



Media and Information Provider Unifies Development Processes

Overview

Country or Region: United States
Industry: Media

Customer Profile

With operations on six continents and revenues of U.S.\$12.4 billion, Thomson Reuters provides information for professionals in the financial, legal, tax and accounting, scientific, healthcare, and media industries.

Business Situation

Using three separate and dissociated configuration management tools, the Online Services group at Thomson Reuters struggled to collaborate on software projects.

Solution

Thomson Reuters Online Services deployed Microsoft® Visual Studio® 2005 Team Foundation Server and the Teamprise Client Suite, unifying the group's development processes.

Benefits

- Improved quality and development life cycle
- More transparent and controlled processes
- Simpler administration and setup

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Mac Noland, Lead Software Configuration Management Engineer, Thomson Reuters

Thomson Reuters is a leading source of intelligent information for businesses and professionals. Its Online Services group develops and maintains proprietary software that is critical to the business. The group's 150 developers and testers worked on a variety of development frameworks, operating systems, and configuration management tools, which resulted in an “information black hole.” Looking for a way to improve transparency and collaboration, Online Services standardized on Microsoft® Visual Studio® 2005 Team Foundation Server and the Teamprise Client Suite. Regardless of the development framework or operating system, everyone shares a single, integrated source control system and collaboration server. Now, the team can better control code and processes and more accurately communicate with team members and customers.



Fast Facts

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| Development tools | <ul style="list-style-type: none">■ Eclipse■ Microsoft Visual Studio 2005 Team Suite■ Rational Application Developer |
| Collaboration server | <ul style="list-style-type: none">■ Microsoft Visual Studio 2005 Team Foundation Server |
| Work items managed in Team Foundation Server | <ul style="list-style-type: none">■ More than 2,000 |
| Changesets managed in Team Foundation Server | <ul style="list-style-type: none">■ 70,000 |
| Files and folders managed in Team Foundation Server | <ul style="list-style-type: none">■ 200,000 and growing |

Situation

Thomson Reuters combines industry expertise with innovative technology to deliver critical information to decision makers in the financial, legal, tax and accounting, scientific, healthcare, and media markets, powered by the world's most trusted news organization. With headquarters in New York and major operations in London and Minnesota, Thomson Reuters employs more than 50,000 people in 93 countries.

The Online Services group at Thomson Reuters is responsible for the storage and retrieval of online assets. Of the 220-member team, approximately 150 are development engineers or quality engineers. Although the team does some programming using the Microsoft® .NET Framework, the group primarily develops in Java on computers that run a variety of operating systems, including Linux, Linux 64, UNIX, Macintosh, and Windows®. About 90 percent of the programmers in Online Services work in Eclipse or Rational Application Developer (RAD), and up to 50 percent of the testers work in Eclipse. All of the team's build computers run UNIX or Linux.

For configuration management, Online Services had been using three autonomous toolsets: Tracker software for defect management; TeamTrack software for change management; and Microsoft Visual SourceSafe® 2005 for source control management. The team experienced problems with the tools, including data integrity issues and the need to manage multiple contracts. But the biggest downfall was that the tools did not share information. As a result, programmers, quality engineers, team leads, and project managers found themselves working in an "information black hole."

"Without an integrated toolset, we had bits and pieces of information that simply didn't mean much or make much sense," says Mac Noland, Lead Software Configuration Management Engineer at Thomson Reuters. The lack of integration among tools made it difficult for Online Services to manage and report on projects. "Leads want transparency and easy reporting," explains Noland. "People responsible for writing and quality checking the code want the ability to track history and associate change requests, defects, and bugs with specific lines of code. Lacking a big-picture view and the ability to drill down into the detail, we could not effectively manage the software life cycle."

Solution

In May 2007, the Online Services group deployed Microsoft Visual Studio® 2005 Team Foundation Server, an integrated collaboration server. Team Foundation Server combines team portal, version control, work-item tracking, build management, process guidance, and business intelligence into a unified server. It enables everyone on the team to collaborate more effectively and deliver better quality software.

Online Services uses Team Foundation Server to manage work on Java-based storage and retrieval systems that provide a significant source of revenue for the company. Using Team Foundation Server, the team manages more than 2,000 work items, 70,000 changesets, and 200,000 files and folders. Since Online Services implemented Team Foundation Server, four other business units either have adopted it or have begun the implementation process.

