting and Planning

- Clearer view of application performance allows management to better predict need for additional servers, and plan for them

Nonintrusive Monitoring

- 10 to 20 times less CPU overhead (around 1% compared to 10%-20% for competitive products)