IBM

Fidelity National Financial Drives Improvements in Software Development and Reuse with IBM Rational Software Development Platform and Flashline

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Overview

■ **The Challenge**
Following a series of acquisitions, development teams within Fidelity National Financial (FNF) were using a range of disparate software development tools and processes. To continue to drive its transformation from insurance underwriter to leading provider of products, services and solutions, the company needed a consistent yet flexible software development environment that would enable teams to improve communication, increase reuse, and focus on the company's guiding precepts.

■ **The Solution**
FNF adopted the IBM Rational Software Development Platform, enabling thousands of analysts, developers and testers across the enterprise to leverage a comprehensive, integrated set of tools, processes and training. FNF development teams use IBM Rational tools together with software asset portfolio management solutions from Flashline to increase reuse and productivity.

■ **The Benefit**
IBM Rational and Flashline have contributed to increased reuse resulting in a cost savings of millions of dollars per year. Divisions throughout FNF have gained a competitive advantage with access to enterprise class development tools that promote effective communication, best practices, and asset reuse.

In the past, Fidelity National Financial, Inc. (FNF) was primarily known as the nation's largest title insurance underwriter. Over the last several years, however, the company has undertaken a business transformation, and is now a leading provider of products, services and solutions to financial services, mortgage, insurance and real estate industries. Through its majority-owned subsidiary Fidelity National Information Services, Inc., FNF provides core financial institution processing, mortgage loan processing and related information products and outsourcing services to financial institutions, mortgage lenders and real estate professionals.

As part of this fundamental business transformation, FNF acquired several smaller companies, each with its own software development teams,

tools, and processes. The company wanted to unify its development teams with a proven software development platform that supported its three key development environments: Microsoft .NET, J2EE and legacy COBOL development. To provide its development teams with a complete, flexible, and open platform for software development, FNF adopted the IBM Software Development Platform. Flashline development groups – from small teams to entire divisions within FNF – are leveraging IBM Rational® tools and IBM Rational Unified Process® along with software asset portfolio management solutions from Flashline to reduce costs, promote reuse, and improve communication across the team and across the organization.

"We had disparate tools and processes across the organization. We wanted to promote unity without introducing any bureaucracy. Our goal is top to bottom software improvement while reducing costs through unrestrictive reuse of tools and software assets," says Bill Gellerstedt, CTO of Enterprise Architecture for FNF. "IBM Rational tools have enabled us to create a center of excellence that our teams can leverage and reuse in a way that meets their specific needs."

Deployment in Line with Guiding Principles

As Gellerstedt notes, minimal bureaucracy is one of the five fundamental precepts upon which FNF was founded. This precept, along with a bias for action; autonomy and entrepreneurship; employee ownership; and close customer relationships, form the cornerstone of the company's innovative management philosophy and operating success. These principles led FNF to deploy the IBM Software Development Platform and Flashline tools on an open, community-based model, in which each group is free to use as many or as few of the development tools as they choose, and to configure them as needed. Although the tools also support a highly-governed, top-down deployment strategy, their flexibility enables them to be deployed and used in a wide range of approaches, including the autonomous approach used at FNF.

"In the first eight months, we have deployed 650 users on IBM Rational tools, and we plan to have around 2200 active users in the next 18 months. Teams are looking for solutions that are simple, easy and quick. People look at things tactically, and eventually understand strategically what the tools can do. With software configuration management (SCM) for example, I set up a central server with IBM Rational ClearCase® and IBM Rational ClearQuest® that teams can use to get up and running very quickly. Some

groups like pre-configured solutions, but others like to do it all on their own," says Gellerstedt.

He adds, "The IBM Software Development Platform enables us to follow the precepts of our organization by allowing different groups to maintain their autonomy and entrepreneurship while using mature, enterprise solutions. Within Fidelity, the larger banking and mortgage companies really drove the initial decision to use IBM Rational tools, but now our smaller companies, competing against other small companies outside FNF that do title-based business, have the potential of fully utilizing enterprise development tools. This is a big competitive advantage for them while being cost-effective for the entire organization."

