



CHALLENGE

Streamline user management and problem resolution for a large Jenkins deployment with thousands of jobs across a worldwide development team

SOLUTION

Rely on CloudBees Jenkins Enterprise™ for responsive support and role-based access control to Jenkins jobs organized in hierarchical folders

RESULTS

- » User management activities cut from hours to minutes
- » Jenkins issues resolved quickly
- » Thousands of dollars saved

PRODUCTS

- » CloudBees Jenkins Platform™ - Enterprise Edition

Acxiom Simplifies User Management, Automates Development Activities and Reduces Risk with CloudBees Jenkins Enterprise

Headquartered in Little Rock, Arkansas, Acxiom is an enterprise data, analytics and Software as a Service company that processes more than a trillion transactions each week. The software that powers these transactions includes client-facing and internal systems, written in Java, C/C++, Python and other languages by hundreds of developers working in North America, Europe and Asia.

As the company's development projects grew progressively more complex—requiring daily builds of hundreds of components for a single product—the development team adopted Continuous Integration (CI) to automate many previously manual tasks. Today, Acxiom is maximizing the advantages of CI across its worldwide development organization with CloudBees Jenkins Enterprise™.

"Speed and efficiency are so critical now—every company is trying to get more done with fewer people," says Brenton Witonski, release engineer lead at Acxiom. "To help us do that, we use Jenkins as the foundational component for our integration and our automation. CloudBees Jenkins Enterprise adds stability to that foundation and enables us to use it more efficiently and securely."

"By itself, the simplified user management made possible by the Folders and Role-Based Access Control plugins justified the cost of CloudBees Jenkins Enterprise. When combined with the responsive, expert support we get from CloudBees, the ROI has far exceeded our expectations."

Brenton Witonski
Acxiom

CHALLENGE: SUPPORT CI WITH SIMPLE USER MANAGEMENT AND MINIMAL RISK

Prior to adopting CI, Acxiom staff worked nights and weekends on builds to keep pace with demand. At times, a system under development might be untestable for weeks because of dependency and integration problems that arose when different teams repeatedly updated their components.

Although the introduction of CI and build automation largely addressed these issues, the Acxiom team soon identified several opportunities for improving upon the free version of Jenkins. The first was centered on user management in a Jenkins environment that was used to build more than 50 products, in which each product may have as many as 180 jobs. "Developers on one product do not need access to jobs on another product," explains Witonski. "To keep the permissions up to date when adding a new developer to a product team, we spent half a day manually adding the developer to each Jenkins job. It took another half-day to remove a developer from a product team."

The second opportunity was centered on ensuring the stability of the build environment. "We depend heavily on Jenkins, and to me, it's very risky to rely on a product with no support," says Witonski. "In the past, when we had a Jenkins problem, we'd search for a solution online or try to solve it ourselves. Sometimes we found answers, and some problems we just had to live with. At best, it was inefficient; at worst, a catastrophic failure or complication could shut down development."

SOLUTION: SECURE, STABLE CI

Acxiom acquired a subscription to CloudBees Jenkins Enterprise to simplify user management and access responsive support when needed.

When someone on the build or development team encounters a problem with Jenkins, they no longer waste hours looking for a solution on the web. Instead, they open a support ticket with CloudBees® and resume work on another task. "The responses come very quickly—usually within a few hours—even to low-priority issues," says Witonski.

To help manage Jenkins jobs on complex products, Acxiom uses the Folders plugin, created by CloudBees, to organize jobs into a folder hierarchy.

Used together with the CloudBees Jenkins Enterprise Role-based AccessControl plugin, the Folders plugin enables Acxiom to define security permissions for each folder.

Now the Acxiom team can add a developer to the hundreds or more jobs in a project simply by assigning them a role in a group. The

permissions associated with that role are automatically used to grant authorized access to only those folders within the project hierarchy linked to that role and group.

To identify time lost because of jobs waiting for executor resources, Acxiom uses the Wasted Minutes plugin, also developed by CloudBees.

CloudBees Jenkins support extends to open source Jenkins plugins as well, including several that Acxiom uses to integrate Jenkins with other systems in their development infrastructure, such as Subversion, Git and HP Application Lifecycle Management tools.

Acxiom is currently working on extending Jenkins for installation activities in continuous delivery automation, with support from CloudBees Jenkins Enterprise.

RESULTS

User management activities cut from hours to minutes.

"Adding a user to a typical project with 120 jobs used to take about four hours," says Witonski. "With the Role-based Access Control and Folders plugins, it now takes less than a minute. Plus, we've ensured that our developers around the world have the right level of access to just the jobs they are working on."

Jenkins issues resolved quickly.

"When we encounter a problem with Jenkins, instead of wasting time trying to find an answer ourselves, we open a ticket and redirect our efforts to other goals that we need to accomplish," says Witonski. "We get a rapid response every time, saving us hours of research and trial-and-error hacks. We're more productive as a result, and we've mitigated the risk of something going seriously wrong with no way to resolve it."

Thousands of dollars saved.

"Before we began using the Role-based Access Control and Folders plugins, we estimated that they would save us about \$4,000 per quarter in reduced user management effort," notes Witonski. "Now that we're using them, we found that the savings have been considerably more than that initial estimate."

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