



Oklahoma Teachers Retirement System

OTRS safely and efficiently migrates to Microsoft Windows and SQL-Server from HP3000

Migration Case Study

Oklahoma Teachers' Retirement System is an agency set up to provide retirement benefits to Oklahoma's education staff. Based in Oklahoma City, the TRS employs nearly 50 individuals and oversees a pension fund valued at approximately \$10 Billion. While the TRS' active members are all located in Oklahoma, its retirees are located all over the world. The TRS has spent many years and dollars customizing its Client Accounting System, written for the HP3000 running MPE/iX and designed to manage the pension funds for TRS' active and retired members. The system was predominantly written in HP COBOL, utilizing Suprtool and VPLUS screens and accessing a Turbo Image database. When HP announced its 'end-of-life' decision for the HP3000 TRS was forced to review its options going forward. Finding a replacement 'packaged' software product was an impossible task - even a package remotely similar would require heavy customization to bring it in line with current needs. Re-writing for a new platform was too costly, time consuming and would introduce an unacceptable level of risk.

TRS wanted to retain its valuable investment in the existing applications and felt that migrating them to an Open Systems platform presented the best option. TRS reviewed two ways of doing this - emulation and native conversion. While emulation offered a way to run on open systems hardware, it introduced a proprietary emulation layer between the code and the operating system, thereby locking TRS into the proprietary MPE environment and also rendering them forever dependent upon the emulation vendor after migration. The alternative was UNICON's offering - migration to NATIVE open systems without using emulation middleware - by converting the legacy COBOL to the pure open systems COBOL of TRS' choice, running in either native

UNIX or Windows and conversion of the data to the RDBMS of TRS' choice, by using UNICON's in-house developed automated conversion tools to convert the source and data. "We looked at converting the legacy code to one of MicroFocus' products" says Rocky Cooper, IT Manager for the TRS. "We wanted our applications to run in open systems. UNICON offered a completion timeframe we were comfortable with and they didn't require extensive and costly front-end analysis and preparation..." The non-proprietary approach was also particularly attractive from a costs standpoint, since TRS would not be locked into any ongoing fees to the migration vendor... "UNICON



"In over 40 years... and about a dozen migrations... I have never seen a conversion as smooth as this one and have never experienced such a high level of customer service" ROCKY COOPER, IT MANAGER, OTRS

provided for cost-effective, extensive on-site training and, of course, their fixed bid price for the entire conversion effort was much more in line with our budgeting constraints than those submitted by other vendors."

TRS' final chosen path was to Windows on a Dell PE2900 server with Microsoft SQL-Server™ as the database. They selected MicroFocus' ACUCOBOL as the target programming language due to its flexibility, ease of use and lower cost. UNICON converted TRS' entire COBOL and copylibs code-set, including VPLUS forms to the screen section of the target

Project Snapshot

CUSTOMER FACTS: Established 1943 by OK state legislature | Located in Oklahoma City OK | Manages \$10B pension fund

LEGACY APPLICATIONS: Client Accounting System for managing pension funds | Programming Language - HP COBOL | Hardware - HP3000 | Operating system - MPE/iX | Database - Turbo IMAGE | Suprtool | V-Plus screens

NEEDS OF THE BUSINESS: Platform change in response to HP's 'end of life' announcement for the HP3000 | Desire to leverage modern dbase technologies

TARGET ENVIRONMENT: Hardware - Dell Server PE2900 | Operating System - Windows | Database - MS SQL-Server | Programming Language - MicroFocus Acucobol

COBOL. IMAGE tables were converted to SQL-Server tables and KSAM files were converted to Vision (the ISAM file structure of ACUCOBOL). Stream/JCL files and UDC commands were converted to Windows .bat scripts and a small amount of SPL was converted to COBOL. UNICON also provided TRS with COBOL equivalents for HP3000 intrinsics and converted the IMAGE I-O intrinsics to embedded SQL. TRS had also been using the Suprtool data extraction facility on the HP3000 and UNICON provided a COBOL equivalent for the converted system.

"UNICON was able to simply take our existing system and application code and migrate to the selected products..." stated Rocky... "Reaction across the board was very good." He noted that the TRS systems had been running for a long time, some as long as 20 years! "The current programmers are not experts in HP3000 and had some difficulty enhancing the systems and applications prior to conversion; however, while the COBOL will be relatively the same, working with the databases has already proven to be much easier." The new features and functionality offered by the new COBOL now allows TRS to begin leveraging true open systems, no longer bound by the proprietary restrictions imposed upon them by the HP3000 environment. Rocky had this to say about UNICON: "The project was performed professionally, thoroughly, on time and on budget. During and after the migration, expert help was, and still is provided as soon as it is requested. I have been in the computer programming business for over 40 years and have been involved in about a dozen conversions/migrations and I'm pleased to say I have never seen a conversion as smooth as this one has been and have never experienced such a high level of customer service as we have with UNICON."

UNICON Conversion Technologies, Inc. is a privately held corporation founded in 1985, based in Laguna Hills, Southern California USA. UNICON performs automated migration services from HP3000, IBM Mainframe, DEC/VAX, IBM AS400, Unisys and Wang/VS to **native** open systems architecture, without the use of emulation middleware.

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