Bridging the Enterprise Computing Gap

sysb·II

Case Study

Standard Life gives customers continuous availability to CICS data

Overview

The Standard Life Assurance Company of Canada is one of the leading companies in the financial services industry in Canada. It is part of Standard Life plc – a major international financial services group of companies from Scotland – and its largest operation outside the U.K. Its 2,000 employees provide asset-managing services for retirement, investment, and protection to more than 1.3 million Canadians, including group insurance and pension plan participants.

Business need

- Continuous availability to customer data from Web applications to stay competitive in the market and enhance customer service.
- Improved recovery from abends that occur during the nightly batch run to ensure data is current for the next day and that developers meet SLAs.
- Improved performance of batch programs to reduce costs.

Solution

- Give CICS and batch concurrent access to VSAM files so that customers can access data from the Web while batch jobs run.
- Automate the abend recovery process using the journal back-out feature of SYSB-II.
- Use SYSB-II statistics to analyze batch programs so that developers can continually improve programming practices.

Benefits

- Customers have continuous availability to data from the Web 24 hours a day, seven days a week.
- Standard Life developers spend less time assisting with the recovery from abends that occur during nightly batch runs.
- Standard Life developers continue to exceed SLAs.
- Standard Life is able to post information to customer accounts closer to real time, helping to enhance customer service.

Standard Life was the first life insurance provider to transact business in Canada 175 years ago. The Standard Life Assurance Company of Canada now provides asset-managing services to more than 1.3 million Canadians, including group insurance and pension plan participants.

Its products and services include group savings and retirement plans and group life and health insurance, as well as individual investment and protection solutions such as annuities, life insurance, segregated funds, and mutual funds.

Giving customers direct Web access to data

Like most companies operating in its sector in the past decade, Standard Life of Canada had been providing indirect access to customer data. Customers, advisors, and brokers could call or mail the company to update contact information, alter plans, and make changes to policies. With the explosion of the Web and its effect on the financial services industry, Standard Life knew that to stay ahead of its competition and meet customer expectations, it would need to provide direct Web access to customer data.

However, some of Standard Life's customer data is stored in backend mainframe applications that weren't accessible on the Web. To overcome this issue, Standard Life developed an umbrella application to access the mainframe. Known as CLUE, the WebSphere-based application gives Standard Life customers the ability to view and update their annuity, life insurance, and other policy information from the Web.

But Standard Life wanted to do more for its customers. Both the annuity system and the life insurance application, known as CAPSIL, were closed every night so the company could run batch updates. These batch updates include processing transfers, deposits, address changes, new contracts, term deposits, and much more. Processing can consist of anywhere from 15,000 to 500,000 transactions per night. With batch requiring the applications to be closed, customers had no access to their data for most of the night. Standard Life believed that to provide customers true Web access, that access had to be continuous, which meant 24 hours a day, seven days a week.

"As we made information available to clients outside of business hours, we could no longer have our applications shut down overnight," said Guy Rémillard, the Manager of Systems Development for Systems Information Technology for Standard Life. "Standard Life of Canada wanted to differentiate itself with a high level of service to clients."

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Guy Rémillard

Shadow files prove problematic for continuous availability

Initially, Standard Life looked at creating "shadow" copies of files as a means to providing continuous availability. With this type of solution, copies of files are created for the batch process, which the batch process then uses to update the information at night. During this time, customers view the original versions of the files. In the morning, when the batch process is complete, the shadow copies of the files with the updated information are restored for the online application to use.

But the solution proved problematic for several reasons. Creating shadow files required additional storage, increased overhead, and added cost. The process also required the shadow files to be re-created every night so that they reflected new data. And as soon as the batch process began updating the shadow files, the data that customers were viewing in the original files was no longer accurate.

"I didn't believe it. I made it very clear. I said I don't think SYSB-II can do this."
Jane Triandos

Standard Life wanted customers to have continuous availability to the most current data possible and continued to look for a solution, which is when the company found SYSB-II from H&W Computer Systems, Inc.

