Success Story: Deutsche Bank's Securities Custody Reporting System

The Bank's First Grid Computing Application

Deutsche Bank's Securities Custody System is one of the earliest successful examples of commercial grid computing. This large-scale financial application demonstrates the substantially lower costs and higher return on investment possible with Base One's grid and cluster computing software, as compared to traditional architectures.

Background

In 1996, the Bank needed to expand the reporting capabilities for its Global Custody business, which included account holdings and activity for over $50 billion in securities. Their existing Custody Reporting System was DOS-based, with no user interface, no centralized control, and no application security. The old system also required account reps to match manually the thousands of daily SWIFT affirmations – electronic messages that banks use to communicate with each other – by account, and to monitor them for missing or incorrect instructions. The bank wanted to replace its inefficient system with an architecture that was reliable, scalable, and Year 2000 compliant. Also it had to be flexible enough to support continuous enhancements by numerous programmers, and capable of being moved into a production environment run by their mainframe data processing staff.

Deutsche Bank and Base One

Deutsche Bank turned to Base One and contracted for custom software design, development and support. In the course of this work, Base One developed general purpose grid computing software using its own proprietary programming tools and database middleware.

Less than a year after design and implementation began, the first version of Deutsche Bank's new system went into production, running on a loosely-coupled cluster of rack-mounted PCs in a secure server room. Base One's software made it easy to use regular Windows computers to schedule and perform repetitive back-office tasks, such as data loads, transformations, exports, database upgrades, and financial reports.

This technology evolved into the current architecture through continual rapid development at Base One, incorporating feedback from heavy, round-the-clock, production use at Deutsche Bank. In late 1998, Base One released a commercial version of its software, the first "shrink-wrap" grid computing solution available in the marketplace.

Commercial Grid Applications developed at ¼ the cost of equivalent solutions… annual savings over $5 million… running in production 24 hours/day for over 5 years

Deutsche Bank's confidence in the Custody Reporting application grew with each month of successful operation. Having witnessed the low cost of development and ongoing operations, and with their confidence in the development process and technical merit of the software, they continued adding more grid applications. New opportunities for this technology were selected based on the ability to do high-efficiency parallel database imports, exports, consolidations, and report construction. Eventually, Deutsche Bank's grid computing system imported data from multiple other production systems and databases running on a wide variety of mainframes and minicomputers, as well as Unix and Windows servers.

During this time, developers added front-office grid computing applications to support "straight-through processing" (automated, streamlined workflow). This dramatically improved feedback on the business operation and enabled the Global Custody group to restructure its workflow to be more efficient, saving the business money by reducing operational overhead.

Dramatic Return on Investment

Deutsche Bank purchased Bankers Trust, which had a legacy custody system that fulfilled similar requirements and serviced a similar volume of business. After Deutsche Bank's securities custody system was placed under the same management responsible for Bankers Trust's system in 2000, they analyzed and compared the development costs and continuing expenses for both systems. What they discovered was remarkable cost savings with the Base One solution running at Deutsche Bank.

They found it took a staff of 110 on the equivalent Banker's Trust IBM mainframe system to do the maintenance and operations that Deutsche Bank accomplished with only 16 employees, a cluster of rack-mounted PCs, and a mid-priced, Solaris, Oracle server – an ongoing reduction of over 90 people to operate and maintain this application. Assuming a net annual cost of $60,000 per person, the annual savings were over $5 million.

Deutsche Bank also discovered that the system built with Base One's database and grid software cost less than 25% as much to develop as the equivalent Banker's Trust application. In other words, Bankers Trust's applications were four times more expensive to develop, even though they actually did less than Deutsche Bank's, which also handled foreign exchange rates and SWIFT transactions.

Reliability, Performance, and World-Class Customer Service

Deutsche Bank's Securities Custody Reporting System became far more reliable and robust than their previous system, and the Windows-based interface gave them centralized control of their processes for the first time. The new system automatically created and delivered hundreds of daily client statements, plus thousands of SWIFTs. Deutsche Bank was able to update information from mainframes on an automated basis, create standard and custom-tailored reports, and automatically distribute them via e-mail, fax and SWIFT-messaging to its electronic customers. Once the process was fully automated, account reps no longer had to monitor specific accounts at such a detailed level as before. Instead, they could now focus on responding to customer queries and delivering world-class customer service.

In Production - Over 5 Years, 24 hours/day

In 2003, State Street Bank bought out Deutsche Bank's entire North American securities custody business. Until then, for over 5 years, Deutsche Bank's custody system ran successfully 24 hours per day, delivering exceptional value to the business.

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