A Configurable Process

IBM Rational Unified Process, or RUP®, provides FNF with a configurable, proven software development process that can be tailored to meet the specific needs of individual development teams or projects. One of the technical criteria on which FNF based its selection of IBM Rational tools was the ability to leverage a shared process model in addition to a shared development platform.

The configurability of RUP has facilitated its adoption by numerous groups within FNF. "When we show our different development sites how they can modify RUP using RUP Builder, and how the tools work with it

in a coordinated solution, it creates momentum for deployment. Instead of using a very top-down, rigidly-governed approach, we use a more open approach where we show the value to each individual group. As they see the value of RUP and the tools, they begin by adopting a little, and when they are successful they adopt much more," says Gellerstedt. FNF development teams also have access to Flashline's Ready for IBM Rational validated RUP Plug-In for Software Asset Portfolio Management (SPM) which provides guidelines, best practices, roles, artifacts, and workflows for all levels of asset management from program management activities to project level tasks.

Providing a Foundation with Software Configuration Management

On one of the first FNF projects using IBM Rational tools, the team is using IBM Rational ClearCase for source code management and IBM Rational ClearQuest for defect and change tracking. The team streamlined their SCM functions and automated their workflow by using the Unified Change Management (UCM) activity-based change management capabilities in Rational ClearCase and Rational ClearQuest.

Throughout FNF, Rational ClearCase, Rational ClearQuest and Flashline are frequently among the first solutions adopted by teams as they move from disparate toolsets to a more unified environment.
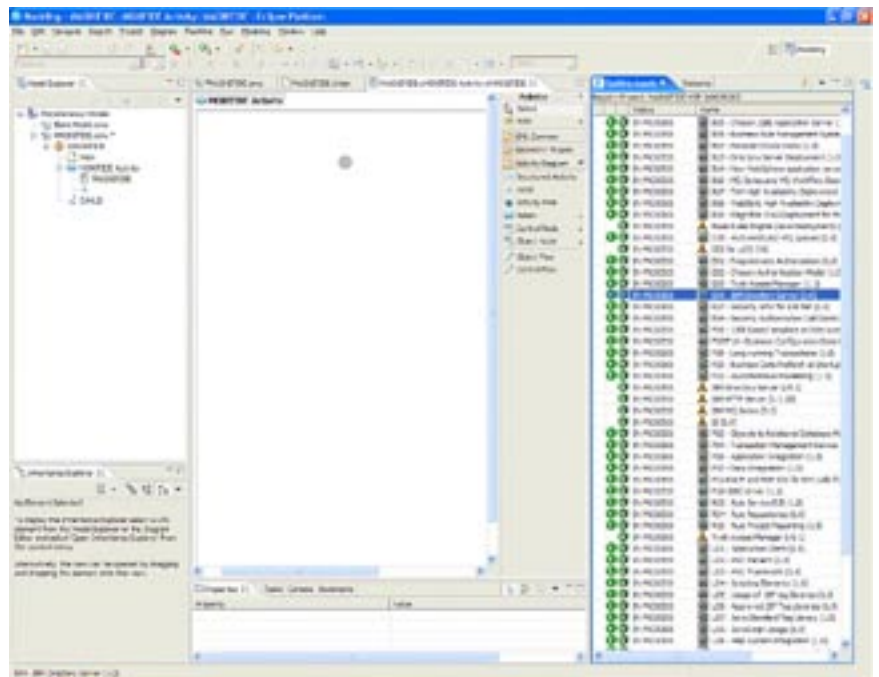
"Our teams that were using other source code management tools are using Rational ClearCase along with Rational ClearQuest – in many cases integrated in their Rational Software Architect or Eclipse development environment," says Gellerstedt. "We recognized early on that adopting Rational ClearCase and ClearQuest would provide everybody in the organization with the ability to effectively track issues and manage their source code and documents. In addition, our teams can use a solid, customizable solution to build software and create the workflow environment that is most effective for their development."