Evaluating Collaboration Software

In its search for a collaboration software solution, Online Services considered several factors including integration, ease of use, and ease of administration. The team considered several tools, including Team Foundation

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Server, IBM Rational ClearCase, IBM Rational ClearQuest, IBM Telelogic Synergy, and Perforce. “When we considered only source control, the tools were similar. But when it came to integration, Team Foundation Server was the clear winner,” remarks Noland. “We felt that Team Foundation Server was the easiest, most fully integrated solution to adopt and use.”

Meeting Needs Across the Team

To enable Java developers to benefit from source control and other collaboration features of Team Foundation Server, Online Services deployed the Teamprise Client Suite from Teamprise, a Microsoft Certified Partner. Teamprise is a division of SourceGear that focuses on creating new products and solutions for enterprise companies standardizing on Team Foundation Server. The family of client applications from Teamprise helps far-flung developers using a variety of integrated development environments (IDEs) to work together in a single source control and configuration management system, regardless of development platform.

“Previously, Java developers were disconnected from source control,” remarks Noland. “With Teamprise, they have seamless access to Team Foundation Server, including version control, build management, work-item tracking, planning, and reporting from Eclipse, RAD 6, and RAD 7. “Teamprise was a critical factor in our decision to adopt Team Foundation Server. Teamprise with Team Foundation Server is the answer for teams that have programmers who use myriad development platforms and computers that run a variety of operating systems,” adds Noland.

Thomson Reuters appreciated the expertise and level of service that Teamprise brought to the project. “Because Teamprise is dedicated to enabling everyone to use Team Foundation

Server, we have found them to be very responsive in supporting our business and enabling us to work with Team Foundation Server in the way that we want to,” remarks Noland.

The Teamprise Client Suite consists of three clients:

- Teamprise Plug-in for Eclipse allows access to Team Foundation Server from within the Eclipse IDE.
- Teamprise Explorer is a stand-alone, cross-platform client that supports team members, such as graphic designers, quality assurance testers, and project managers, who may not work in Microsoft Visual Studio or the Eclipse IDE.
- Teamprise Command-Line Client is a cross-platform, nongraphical interface for Team Foundation Server used for scripting and build scenarios or for developers who prefer a command-line interface.

“Team Foundation Server has a reputation for just being for .NET developers, but we've proven that it's a platform-agnostic toolset that can be used for Java or Perl, or whatever language you're using,” says Noland.

Providing Something for Everyone

Everyone in Online Services benefits from Team Foundation Server and Teamprise:

- About half of the developers work with Teamprise Explorer; the other half uses the Teamprise Plug-in for Eclipse.
- Programmers working in the Microsoft .NET Framework use Microsoft Visual Studio Team Explorer.
- Project managers, team leads, group managers, and testers use Team Explorer along with the integrated plug-in for Microsoft Office Excel®.

Noland remarks, “One of the more compelling features of Team Foundation Server has been the plug-in for Office Excel because it lets people work in the tool with which they

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are comfortable. Leads and managers accustomed to working in the Microsoft Office system can pull information from and publish data to Team Foundation Server using only an Office Excel spreadsheet.” The plug-in for Office Excel integrated with Visual Studio Team Explorer is also especially helpful for testers and test team leads who are accustomed to using Office Excel to assign and manage work items.

People who work on computers that run Linux or Macintosh operating systems can seamlessly access services provided by Team Foundation Server from within the Teamprise interface. “From their perspective, our people don't know who the vendor is; they just know that through their IDE, they can connect to the source control repository and do countless other things they couldn't do previously,” raves Noland.

Accomplishing Builds

To create builds, Online Services switched from Ant Hill software to Team Foundation Server. “Integration between Team Build, work-item tracking, and source code in Team Foundation Server makes Team Build a compelling, superior alternative to Ant Hill,” says Noland.

The build report contains information—such as which changesets and work items are included—that is extremely valuable to programmers and the quality assurance group. “The development team looks at code churn metrics, and the quality group reports the number of successful builds and other key indicators found in a build report,” says Noland.

