A CASE STUDY OF PLATFORM MIGRATION - UNISYS MAINFRAME TO WINDOWS

CUYAHOGA REGINAL INFORMATION SYSTEM, CLEVELAND, OHIO
Projects by Inglenet Business Solutions, 1997 - 2002

Summary

The Cuyahoga Regional Information System (CRIS) is a consortium of 79 police agencies in and around the metropolitan Cleveland area. The CRIS user agencies share a computer center and related law enforcement information on a local and regional basis. The CRIS applications were developed and are maintained "in house". The CRIS systems initially ran on a cluster of four Unisys mainframes to provide high availability and redundancy. In the early 1990's, Unisys Corporation announced the obsolescence of the System 80 mainframes. Although many alternatives were evaluated and considered, in 1997, CRIS decided to migrate their applications and data to Microsoft Windows technology in conjunction with Year 2000 renovation initiatives. The migration took 20 months and was completed in mid 1999. Post Y2K, a database redevelopment project was undertaken to convert all information to Microsoft SQL Server.

Motivators

Although CRIS was aware that their Unisys mainframe technology was inefficient and cumbersome to maintain, the real motivation to move off of the mainframes did not come until support termination was announced. This gave CRIS a "date" to target. An external consulting organization, MTG of Seattle, had been retained by the County to develop a new integrated Information Technology Architecture (ITA) for criminal justice in Cuyahoga County. The recommended MTG ITA made extensive use of Windows technologies. MTG agreed that the Inglenet proposal worked within the Windows ITA proposed for the County, and a decision was made to port the CRIS applications from the Unisys mainframe to Windows to become a working example of the proposed County ITA.

Options/Alternatives Considered

Initially, CRIS investigated packaged applications to replace everything on the mainframe. Commercial-Off-The-Shelf (COTS) solutions were evaluated, but a conclusion was reached that the CRIS applications effectively met the business needs of CRIS, and that improvements in the database and database query capabilities using the current applications would derive the maximum utility for the cost invested.

In addition, CRIS had many interfaces to other existing systems, including the State of Ohio (LEADS) Law Enforcement Center and local Computer Aided Dispatch (CAD) applications. It was determined that implementing a COTS solution or writing new applications would unnecessarily complicate issues with external interfaces, which migrating would not.

Results

CRIS replatformed in 20 months, completing the project on budget. Three CRIS Project Manager changes interrupted the continuity of the project, contributing to a project delay, as did testing delays. The replatforming project cost was $ 900,000. No cost savings have been realized because the CRIS outsources its operations to a County facility that charges based upon fixed rates that were not affected by the platform change.

The CRIS applications now run on Windows 2000 in a redundant, clustered configuration. There have been considerable improvements in system reliability and overall availability

After replatforming, a MS SQL Server database redevelopment project was undertaken by CRIS in conjunction with Inglenet. The project was completed in February 2002. The CRIS batch COBOL applications were also redesigned to exploit the new SQL database, resulting in improved batch performance and reducing update lockout periods.

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