Ultra-Secure Day Trading System

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"Telliant has a solid reputation for introducing technology efficiencies and economies of scale to its clients...."

The Client

The Client is a day trading firm based in New York, with a network of day traders who are either employees of the firm or external brokers/traders who subscribe to the firm's hardware and software services. Each trader/broker has a few hundred clients and a unique trader ID to serve them. At the end of each day, Goldman Sachs clears the day trades via their secure FTP site. Each morning the Client has the ability to download the details of several thousand trades executed the previous day, for analysis, accountability and reporting. The reports provide: information on profit and loss accounts; commission calculations; subscription charges for external traders; intelligence to management and other interested parties.

The Business Challenge

Speed, accuracy and security are crucial elements to the livelihood of day trading, and any compromises to the data threaten the health of the business. Each morning there is a short time window for Goldman Sachs to download several raw data files, including trades, futures, assets, and other activities—each containing up to 30,000 records divided among 120 columns. One challenge is the immediate uploading of the raw data to the SQL server database at the Client office. The upload has to be 'normalized' to different tables and processed for reporting to management.

The specific functions that needed to be accomplished included:

Seamlessness: A process for handling data that runs un-interrupted; any missteps in the process may result in lost or misrepresentation of data.

Immediacy: Reports need to be auto generated as quickly as normalization and processing of data is completed, and mailed in a PDF format to individual tradersand management.

Security: Any break in the process is to be detected immediately and the administrator alerted.

Archiving: Data needs to be automatically archived after every 3 months or when the file size exceeds a certain limit, whichever comes first.

Organization: Report data in the Web should be paged, sorted and grouped, and exported to PDF or Excel as desired by the user.

User-Friendliness: This translates into creating a visual reporting system showing the results in pie and bar charts.

The Client was also interested in a partner that could:

> Offer cost-effective upgrades to the day trading system through the lifecycle of the relationship.

> Leverage any new breed of technologies that come to market.

The Engagement

The Client chose the Telliant team of professionals for its reputation in creating high performance applications that offer speed and consistency. They also chose Telliant because of its consistent commitment to quality as confirmed by its satisfied customer base. Points of the engagement included:

> Analysis of business requirements and technical specifications.

> Design and development of seamless core trader/reporting application.

> Cooperation and collaboration with the Client's development team.

> Testing, benchmarking performance and solution identification.

> Implementation of best-of-breed technology solution(s).

> Routine application quality assurance management and change management.

" The Client was looking for a technology partner to create a highly reliable, seamless and secure application solution for their day traders and the valuable data that is the lifeblood of their business. "

" The challenge was to develop an application that performed at peak efficiency while providing functionality in terms of trader profiling, heavy transaction handling, processing, recording, and reporting delicate and valuable information daily. "

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Solution Highlights

The new model for the ultra-secure trader profile and reporting system highlighted the following secure, time-saving and user-friendly features provided by Telliant:

New Processing: Downloading the raw trade data files from Goldman Sachs is scheduled using Windows scheduler; a Holiday table in the database restricts the process to download files only during working days.

Ease of Management: Server details, files, dates, times and all information in the database are configured in an XML file for ease of maintenance. Any change in parameters, either from Goldman Sachs or the Client can be supported by simply updating XML files.

Time Savings: Telliant introduced the bulk insert feature to the SQL server database, which holds the raw trade data files. This reduced the processing time from roughly 3 hours to 10 minutes. The data uploaded successfully to the database triggers the normalization and processing of data through stored procedures.

Real-time: The status at the end of each stage of the operation is mailed to the administrator for close monitoring.

Security: The STRUTS pre-processor feature was implemented to restrict access to sensitive data.

Simplification: Telliant developed a simpler trader profile system that benefits the relationship with Goldman Sachs, as well as details the services consumed by external traders.

Reporting: The BIRT (Business Intelligence and Reporting Tools) engine was introduced to the system as an open source software to create ad-hoc reports based on trade activity.

Auto-Archiving: Windows Scheduler and SQL Server JOB feature were used to implement the auto archiving process.

Organization: Display tag open source library was used to implement pagination, sorting and exporting of hundreds of rows of report data to Excel and as PDF format.

Technology Environment

Major Technology Components:

> **Language :** Java (JDK 1.6)
> **Application Server :** Jboss 4.2.1
> **Database :** SQL Server 2005
> **Framwork :** Struts 1.1
> **Architecture :** SOA
> **Other tools :** Display tag librar y 1.1, JSTL

Results Achieved

The Client achieved the following major benefits from the partnership with Telliant:

> Developing a total closed loop solution for secure trader profiling and reporting, and building relationships with respective management and with Goldman Sachs.
> Immediate buy-in from the user base.
> Extraordinary information processing savings (3 hours reduced to 10 minutes).
> Cost and time efficiencies that exceeded Client expectations.
> Partnership between Telliant and Client that will far extend beyond this engagement.

To learn more about how we can help you achieve your goals in the ever-evolving world of IT and innovation, please visit www.telliant.com