



Rally Software partners with Lingoport to successfully combine i18n and agile development

Rally Software is a market-leading provider of agile development management software that enables teams and organizations to plan, manage, track, and continuously improve work. Rally Software, formerly known as CA Agile Central, an enterprise-class platform for scaling agile development practices in project management, where teams are able to deliver value in products and services with speed, quality, and efficiency. The Rally platform provides visibility into progress, roadblocks, and dependencies across multiple teams, projects, and programs. Rally's premise is that "when you have a source of truth, both on a macro and micro level, teams become informed, engaged, and happy. Leadership is empowered to quickly pivot with data-driven information and confidently speak about their company's future." Rally Software, was acquired by Computer Associates in 2015 and is part of Broadcom today.

The Situation

As the market leader in agile software, Rally is continuously developing new features, improving on its promises to customers, and keeping ahead of the competition. It is this success that led to Rally's acquisition by Computer Associates (CA), a multinational company, and one of the largest computer software vendors in the world.

CA already had products in its portfolio localized and needed Agile Central to join the ranks. However, Rally had never localized or even internationalized their software. Furthermore, Rally still had other features to build for their next releases at the same time, and therefore could not move their resources to focus on the internationalization (i18n) requirements alone. Making their software global within the quickly approaching and mandated deadline meant Rally needed help to gain efficiencies in order to deliver their next release in time and ready for the global markets.

It is no surprise that Rally expected the i18n development effort to be delivered with the same level of agility as the rest of its software development efforts. Rally needed a partner with i18n expertise and technology solutions that brings automation, fits within their agile software development processes and provides visibility into their progress. Lingoport became an obvious vendor to contact as it had the tools and expertise to support Rally.

Computer Associates

Incorporated: 1976

Industry: Enterprise Software

Headquarters: New York, NY

Employees: 17,000

Countries: 40+

Parent: Broadcom Inc.

www.broadcom.com

Solutions elements:

i18N Assessment

i18N Engineering

Pseudo-Localization QA

Lingoport *Globalyzer*

Lingoport *Localyzer*

The Challenge

Following initial meetings led by Lingoport's i18n architects and experts, Lingoport learned that Agile Central was built on Java and JavaScript, however many of the underlying JS libraries lacked the i18n support needed. This meant that i18n development work would not be limited to code-level changes, but also required framework support and other architectural-level changes which would not be straightforward. Lingoport was to take on the design and development of the i18n solutions that were lacking and refactor Rally's existing code to resolve all i18n bugs found.

However, even if Lingoport could work on the i18n refactoring of the existing code, there was still another hurdle. Rally quickly realized that one of the biggest challenges the software development teams would face would be keeping pace with i18n compliance while building new features. With a large software code base of over 800K lines of code that gets updated continuously, how could they ensure that new i18n issues would not creep back, creating new i18n technical debt?

Rally developers needed i18n guidance and assistance during their development activities, rather than fixing issues later. Rally managers on the other hand needed to keep track of the overall progress of making legacy and new code i18n compliant and have the visibility of meeting the global product launch date. Lingoport's Globalyzer technology with its code scanning abilities to detect i18n bugs, its integration with CI/CD processes and code branching, and its dashboards stood out as the technology of choice to meet these goals. Furthermore, Lingoport's Localyzer could facilitate and automate the steps downstream from software internationalization, mainly testing and localization.

The Solution

It had already been jointly agreed that Lingoport would provide a dedicated team of i18n experts, architects, and developers that would take on the full scope of the i18n work, while Rally developers would focus on new features. Given the agile and ongoing development of new features by Rally developers, Lingoport designed a custom approach and solution to internationalize Agile Central from the ground up and maintain its i18n compliance in the long run. Both teams could work in parallel and keep i18n issues in check with the help of *Globalyzer*.

To identify the best i18n execution plan forward for the existing architecture and code, Lingoport conducted an *Internationalization Assessment* of the entire platform and learned about Rally's internal development environment and processes. The assessment started with discovery meetings between Lingoport and Rally's team leads and architects and was followed by a deeper analysis of architectural diagrams, database schemas, and design documents by Lingoport i18n experts. In parallel, Lingoport technical resources set up Globalyzer to be used by both Lingoport and Rally teams. Globalyzer scans provided a detailed code-level i18n assessment that identified the number of i18n bugs by type and frequency.

The findings from the discovery meetings, detailed assessments, and the Globalyzer scans, made it possible for Lingoport to create an execution plan consisting of a task list of work to be done and completed with tight deadlines. These included details of software i18n refactoring work, i18n trainings for Rally developers writing new code, and the installation of Lingoport's *Localyzer* to automate and streamline the sending of translatable content to the localization (L10n) workflow to complete the global deliveries.

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Rally VP commented:

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Results

With the strategy and task lists in place, and Lingoport’s i18n team and technologies fitted into Rally’s development processes, Lingoport was ready to work on the i18n enabling work. Lingoport i18n architects and leads focused on creating new i18n frameworks for the JS libraries where i18n support was lacking and adapted the software architecture as needed to support other locales. A team of dedicated Lingoport i18n developers worked quickly and effectively performing i18n refactoring on existing code by utilizing *Globalyzer* to gain speed and efficiency. Rally’s test-driven methodologies were incorporated into i18n services. Meanwhile, Rally’s dev teams received training to enable them to write i18n-compliant code and take advantage of the automated i18n checks by *Globalyzer*. With Lingoport knocking down issues in legacy code, and Rally developers writing i18n-compliant code, Rally managers were now able to see the i18n progress made on the *Globalyzer* Dashboards.

In tandem with the software refactoring and development work, Lingoport technical resources set up Lingoport’s localization automation platform. *Localyzer* technology automated sending Git resource files containing translatable content to Rally’s localization vendor and saving returned localized files back into Git. This automation solution streamlined the internationalization and localization efforts perfectly, such that as soon as a resource file got created (or updated) the new content got sent to the localization vendor immediately, which further cut down on timelines and allowed Rally to meet their global release deadlines. *Localyzer* also provided the added benefit for the developers to perform continuous pseudo-localization testing, the industry standard to internationalization testing, which provides an additional step of quality assurance. Rally had all bases covered to be successful.

The benefits of the Lingoport solution were many. For one, having Lingoport focused on i18n and localization automation made it possible for Rally teams to work on ongoing feature development efforts. Delivering towards both i18n and new features in parallel was proof that Lingoport’s approach to refactoring fitted perfectly into Rally’s agile development and testing processes. Rally completed its i18n goals successfully and on time, and was enabled to create i18n-compliant code with every new feature development. The automated and streamlined resource file processing for sending to localization worked perfectly and continues to be used today by Rally.

Rally commented on how Lingoport helped them reach globalization success:

“Lingoport was critical to our success and the rapid progress we made. The strategy, expert i18n resources, and technology solutions that Lingoport provided helped us achieve quality results in a short amount of time. We couldn’t have accomplished releasing our software to the global markets successfully and in time without Lingoport services and technologies. We have always been proud of delivering quality products and maintaining our leadership position in the agile market. These outcomes are a huge win for us.”

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