



SQL SERVER DATABASE MIGRATION

DATABASE UPGRADE/MIGRATION

ABOUT CAPAX ALPHA

At Capax Alpha, a division of Capax Global, we specialize in meeting the specific needs of Hedge Funds and Alternative Investment companies. Our clients benefit from access to Capax Global's extensive network of over 700 of the world's best innovators, people who happen to be great with harnessing complex technology to serve business. We provide end-to-end solution delivery of whatever you need to make IT successful, including solution engagements that support product deployment to your custom requirements, application hosting, and technical staffing solutions.

THE CAPAX GLOBAL DIFFERENCE

As a Capax Global division, you can expect the best from Capax Alpha. We offer the best technologists, the best business acumen, and the best consulting methods – so you obtain the best business results possible from consulting services.

- ▶ THE BEST TECHNOLOGISTS AVAILABLE IN THEIR FIELDS
- ▶ OUR BUSINESS ACUMEN MAKES US A BETTER BUSINESS PARTNER
- ▶ OUR METHODS ARE DESIGNED TO DELIVER BETTER BUSINESS RESULTS
- ▶ OUR FLEXIBILITY MAKES US EASY TO WORK WITH

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CAPAX ALPHA DELIVERS



BUSINESS REQUIREMENT

As a result of a money center bank's merger with another large Investment Bank, it acquired a risk analytics business which utilized multiple legacy and non-standard database technologies. To lower operating cost and dramatically improve performance, the bank decided to migrate the risk analytics platform to a SQL Server 2008 database. It also decided to simultaneously upgrade other older SQL Server databases in the risk vendor's system portfolio to SQL Server 2008 as well.

TECHNICAL SOLUTION

The bank selected Capax to plan, design, and execute this complex application migration project on the basis of its proven strength in this arena.

In the space of 5 months, Capax was instrumental in the team mapping and converting 13 production applications, 6 production databases, and an ETL reporting facility – over 500 tables, 1300 stored procedures, and 700 views – to SQL Server 2008. In the process Capax managed conversion issues arising from Bloomberg feeds, queuing mechanisms, Monte Carlo engines, and security attributes.

Virtually all defects were identified and resolved prior to UAT, which allowed for a very clean user test phase and a trouble-free, on-schedule Production implementation.

CAPAX CONTRIBUTION TO A GREAT TEAM EFFORT

In addition to providing the overall technical conversion plan, Capax also provided technical leadership and SQL Server 2008 subject matter expertise to the coding and infrastructure groups.

Capax ported database-specific code in C++, C and managed C# applications, as well as PERL and Shell scripts, stored procedures, functions and views. Capax code changes included modifying provider specific functionality, replacing non-ANSI code, removing certain types of unsupported updates, and replacing unsupported trims.

Several new environments needed to be built to support the migration effort and future development efforts. Capax provided consultative guidance on the specifications for the new SQL Server 2008 Dev, QA, UAT and Prod environments by defining server hardware, software, network connectivity, and application configurations, including:

- Server Capacity Requirements
- Logical and physical storage requirements
- SAN fabric/implementation requirements
- Fault tolerance
- Backup strategy
- Required maintenance activities
- 3rd party software requirements



> PERFORMANCE AND QUALITY

To insure all migrated entities delivered equivalent levels of functionality at higher performance levels, Capax performed periodic comparisons of ported objects in the development environment utilizing test tools, validation procedures, and performance measurement systems developed by Capax.

For each database migrated, a complete hash of all data was taken at a table level before each test migration to ensure that both source and target environments contained precisely the same data. This made for much faster test execution and helped insure trouble-free implementation.

The migrated SQL Server facility was also evaluated against the performance of the legacy Sybase facility to confirm measured performance exceeded the existing performance baseline – in most cases the measured database performance improvement was more than an order of magnitude faster.

This project was an unqualified success, delivered on time and with all required platform improvements. As such, it was an impressive demonstration of the ability of Capax to deliver personnel and solutions that exceed expectations in the arena of Financial Services database engineering.