SYSB-II is mainframe software that allows CICS and batch to have concurrent access to VSAM files. This means companies can process batch during the business day or night, while CICS applications and current data remain fully available to customers.

Standard Life provides continuous availability to data

When the SYSB-II solution was first proposed, at least one Standard Life systems engineer was skeptical.

"I didn't believe it. I made it very clear. I said I don't think SYSB-II can do this," said Jane Triandos, a Senior Systems Specialist in Development for Standard Life.

"Jane is now the core defender of SYSB-II," said Rémillard.

After bringing in SYSB-II, an H&W expert helped get Standard Life up and running with the product. This included getting the IT team members trained on the technology.

“The installation was smooth. It was very easy,” said Richard Bachand, Specialist, Technology Service for Standard Life.

Standard Life carefully evaluated its environment and began using SYSB-II with files that only required updates at night. Developers then tuned applications to work with SYSB-II, which proved to be straightforward.

“The installation was smooth. It was very easy.”
Richard Bachand

“It was easy because you didn't have to change the program, just the JCL,” said Triandos.

“The changes that we made to our applications were not deep. They were light and repetitive,” said Rémillard.

With SYSB-II up and running, Standard Life began providing customers with continuous, around-the-clock availability to their data. Currently, Standard Life allows only inquiry access at night because of the nature of some of the financial transactions, and because update ability at night is not a current customer need. However, if customer demands change, the company is well-positioned to provide that ability.

“Right now, we run a step in the batch job that modifies a file control table and makes all the online transactions inquiry only. We would just have to remove that step to allow update ability,” said Triandos.

Standard Life also found that it could start providing more current data during the day. Because of SYSB-II, Standard Life implemented what it calls a “noon cycle” in which batch makes updates during the day without files being closed. These include updates to transfers from the previous night and other time-sensitive financial transactions. These daytime updates allow changes to be reflected in client balances much closer to real time, which is important to customer service.

“[Integrating SYSB-II] was easy because you didn't have to change the program, just the JCL.”
Jane Triandos

Standard Life discovers unexpected benefits

With SYSB-II, Standard Life could provide customers continuous availability to data, which was the prime driver for the acquisition. However, the Standard Life IT team soon realized that SYSB-II offered much more.

Recovery from a failed batch run proved particularly painful for Standard Life developers. Typically this process meant an all-night ordeal looking into the last backup in the batch cycle, restoring to that point, and restarting everything.

“Telling clients you're not updating the system and things are pending for another day is not acceptable like it was eight years ago, before we bought SYSB-II.”
Jane Triandos

For the main batch job, several jobs ran simultaneously against the same files, so operators had to be careful what they restored and when because the restore might overwrite something from another job. The team even developed what it called a “bingo card” and ruler to help with the various conditions involved in backing out. The bingo card was like a flowchart that mapped errors back to a possible point in time, so that the operator would know where to start the restore. The process was tedious and time-consuming, especially in the middle of the night.

If the job failed to restore after one or two tries, developers would have to back out of the cycle and tell users the next morning nothing was updated overnight.

“Telling clients you're not updating the system and things are pending for another day is not acceptable like it was eight years ago, before we got SYSB-II,” said Triandos. Standard Life discovered that SYSB-II provided an automated recovery process for abends. This feature made a huge difference to the developers who were responsible for keeping the system up and running.

“Our development people discovered that SYSB-II made recovering from a batch abend event take place in minutes rather than hours, depending on the number of restores required. They fell in love with SYSB-II because of that,” said Gordon Lippiatt, a Senior Technical Specialist for Standard Life.

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With SYSB-II, abends during the nightly batch are no longer all-night affairs. Using SYSB-II to execute batch cycles allows the system to perform backouts much faster and without manual intervention. During the few times that abends have occurred, developers easily resolved the issues and were up and running by the next morning, meeting their SLA.

“You're talking about hours [of time saved],” said Triandos. “It's the difference of me being up half the night rather than being up for only 20 minutes. It takes me longer just to get my bearings than to fix the issue and restart everything.”

