

#### Client

Naia Corporation

#### Technologies

.NET, C#, CruiseControl.NET, Convergence, NAnt, NCover, NUnit

#### Testimonies

"Stelligent engineered a scaleable quality management platform that provided an environment for adding automated tests and analysis tools for monitoring and improving software quality at every step in the development process. By leveraging Convergence within a Continuous Integration system, we are able to determine trends throughout the development cycle rather than waiting until the end of the project to find and fix problems. The team at Stelligent are experts in automated testing, continuous integration, and building quality into the development process."

Troy Carroll  
Chief Operations Officer

## Automated Build and Quality Management Platform Case Study

*Stelligent established a robust infrastructure for building, testing and monitoring quality trends for Naia Corporation. A fresh look into the development quality management processes utilized by the Naia Engineering team was spearheaded by Stelligent in an effort to create a viable platform easy enough for any developer to adopt and capable of monitoring the quality of all present and future software products.*

**The Problem:** Naia Corporation develops custom software using the Microsoft.NET development platform. As the solutions have evolved, there was interest in the ability to monitor the quality trends by project. Naia sought a way to monitor development quality *over time* to discover defects or potential defects sooner than later. Naia knew that by discovering defects in latter cycles, there is a significant increase in the number of required resources to address the problem.

**The Solution:** Stelligent implemented an automated quality management solution using CruiseControl.NET (CC.NET), NAnt and Convergence. Convergence is a quality management dashboard product, provided by Stelligent, for monitoring quality trends throughout the software development lifecycle.

Stelligent used its expertise in continuous integration, automated testing, and quality management to develop an infrastructure to support the quality monitoring needs of Naia. Stelligent installed and configured CC.NET, NUnit, NCover, NDepend, NAnt and Convergence to build the quality management platform.

CC.NET is a Continuous Integration server that polls Naia's Subversion repository looking for changes. Stelligent configured CC.NET so that once a change was detected it runs a NAnt script, which executes automated tests, dependency analysis, code analysis, and code coverage tools using the Convergence quality management system. Convergence trends data gathered from these tools and converts it into useful "actionable" information to improve decision-making capabilities of Naia by monitoring development quality over time.

Furthermore, Stelligent provided "Quick Start" guides and training for Naia's engineers and management. The guides and training covered topics related to using the tools, writing automated tests and interpreting code metrics.

**The Benefits:** By running the automated tests and inspections (static and runtime analysis) with every check in to their Subversion version control repository, Naia developed the capability to discover defects earlier in the development cycle. This enabled Naia to address issues with much less expense because the changes were not as pervasive.

Software releases were more consistent and reliable, and less stressful, because the build and tests were performed throughout the development lifecycle rather than immediately prior to a scheduled deployment.