

CareCore National uses DevOps approach to cut defects by 50 percent

IBM Rational software helps reduce software defects caused by issues with requirements

Overview

The need

CareCore wanted to overhaul its software development processes and shift from a project-focused approach to a more strategic approach.

The solution

It deployed IBM® Rational® DOORS Next Generation, IBM Rational Focal Point™ and IBM Rational Team Concert™ software, integrating the applications with its existing IBM Rational Quality Manager software.

The benefit

From results to date, CareCore anticipates a 50 percent reduction in the number of defects that are due to requirements problems as it continues to expand use of the Rational solution.

Founded in 1994, CareCore National is a specialty benefit management company with offices in South Carolina and Colorado. The company offers customized programs to improve the use of diagnostic imaging and enhance the quality of patient care; solutions for managing cardiac and oncology care; and programs for sleep apnea, musculoskeletal pain management and lab services. CareCore serves health plans in the United States and currently manages treatment affecting more than 30 million people.

Striving for more strategic software development

One of CareCore's primary goals is to react quickly to meet customer needs. Over the years, the company's core development applications had grown to meet these changing needs. But overall speed was hindered by a lack of natural integration between the development applications. "We've done software development with our core set of applications using an iterative and needs-based approach, not a forward-looking approach. It's been a little bit more reactive than proactive," says Mark Thomas, vice president of strategic development at CareCore. To speed development and provide even more responsiveness to customers, the organization wanted to overhaul its processes and shift from a project-focused approach to a more strategic approach.

CareCore National chose IBM Rational software because of the ease of integration it offered. "We were having so much success with Rational Quality Manager, it really didn't make much sense for me to go elsewhere for a solution," says Mark Thomas, vice president of strategic development at CareCore National.



Solution Components

Software

- IBM® Rational® DOORS® Next Generation
 - IBM Rational Focal Point™
 - IBM Rational Quality Manager
 - IBM Rational Team Concert™
-

Using the organization's existing processes, development teams averaged two releases per month. The company tracked requirements and work items using Microsoft Team Foundation Server (TFS) software. However, many stakeholders were still submitting requirements using email or other methods, so it was difficult to gain a comprehensive picture of all of the requirements needed, as well as how they might affect other parts of the company's applications. In fact, Thomas estimated that 70 percent of the company's software defects were attributed to poor requirements development. The company began a strategic initiative to improve requirements gathering and work item tracking processes to help speed the entire software delivery lifecycle.

Integrating with existing IBM Rational applications

CareCore had used IBM Rational Quality Manager software successfully for several years. So although it considered other software development lifecycle offerings, it ultimately chose a solution from IBM. "We were having so much success with Rational Quality Manager, it really didn't make much sense for me to go elsewhere for a solution," says Thomas. "And because of the success with Rational Quality Manager, we said well, we want to be integrated, we want to move in that space. And IBM has a tremendous reputation." The company implemented IBM Rational DOORS Next Generation, IBM Rational Focal Point and IBM Rational Team Concert software, all on the same unifying, open IBM Rational Jazz™ platform as its Rational Quality Manager software. The company integrated the new applications into its existing Rational Jazz server.

As it begins the transition from its existing solution, CareCore uses Rational Focal Point software to create the project and distribute the necessary components to the other Rational applications. The Rational Focal Point application serves as a portfolio management tool to prioritize high-level projects and move them through decision points. Company management encourages stakeholders to put all of their requirements information into the Rational DOORS Next Generation software. Next, stakeholders put information from spreadsheets, diagrams and text documents into the requirements software, without worrying about prioritizing the information. Software architects then work in the software to analyze the information and create requirements. “We highlighted things where we could, converted them over to stand-alone artifacts, and then used that set of artifacts,” says Thomas. From the set of artifacts, developers build work items and then assign the work items to appropriate staff members.

As developers work on their assigned tasks, they use Rational Team Concert software to track their progress and verify that they are meeting the requirements established through the Rational DOORS Next Generation software. Quality assurance (QA) staff then use the same requirements to build test cases and plans. The first time the teams used the new Rational platform for a project, it took six months. For the second project, it took just two.

Cutting defects, improving insight

CareCore anticipates that it will see a 50 percent reduction in the number of defects that are due to requirements problems as it continues to use the Rational solution. In addition, the company has gained greater insight into its requirements and how they fit into the bigger picture. With this insight, the company can create its development plans in a more strategic and less reactive manner. “Seeing how these requirements are related, how they interact with and impact each other, helps elevate the view of the people doing the work to a more holistic view rather than an individual task view,” says Thomas. “For example, a single requirement might drive 10 work items, or a requirement might not have a specific work item associated with it because some other work item actually covers it.”

For companies considering a similar project, Thomas recommends engaging the IBM professional services organizations for help. “What we’d recommend for companies undertaking a similar project would be to balance the initial deployment with more professional services to ramp up faster,” he says.

IBM DevOps solution

The capabilities in this case study illustrate the collaborative development approach of the IBM DevOps solution, an alternative to traditional application lifecycle management (ALM). The IBM DevOps approach applies agile and lean principles to assist stakeholders in an organization that develops, operates, or benefits from the business’s software systems. These stakeholders include the lines of business, as well as customers and partners seeking a competitive advantage.

Rational DOORS Next Generation, Rational Team Concert and Rational Quality Manager software are integrated as the IBM Rational solution for collaborative lifecycle management (CLM). CLM is built on the open, unifying Rational Jazz platform and is an easy-to-install and easy-to-use solution that companies can optimize for agile or traditional teams to help achieve continuous delivery. CLM integrates with IBM Rational Software Architect software for design management to involve stakeholders from across the organization and beyond in the design process.

Extending CLM with Rational Focal Point software expands the continuous business planning capabilities to support an IBM DevOps approach by enabling decisions aligned with business goals through improved analysis, governance, and demand and delivery management.

For more information

To learn more about how IBM Rational software can support the IBM DevOps approach to development, please contact your IBM marketing representative or IBM Business Partner, or visit the following website: ibmcloud.com/ibm/devops/us/en



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Software Group
Route 100
Somers, NY 10589

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