



Project Profile: Client reporting

Business Situation

While rebuilding its back office processing chain, a large asset management company designed and implemented a new infrastructure for its client reporting and statement generation. This had to be a fully automated process to handle tens of thousands of client accounts, giving statement access to the portfolio managers across the country.

The role of Masfin Consulting

Masfin drove the design and implementation of an automated end-to-end process for the statement generation. We used a servlets-based web architecture. Beginning with the proof-of-concept and early prototyping approach, the architecture was eventually scaled using a server farm for load balancing to handle the millions of monthly transactions.

The database server was integrated in a series of stress tests and scaled up by fine-tuning stored procedures, splitting up statements using interim and temp tables as well as tuning the installation of the database server.

The integration was achieved with the following approach:

- Design of the physical architecture
- proof-of-concepts for the end-to-end process
- scaling up of all software components involved
- create probes for all software components to identify and eliminate bottlenecks
- optimize the load balancing process that distributed the report generation and the associated high load for computation across several work performers.

Benefits of the solution

- ❑ Brokers throughout the country have online access to various client account reports
- ❑ Process to send account reports to clients is fully automated from the trade capture to sending the print files to a print shop
- ❑ Flexible component architecture allows production of tens of thousands of reports with a back office staff of no more than two
- ❑ System architecture is highly scalable to allow for growth by an order magnitude without the need for re-engineering
- ❑ Web architecture is fully portable across operating systems and web servers

Technology

Some of the performance improvements between the proof-of-concept and the rollout included

- ❑ Detection and recommendation of solutions for several network bottlenecks, in particular between the work performers and the database server
- ❑ Upgrade of both ODBC and JDBC drivers to a third-vendor solution
- ❑ Introduction of an application server based load balancing concept for the computationally intensive components
- ❑ Break-up of several hundred highly complex SQL statements into smaller pieces to ease the load on CPU and memory
- ❑ Fine tuning of the database server software and the setup of the operating system
- ❑ Servlets, Java , EJB, IIS, COM+, SQL Server, Seagate Info Application Server