Comerica Bank Uses Strobe to Solve Performance Puzzle

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CHALLENGE

Comerica, a multistate financial service provider, set out to reduce overall response time for its online documentation system. Its IT team detected a bottleneck but lacked the right tool to uncover the problem.

SOLUTION

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RESULTS

- Discovered that one SQL statement accounted for more than 60 percent of CPU usage

- Reduced runtime by more than 25 percent

Business Challenge

Comerica Incorporated, a financial services company headquartered in Dallas, offers three strategically aligned business segments for its customers: business banking, retail banking and wealth and institutional management. It is imperative that the online documentation system that backs up account and document withdrawals, deposits and other account activity works efficiently for a multistate network of more than 500 branch, lending and investment offices.

At the heart of the company's documentation process is the vendor-supplied Comerica Online Documents (COLD) application that archives, restores and retrieves these types of reports electronically.

When this application was originally installed, the company started backing up a month's worth of statements on a mainframe disk drive. Any request for account statements from over a month, however, was backed up on tape. "Any time the system has to go out to tape to retrieve a document, it takes a little longer," explained Joe Reimann, IT project coordinator for Comerica. "You'll get quicker response time from reports that are on the hard drive than if you have to go out to a tape."

To improve application response time, Comerica moved a year's worth of account statements from tape to the mainframe disk drive. The company expected to see better response time, but that wasn't the case. The system took the same amount of time to retrieve the account statements as it did before its IT team implemented the change. "You would have thought that since your most common report was out on the hard drive, you would get faster response time," Reimann recalled. "When we didn't see that, we decided to get a team together to figure out where the bottleneck was."

Solution

Reimann's team attended an on-site Compuware class demonstrating how Compuware Strobe measured online activity in CICS environments. Although Comerica was already using Strobe to measure batch activity, it had not been used widely for online environments.

Strobe's ability to drill through multiple layers of a CICS application to measure actual online activity proved to be a valuable capability for Reimann's team. "The key here was pinpointing the actual statement causing excessive CPU usage. That's not something that our current system monitor can do," said Reimann. "Our current monitor basically reflects response time, alerting us when the system runs slow and when we're not meeting service levels. Strobe actually tells us how the resources are used and what resources are used."

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Using the Strobe profile report, the team drilled down through the SQL to find which program statement consumed too much CPU. In this case, the culprit was in the database. A closer look at the table structure revealed a Report Date, Report Name sequence, the exact opposite of the actual call. "Normally, we wouldn't have recognized that this was a problem. At first, it made sense that you would have a lot of activity there, but we wanted to dig a little deeper."

"Strobe shows you where the bottleneck is to help you focus on the specific problem. That's its big advantage."

— Joe Reimann, IT Project Coordinator, Comerica Incorporated

Results

In using Strobe, the IT team at Comerica was able to conserve CPU usage. "Strobe showed us that one SQL statement was eating up a good 60 percent of CPU usage," said Reimann. "After we fixed the problem, we noticed more than a 25 percent reduction in CPU usage."

That's a good thing, too, since the COLD application is a vendor-delivered program. Reimann's team couldn't access the program to change the code or view the source because Comerica didn't own the code. With the Strobe report, the team was able to go back to the vendor with the actual SQL and discuss what it was, or was not, doing. "The fact that Strobe actually spells out the SQL, telling us what the SQL statement looked like, allowed us to help our system without changing the source," said Reimann. "The vendor is contemplating actually making the change because of the fact that it had a CPU reduction of at least 25 percent."

Dennis Kay, database administrator for Comerica, added, "What makes the COLD application unique in a DB2 world is the fact that these reports are stored on tape. Accessing reports from tape causes long response time. Two minutes is acceptable, but anything over two minutes is stretching it. We were trying to whittle it down. Strobe helped us identify the SQL, so we could speed up response time."

The fact that Strobe was easy to use made it all the better. "All you need to know is the name of the CICS region and how long you want Strobe to run. Strobe shows you where the bottleneck is to help you focus on the specific problem. That's its big advantage," Reimann said.

To learn more, please visit: **compuware.com/strobe.**

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