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case study

Visible Breakthrough:

U.S. Army Migrating Mission-Critical System for
Better Performance and Lower Costs

Imagine It

Migrating a mission-critical information system to a new application server platform in a manner totally transparent to its 6,800 end users.

Done

The Military Surface Deployment and Distribution Command relied on long-time partner Unisys to migrate its mission-critical Global Freight Management (GFM) System to an open source application server environment in just 6 months.

Visible Breakthrough: Seamless Performance Improvements

GFM users are seeing increased reliability and improved performance without any indication that applications have migrated to new servers.

Secure Business Operation

Information management for the procurement of commercial freight transportation services in peace and war.

Innovation Metrics

Two architects performed migration services on seven servers supporting 10 applications in just 6 months, with no disruption to ongoing operations.

Transparently Improving System Performance

With a mission to “provide global surface deployment command & control and distribution operations to meet National Security objectives in peace and war,” the Military Surface Deployment and Distribution Command (SDDC) serves as the single manager of DoD surface freight movements, responsible for accepting and approving tenders of service from the U.S. carrier industry. Critical to the SDDC’s ability to meet its mission and responsibilities is the Global Freight Management (GFM) system – an information management system that automates carrier selection, costing, shipment documentation and management of DoD freight movements. The system supports prepayment audits of carrier freight bills submitted to the Defense Finance and Accounting System (DFAS) and the DoD electronic payment system for prompt payments of bills of lading. The GFM system also supports readiness by providing shipment information of DoD assets that includes in-transit visibility between origin and destination.

Developed and maintained by Unisys, GFM supports more than 6,800 users across approximately 1,000 sites. Until recently, the 10 subsystems that make up GFM had been running on proprietary application servers – an environment that was becoming increasingly cumbersome for GFM’s purposes. Not only would SDDC have to make significant code changes to upgrade the servers in order to continue getting technical support, the organization was faced with costly license renewals each year. Heeding the advice of Unisys, SDDC’s GFM team decided to migrate from the proprietary servers to JBoss – a leading open source application development environment. The migration went so smoothly and so quickly, remarks Dianne Constable, GFM Program Manager and Chief, Surface Cargo Systems Branch, “Users don’t even know we’ve made the change.”

Partnering for Success

The SDDC relied on Unisys to manage the effort, which involved the migration of seven servers supporting 10 applications to the new application server platform. Because of the long history between the SDDC and Unisys, Constable says she was fully confident that the project would be successful.

“Unisys has been our development contractor for at least 17 or 18 years,” she states. “They have had to re-compete for the contract several times, and they always come out on top.”

“Over the years,” she continues, “Unisys and their team have made it clear that they are invested in the system—they want to make it better for our customers. If they come to me with a plan, I have confidence that it has been looked at upside down and inside out. The folks on the project are top notch, and that really adds to the comfort level.”

In fact, two of the Unisys architects on the project have recently been trained and one has received certification in JBoss, demonstrating an ongoing commitment to the success of the system.

Hal Mann, Government Technical Team Lead, also remarks on “the close team environment, not just between Unisys and GFM staff, but all the other contractors working on the project as well. We all function as a team, and we worked together to make sure this project went smoothly.”

In addition to teamwork, one of the keys to the successful transition was the decision to take an incremental approach.

“We’re big on uptime,” says Mann, “so we migrated one server at a time. That allowed us to have both environments running simultaneously so we could roll back if JBoss didn’t work – but that didn’t happen. We would convert an application over and let it run without making any other changes for two weeks so we could monitor stability and get performance metrics.”

The phased conversion proved to be effective, with no disruption to daily operations. As Mann quips, “The system users were blissfully ignorant.”

“Over the years, Unisys and their team have made it clear that they are invested in the system—they want to make it better for our customers.”

Dianne Constable, GFM Program Manager and Chief, Surface Cargo Systems Branch

At A Glance: U.S. Army Military Surface Deployment and Distribution Command (SDDC)

- Reports to: U.S. Transportation Command
- Mission: Provide global surface deployment command & control and distribution operations to meet National Security objectives in peace and war.
- Objective: Migrate the Global Freight Management (GFM) system to a new application server platform for improved service and lower costs.
- Results: Seamless transition. Increased reliability. Improved performance.
- Population served: More than 6,800 users across 1,000 sites

Simplifying System Administration

While the migration to JBoss was only recently completed, Mann says GFM has seen “significant improvements due to performance tuning. We use a lot less memory than we used to; the applications are growing, but memory is no longer a constraining factor.”

Because JBoss is an open source platform, it provides the information needed to monitor GFM and continually improve service to end users. Further, load balancing is much easier than before, offering the opportunity to improve performance and reliability. And the lack of licensing fees makes JBoss much less costly than the previous environment.

“We now have the flexibility to do things more quickly,” adds Constable. “We put out a software release every other week, and with JBoss it’s much easier to add that new functionality and make business process changes.”

Unisys is also benefiting from the flexibility of JBoss, with the team’s software developers finding it much easier to use than the proprietary server – particularly when it comes to integration with third-party tools, scalability and the ability to perform “hot deployments.”

“When it’s time for a new release or other application change,” Constable explains, “Unisys says they are ready to do it. We say do it. It’s done. We’re happy.”

The SDDC is Visible. Are You?

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