Standard Life also makes updates during the day. If the batch job fails at night, the annuity side simply runs it during the day without affecting clients. And with CAPSIL, the life insurance application, Standard Life can use SYSB-II to run jobs to repair flawed records and then put them back without bringing down the files.

“There have been times that we haven't been able to issue a check because something was wrong with the file. Now we just go in and fix the record, and they can issue the check,” said Triandos.

Before SYSB-II a change would mean a 24-hour delay plus paying staff to come in at night. With SYSB-II, nothing has to close and staff can simply fix the record during office hours, run the job, and update it in production.

Standard Life even installed SYSB-II on its quality assurance and test regions so that if a failure occurs, the team can back out as it does in production and then rerun a job right away. Before, when developers ran test scenarios during development and the system posted transactions, developers had to restore, make their modifications, and then repeat the process, which took hours. SYSB-II has saved them countless hours in their development cycles by eliminating the need to have systems people restore the environment for another test.

Improving performance and cutting costs

Standard Life, like most companies with a mainframe, is continually seeking ways to improve performance and reduce operating costs. Developers found that the statistical information SYSB-II provides help with both goals.

SYSB-II statistical information gives IT staff insight into the internal processing that occurs within batch programs and CICS. For example, developers can see the requests, reads, and updates that a batch program performs and how that activity translates into potential overhead for CICS, when both CICS and batch are providing concurrent access to data. Standard Life developers use this information to help pinpoint areas for improvement.

“If I'm reading 5,000 policies and I'm doing 20,000 updates, I know I'm doing something wrong. I know I've got different programs doing an update all over the place. So then I investigate and try to optimize the programs,” said Triandos.

Use of the SYSB-II statistics has further spread into application development and QA to encourage more efficient programming. Developers are now more aware of their programming techniques and how even subtle changes can improve performance. They also know that SYSB-II will point out inefficiencies. This change has led to more efficient programs, which helps improve overall performance and reduce cost.

“It makes you think now when you program because you know SYSB-II will tell you. It's become like a habit,” said Triandos.

After finding ways to optimize programs and the batch process using SYSB-II, Standard Life has taken the process even further. This includes evaluating the cost of running short batch jobs verses longer ones, questioning the necessity of every batch job, and separating out inactive client records to reduce processing time.

“We go through and question everything. Why are we running these jobs?” said Lippiatt.

“You're talking about hours [of time saved]. It's the difference of me being up half the night rather than being up for only 20 minutes. It takes me longer just to get my bearings than to fix the issue and restart everything.”
Jane Triandos

A 2008-2009 company initiative has been seeking to reduce MSUs significantly. Already the company has introduced scheduling changes, performance enhancements, and other changes and realized impressive reductions.

”I would not like to work in application support without SYSB-II.”
Alfredo Perez Marquis

Conclusion

Standard Life realized that continuous availability to customer data from the Web would be a business differentiator and help the company remain competitive in the financial services industry. After initial skepticism from developers, the company successfully implemented SYSB-II from H&W Computer Systems to allow the batch process to run while CICS data remains available to clients.

Upon satisfying this critical business need, Standard Life developers discovered that SYSB-II offered many other benefits, including automated recovery from abends during the nightly batch. With SYSB-II, developers spend only minutes rather than hours to resolve issues and have the batch process up and running quickly, eliminating a time-consuming manual process.

Developers also realized that SYSB-II could help them improve their applications. Using the statistics that SYSB-II provides, developers found ways, which are now standard practices at the company, to optimize programs and improve programming.

“As long as I'm here, I want SYSB-II. I can't go back to the old way.”
Jane Triandos

Standard Life developers remain adamant about the need for SYSB-II.

“As long as I'm here, I want SYSB-II,” said Triandos. “I can't go back to the old way.”

“I would not like to work in application support without SYSB-II,” said Alfredo Perez Marquis, Senior Programmer Analyst for Standard Life.

For more information

- H&W has been helping customers solve this issue since 1989. To talk about your situation:
  - Have someone contact you by phone or e-mail.
  - Call 1-800-338-6692 and ask to speak with a CICS/batch virtualization specialist.
- For more information about Standard Life, visit www.standardlife.ca.