



TrueNorth Consulting Uses Spotlight® to Solve Critical Bottleneck at eMerchandise.com

TrueNorth, an Oregon-based IT consulting firm, chose Spotlight® to diagnose and resolve database performance for their client eMerchandise.com. Tom Cox, a DBA for TrueNorth, was able to fix a critical bottleneck in only minutes with Spotlight, increasing the number of supported concurrent users from 375 to 10,000—over 2500 percent. Such results would have normally taken Cox and a team of 10 about a week to achieve using manual methods.

The Challenge

Tom Cox, Senior Principal Consultant for TrueNorth Consulting, knows first-hand that the e-business era has placed new performance demands on a company's database. Anyone with an online presence must be able to handle large traffic loads and variable throughput requirements to succeed.

TrueNorth Consulting recently faced a throughput problem for one of its clients, eMerchandise.com—one of the largest resellers of branded entertainment merchandise on the Internet. This Internet-based business faced increasing levels of visitors on its site due to their successful television ad campaigns. After one ad ran, eMerchandise.com received a traffic spike of 80,000 visitors in a two-hour time period. Unfortunately, their old Web site performed poorly (at the time) under this unusually high load. TrueNorth faced a major challenge – to increase the performance of the database at eMerchandise.com so it could handle the increased traffic before additional TV ads ran.

The major task at hand was to identify the database bottleneck, fix it and place it into production before customers and sales were lost. "They don't dare move forward with the marketing, until they know the backend can handle it," said Cox. According to Cox, using conventional troubleshooting methods would take approximately a week just to diagnose and incur substantial costs if the fix were difficult. With time running short, they needed a quick, effective alternative.

The Quest Solution

TrueNorth needed a solution that would quickly enable them to detect and diagnose bottlenecks and resource drains on their database. Cox gave Spotlight a try after successfully using and recommending SQL Navigator®, Quest Software's graphical PL/SQL development tool, for years. After a quick install of Spotlight, he was able to start diagnosing his database performance problem in only 15 minutes.

With Spotlight's intuitive graphical user interface, Cox was able to see the real-time flow of data for eMerchandise.com's database. This enabled Cox to easily pinpoint a bottleneck the database was experiencing. It was serving up only 1,500 pages per minute instead of the required 40,000 to meet demand. A more detailed look showed that one particular buffer busy wait constituted 80 percent of all waits. When he went to the context-sensitive help built in to Spotlight to see what the wait meant, it suggested increasing the free list for that table. "It was the first time in 11 years the free list was relevant to a tuning operation. It would have been the last thing I checked. Spotlight handed it to me on a platter, wrapped up, and by the way here's how you fix it," said Cox.

Spotlight uses calibration technology that automatically learns the behavior of a specific database and sets a baseline for normal activity. This self-calibration process allows Cox to proactively monitor multiple systems simultaneously with very little effort. The program automatically notifies him when something needs his attention.

Despite Cox's extensive commercial database development experience, Spotlight was able to get eMerchandise.com's database running at peak performance in a fraction of the time it normally would have taken him using his manual methods.

Overview

"[Spotlight] clearly presents a dramatic paradigm shift for database administrators. Rather than trying to decipher the meaning of thick stacks of printouts, we can simply look at a graphical flow chart, quickly determine the location of the problem, and then get more detailed diagnostic information and suggested solutions to fix it."

- Tom Cox,
DBA,
TrueNorth Consulting

Headquarters

Oregon

Services

An IT consulting firm

Critical Needs

Increase the performance of the database at eMerchandise.com (TrueNorth's client) so it could handle increased traffic from promotions

Solution

Spotlight

Results

- Fixed a critical bottleneck in only minutes, increasing the number of supported concurrent users from 375 to 10,000 – over 2,500 percent
- Fixed problem on time and in budget, avoiding the need to hire costly, additional resources
- Increased consultant productivity

The Bottom Line

Before using Spotlight, diagnosing performance problems at eMerchandise.com in such a tight time frame would have taken “a staff of 10,” and at a cost they couldn’t afford. “I was preparing to roll my own asynchronous queuing system, which I estimated at 10 staff-weeks of effort. We would never have finished that in time or with our original budget,” Cox said. With Spotlight, Cox was able to fix their Web site, on time and within budget. eMerchandise.com was able to ramp up their ad campaign knowing their Web site could handle the load.

Cox also found Spotlight would increase his productivity at other client sites. His responsibilities for TrueNorth Consulting have him juggling database development and production, leaving him little time for diagnosing and tuning. “This type of tool clearly presents a dramatic paradigm shift for database administrators. Rather than trying to decipher the meaning of thick stacks of printouts, we can simply look at a graphical flow chart, quickly determine the location of the problem, and then get more detailed diagnostic information and suggested solutions to fix it,” concluded Cox.

In addition, Cox thinks Spotlight’s unique graphical representation of data flow can help reduce finger-pointing between developers and DBAs when troubleshooting performance issues. Since Spotlight shows the database flows in real-time, DBAs need not waste any time trying to tune a database that they can see is running at acceptable performance levels. “I no longer have to spend time convincing them that it’s not a database problem—I just point to the Spotlight display. If it’s all green, then there are no database-side bottlenecks. That means I can’t fix it because it’s not broken on my side. Go fix your program. Other times I get a yellow or red light, and I’m halfway to fixing it before they show up at my desk.”

After experiencing such success with Spotlight, Cox also began using Quest’s Schema Manager™ to assist him when a client constantly changed schemas across several instances. Schema Manager enables him to keep version control activity on schemas coordinated at all times. He also plans to implement Quest Software’s Foglight® for 24x7 unattended monitoring of his Oracle databases. “I’m hearing great things about it from my peers. I can’t wait to give it a spin.”

About TrueNorth Consulting

TrueNorth Consulting, an Oregon-based consulting firm, provides architecture, design, development and production software, and database services to large corporations and Internet businesses worldwide.

About Quest Software, Inc.

Quest Software, Inc. delivers innovative products that help organizations get more performance and productivity from their applications, databases and Windows infrastructure. Through a deep expertise in IT operations and a continued focus on what works best, Quest helps more than 18,000 customers worldwide meet higher expectations for enterprise IT. Quest Software can be found in offices around the globe and at www.quest.com