

NMCI Lessons-Learned & Success Stories (Web-Enabled Application Hosting of the Navy Standard Integrated Personnel System)

One of two programs under the Program Executive Office for Information Technology (PEO-IT), NSIPS is an Acquisition Category I joint interest application. First deployed in 2000 to provide pay and personnel human resources management functionality at 280 CONUS based Naval Reserve Activities, it is now in use at 95 active duty Personnel Support Detachments (PSDs) and 177 ships worldwide. NSIPS relies upon the commercial HRM software application PeopleSoft with Oracle providing database management support. The initial implementation of NSIPS was based on a client-server architecture and required a server to be maintained at all 554 user locations. Each NSIPS maintenance or upgrade release was accomplished by mailing a CD with the necessary software to each site for installation by the local server administrator.

The award of the NMCI Contract, the Task Force Web initiative, and the development of a pure internet architecture by PeopleSoft in its version 8.0 product release were all key influences and enablers of the NSIPS transition to a centralized web-based architecture. While the NSIPS Program Office was still deploying NSIPS Release 0.2 to provide personnel management functionality to active duty HR organizations, work was already underway in accordance with the program's Operational Requirements Document (ORD) to develop NSIPS Release 1.0, adding pay functionality for active duty personnel. The mandate to comply with TFW resulted in a simultaneous development effort for a web-enabled version of Release 1.0, now known as Release 1.1.

The NSIPS program office had several objectives in mind when it set out to migrate the application from a client-server architecture to an n-tiered web architecture. The primary goals included:

- Reduction in the time and cost involved with deploying new releases and maintenance patches
- Improved Configuration Management (CM) and Information Assurance (IA) controls
- Reduction in cost and manpower to operate the system

Among the alternatives for achieving these goals was the un-priced services option (CLIN 29) under the NMCI contract. The program office determined that adopting a CLIN 29 approach afforded an opportunity to outsource the hosting and operational management of the web-based NSIPS application within a secure DoD network environment.

In January 2002, the NSIPS Program Office became the first organization in the Navy to place a CLIN 29 order. This turned out to be uncharted territory since the processes surrounding development and placement of the order, deriving an independent government cost estimate, and most importantly, architecting and implementing the solution were largely undefined. As the program office worked through these challenges,

there were also significant policy changes being developed for network information assurance that were specifically aimed at the NMCI. Ensuring compliance with these evolving policies would also prove to be a daunting hurdle to cross.

It became immediately obvious that operation of the NSIPS web-enabled production hosting environment would require similar development and test environments to ensure the application would operate as expected once it was made available for field users. In order to meet schedule milestones an initial CLIN 29 order was placed for a hosted System Testing environment. This was due to the fact the existing government owned hardware resources had reached obsolescence and were failing. A second order rapidly followed for hosted services for an application development environment.

While NSIPS web development and testing activities proceeded, the NSIPS government and contractor software and system engineers worked with EDS network architects and system engineers to develop and refine requirements for a suitable defense-in-depth architecture that would meet NMCI and Navy information assurance policies. The culmination of these design activities was a third CLIN 29 order for Production Application Hosting services and Continuity of Operations/Disaster Recovery Services. The order was split into base and optional components due to funding constraints, with the production services component awarded in November 2002 and the Disaster Recovery Services component awarded in August 2003.

As of March 2004, all 280 reserve activities and three PSDs have successfully transitioned from the NSIPS client-server architecture to the web-enabled hosting environment. The Disaster Recovery environment is installed in Millington, TN and is available to provide “warm” failover support in the event of a natural or man made disaster. While there have been occasional problems along the way, the transition has been largely successful from an operational perspective.