

## Quest's Application Assurance Suite for Java and Portals Becomes an Integral Part of a Leading E-Business Solution Provider's Infrastructure and Qualification Process

As a leading developer of Internet and intranet e-business systems and a leading provider of service-oriented architecture (SOA) implementations for the retail and insurance sectors, DeCare Systems Ireland (DSI) recently embarked on a complete re-engineering of its Java software development processes and infrastructure. Since DSI places a high value on the stability and performance of its solutions, the methodology overhaul needed to address all aspects of pre-production performance testing.

"Since Java batch type applications have started to come more to the forefront in the Java technology space, we believe it is imperative to preempt any potential performance issues," said Jason Barry, project lead at DSI. We decided to re-emphasize unit testing and the use of continuous integration."

### The Challenge

Without the ability to accurately determine an application's performance and code quality prior to rolling into production, both the end user and IT organization can suffer from system downtime and performance issues. Therefore, production problems result in a reactive approach, placing excessive demands on development resources and jeopardizing application availability and user satisfaction. This practice is costly in terms of downtime and the inefficient allocation of development resources. "Our job is to build reliable, scalable and quality applications for our customers, so it is all the more crucial that potential problems are identified and corrected prior to rolling the application into production," said Barry.

DSI's restructured development and testing methodology required a proactive approach toward potential performance issues. Performance bottlenecks or memory issues are typically identified during application load testing. The company needed to implement whatever tools necessary to help the development team identify and correct potential problems prior to moving an application into production. This would eliminate countless hours and resources required to identify any post-production performance problems and enable the company to better meet service level agreements (SLAs).

### The Quest Solution

When DSI revised its pre-production testing practices and processes, two Quest tools became an integral part of the company's new development environment: JProbe® and PerformaSure®. These are the two products that comprise Quest's Application Assurance Suite for Java and Portals. DSI discovered that both tools were easy to install and set up, straightforward and intuitive to use, and provided all of the necessary diagnostic features needed to ensure accurate and efficient pre-production performance testing.

As part of the development environment, DSI uses JProbe to isolate and resolve memory issues and potential application stability concerns for highly scalable, real-time applications and for high throughput, high-performance batch-type applications. In addition, JProbe's reporting features allow the company to isolate performance bottlenecks or memory issues.

"Once we identify an issue, we rerun load tests in a JProbe Profiler-enabled environment. This allows us to establish a baseline from which we can generate a report, highlighting method hotspots, the number of method calls, cumulative time spent on method and explicit method time. A graphical representation of the method call stack is also available, displaying the flow of the application in an easy-to-understand, color-coded manner," said Barry.

### Overview

*"JProbe helps us identify existing and potential performance issues. Based on past experience, resolving these issues can take hundreds of man-hours in a production environment. Not only is that very expensive, but it causes us to lose some credibility with our customers. And with PerformaSure, we are able to conduct effective pre-production performance testing across the application. These tools have dramatically improved the reliability and stability of our deployed code."*

Jason Barry  
Project Lead  
DeCare Systems Ireland



### Headquarters

Cork, Ireland

### Services

Develops Internet and intranet e-business systems and service-oriented architecture (SOA) implementations for retail and insurance industries.

### Critical Needs

A comprehensive tool suite to become an integral part of the company's new pre-production performance testing methodology and process.

### Solutions

Application Assurance Suite for Java and Portals (PerformaSure and JProbe)

### Results

- Identified and resolved numerous application performance problems in development/test environment, eliminating any performance/availability issues in production
- Ensured delivery of accurate performance SLAs, increasing credibility with clients
- Reduced support overhead costs



A lead developer/application architect, with an expert understanding of how the application should behave, then analyzes the report to identify any problematic code – down to the exact line of code, if necessary. A code fix is applied and the load test is rerun. DSI then compares the baseline report against the report generated by the new, improved code. Any change in code performance is displayed in plus or minus percentage differences from the baseline. This process continues until any SLAs are met.

As part of the production deployment and software qualification process, DSI instruments the production environment with PerformaSure. Once the production-ready software build is ready, the application is pushed to production and real-world measurement of the system can occur. “We can run PerformaSure in any type of production environment, no matter the OS, CPU count, number of application servers in the cluster or number of physical machines. This allows our team of experts to observe the application under a combination of virtual and real load scenarios in a production environment and take precise performance measurements to easily and quickly identify problem areas,” said Barry.

## The Bottom Line

As a direct result of improved development/testing/QA cycles and the utilization of JProbe and PerformaSure, DSI rarely encounters any production performance issues.

“Today, we are experiencing reduced timelines, measurably higher quality output, and an enhanced ability to deliver complex enterprise-level systems,” said Barry. “By clearly identifying the key characteristics of our process (e.g., simplicity, productivity and stability), we have seen levels of regression errors decrease by orders of magnitude without impacting project timelines.”

JProbe and PerformaSure helped DSI reduce the number of performance and availability problems and consequently the need for their users to contact IT Support. This has enabled the company to better meet established SLAs for information retrieval and eligibility processing/delivery.

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## About DeCare Systems Ireland

DeCare Systems Ireland provides software development and Internet solutions for a select market of worldwide healthcare and retail organizations. The company was established in 1998 and is a wholly-owned subsidiary of DeCare International, one of the largest dental insurance management companies in the U.S. Revenues have increased an average of more than 30 percent in each of the last four years.

## About Quest

Quest Software, Inc. delivers innovative products that help organizations get more performance and productivity from their applications, databases and infrastructure. Through a deep expertise in IT operations and a continued focus on what works best, Quest helps more than 18,000 customers worldwide meet higher expectations for enterprise IT. Quest Software can be found in offices around the globe and at [www.quest.com](http://www.quest.com).