Managing Requirements with IBM Rational RequisitePro

The FNF project team that was among the first to use Rational ClearCase also uses IBM Rational RequisitePro® to define, manage and track requirements for the system. Typically, requirements would be defined in Rational RequisitePro before any coding begins. However, because this project was underway before the team began using IBM Rational tools, the team first addressed the need for efficient software configuration management, and then began using Rational RequisitePro.

Gellerstedt explains, "The tool implementation evolved. We started with Rational ClearCase and Rational ClearQuest and we brought in Rational RequisitePro as we started defining specific requirements. We linked them all together and flushed out a process,

which was based on RUP but modified to best suit our purpose. The process begins with a business use case that allows our business people to establish the business requirements. We then drive out the fine details and create technical use cases. That is done in Rational RequisitePro." According to Gellerstedt, a key advantage of the IBM Software Development Platform is the ability to start with only the tools needed to address immediate needs, and then deploy additional solutions over time. "The magnitude and configurability of

Developers can access Flashline assets for projects working within Rational Software Architect

the solutions within the IBM Software Development Platform is a major advantage. You can take one tool and start getting your job done, and then add the second one and go forward," he adds.

IBM Rational Software Architect with Flashline

A number of FNF development teams use IBM Rational Software Architect –

an Eclipse-based integrated design and development tool – to create well-architected applications and services by leveraging model-driven development with the Unified Modeling Language (UML). Flashline's Eclipse plug-in allows developers to access Flashline features and capabilities from within their familiar IDE.

Developers search for and view Flashline assets, such as components, Web services, or business rules, from within Rational Software Architect. In

addition, developers can see assets that have been used in or downloaded to the project, and assets that have been prescribed – assigned to the project but not yet used in the project.

Ensuring Quality

Delivering high quality products and services is a high priority for FNF – it helps the company maintain long-

lasting and close relationships with its customers. FNF developers use IBM Rational PurifyPlus™ during development to detect memory corruption problems and memory leaks, profile application performance, and analyze code coverage.

FNF testers also use IBM Rational Manual Tester and IBM Rational Functional Tester to verify system functionality and to conduct preliminary performance tests with concurrent users before conducting pre-production benchmarking of the system.

FNF development teams have also begun integrating IBM Rational testing tools with Rational RequisitePro and Rational ClearQuest to enable traceability throughout development from requirements to testing. FNF plans on using this capability to track and ensure compliance with the strict regulatory requirements of the financial services industry.

Top Benefits
One of the key advantages of the enterprise-wide adoption of IBM Rational tools at FNF is the ability to streamline and accelerate training. Gellerstedt explains, "With a common toolset, we can leverage training throughout the organization. For example, we can ask IBM to conduct on-site training, and invite users from a number of groups to attend. IBM has worked with us to customize the training to meet our needs and it has been very productive and cost-effective."

The IBM Software Development Platform has also improved communication between groups within FNF. "Unrestricted communication is the key to any good relationship and that includes development environments. Because many groups are using the same tools, there is real interest in the success of other groups. The response within FNF has been very positive," Gellerstedt notes.

In addition to improved productivity, communication and asset reuse, FNF has reduced costs since adopting IBM Rational and Flashline tools. FNF used Flashline's automated tracking and measurement capabilities to measure the cost savings of asset reuse. Gellerstedt concludes, "At the end of the year, we like to assess the impact the tools have had. We've seen savings of millions of dollars through asset reuse. Over the past two years, we have realized significant cost savings through reuse and the majority is due to the leveragability of the tools. As we continue to integrate Flashline and IBM Rational tools, we will be able to embed reuse deeper in the development environment and further reduce costs by creating and sharing reusable solutions."

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