The use of Teamprise and Team Foundation Server results in a better, more complete and integrated build environment. Using the Teamprise Command-Line Client or the Teamprise Ant Tasks with Team Foundation Server gives Online Services a way to natively

connect build computers that run Linux 64 or UNIX with the source control repository in Team Foundation Server.

Eagerly anticipating the Continuous Build capability in Microsoft Visual Studio Team System 2008 Team Foundation Server, Online Services is on an aggressive schedule to upgrade to Team System 2008 Team Foundation Server in June 2008. “Continuous integration in Team System 2008 Team Foundation Server will allow for quicker, timelier information on build issues,” remarks Noland. The team also plans to upgrade to Teamprise 3.0 to gain the advantages that the new version offers. “Code check-in policies and the ability to execute builds from Teamprise underscore the value that Teamprise brings to our organization,” remarks Noland.

Benefits

With an integrated collaboration server and an agnostic configuration management system, Online Services group finally has the transparency it needs to more effectively manage software projects. Equipped with an integrated configuration management solution, the team has more control of both code and processes and can more accurately predict, plan, and communicate within the team and with business stakeholders.

Improved Quality and Development Life Cycle

By providing superior integration, Team Foundation Server helps the team improve predictability and software quality. Specifically, the rigor built into version control in Team Foundation Server helps the team manage changes to project artifacts, and work-item tracking improves predictability by helping people communicate and manage work across the team.

Because they could not connect to the source control features from within their Eclipse or

RAD IDE without using a virtual machine, developers did not regularly check in code as they completed it. “The build process might not happen until the end of the day because developers waited until then to fire up their Windows virtual machines just to check in their source code,” remarks Noland. “Now, with a constant connection to the repository from within RAD 6, RAD 7, or Eclipse, developers can check in code all day.”

Powerful build capabilities enable Online Services to regularly integrate code and conduct more frequent builds, resulting in an improved development life cycle. Team Foundation Server also helps enforce best practices, such as running code analysis or linking check-ins to a work item.

Using previous tools, the team experienced data corruption issues at least once a week. Since replacing these systems with Team Foundation Server, the Online Services group hasn’t had a single data corruption incident.

More Transparent and Controlled Processes

Integrated process workflows, version control, work-item tracking, and other features in Team Foundation Server provide the transparency necessary to improve control of code, project artifacts, and processes.

Reporting and business intelligence tools in Team Foundation Server automate and simplify tracking and reporting of project status, performance, and quality metrics. Having this information closes the information black hole, fosters better communication, and helps everyone contribute to the team’s goals.

Managers and leads appreciate the ability to access information and view it in a consistent way, whether it’s for the Java team or for developers working in the .NET Framework. “We finally have apples to apples comparisons,” remarks Noland. “Team Foundation Server brings the whole team together in ways that are revolutionary, especially now that we have cross-functional teams working in multiple development projects and frameworks.”

Simpler Administration and Setup

Team Foundation Server vastly reduces the burden of administration, operations, and setup. Noland explains, “Before, if we had a new employee, we had to add them to three different tools; it was a laborious, frustrating process because we wanted them to be productive from the moment they came on board. Now, we add them to a group and we’re done. It literally takes five seconds and they can connect from their IDE to Team Foundation Server.”

For More Information

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Microsoft Visual Studio

Microsoft Visual Studio is the world's most popular development environment for designing, developing, and testing next-generation Windows-based solutions and Web applications and services. By improving the development experience for Windows, the Web, mobile devices, and Microsoft Office, Visual Studio helps organizations deliver a variety of solutions more productively than ever before. Visual Studio Team System expands the product line with new software tools that enable greater communication and collaboration throughout the development life cycle. With Visual Studio, businesses can deliver modern service-oriented solutions more efficiently.

For more information about Visual Studio, go to: msdn.microsoft.com/vstudio

Software and Services

- Microsoft Visual Studio Team System
 - Microsoft Visual Studio 2005 Team Foundation Server
 - Microsoft Visual Studio 2005 Team Suite
- Microsoft Visual Studio Team System
 - Microsoft Visual Studio Team System 2008 Team Foundation Server
 - Microsoft Visual Studio Team System 2008 Team Suite

- Microsoft Office
 - Microsoft Office Excel
- Teamprise Client Suite

Partners

- Teamprise