



Research Report

Mainstreaming the Mainframe: Compuware's New Strategy to Bring the Mainframe into the DevOps Fold

Introduction

As businesses look to integrate systems of record with systems of engagement, linking siloed mainframe environments with distributed web, mobile and social platforms is a necessity. But the integration of the mainframe world with the distributed systems world has proven to be challenging. Mainframers have traditionally used different development languages (Cobol, Fortran, Pascal, Assembler ...), different development and workflow tools and different development methods (such as Waterfall) to build mainframe applications. Distributed systems developers use newer programming languages (Java, Python, Ruby...), more advanced toolsets and Agile development methods to build distributed applications.

What is needed to rectify this situation is a common DevOps environment. To blend mainframe and distributed development, Compuware has announced a series of unique technology integrations combined with newly acquired software assets to create a common development environment that supports the integration of mainframe and distributed systems. By using Compuware's integrated environment, enterprises can incorporate mainframe applications into broader cross-platform applications and process flow. As a result, businesses can more efficiently and effectively integrate mainframe code with popular Agile and DevOps toolsets, improving business agility and enabling mainframe applications to be developed and maintained by the new generation. Compuware's new strategy enables IT organizations to move toward a blended, multi-platform ecosystem across the enterprise that, in Compuware's words, "mainstreams the mainframe."

Background

DevOps methodologies aim to improve collaboration and communications between development teams and operations through all stages of the software development lifecycle including design, development and support. Agile typically applies this concept more specifically to software development. Used together, businesses will benefit from shorter development cycles (more products get to market sooner), better quality software and more time for developers to focus on value-add features rather than fixing issues. These methodologies support a continuous delivery model that enables features to be delivered to customers as they are available rather than waiting for "the next release."

While many new businesses and new applications now rely heavily on DevOps and Agile, applying these approaches to mainframe applications is new. But in order for businesses to get the true benefits of Agile and DevOps, the mainframe must be "mainstreamed" so that developers can use the same tools, methodologies and processes across all enterprise computing platforms and applications.

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Compuware's DevOps Announcements: A Closer Look

Let's look more closely at Compuware's recent set of announcements.

Acquisition of ISPW Assets

For organizations wanting to be Agile on the mainframe, they must standardize their Source Code Management (SCM) methodologies. Compuware is helping organizations do just that by acquiring the assets of ISPW Benchmark Technologies, a leading provider of SCM solutions that boasts a large, loyal customer base that includes customers such as Shell, Toyota, Great-West Life, FedEx and others. Capabilities include Agile source code management, release automation and application deployment for cross-platform (mainframe and distributed systems) application development. The solution provides an automated single point of control at every stage of the development process, while lowering development costs, speeding application delivery and improving software quality. Designed for Agile development, ISPW replaces CA Librarian, CA Panvalet, CA Endeavor, and Serena ChangeMan, systems that are designed for waterfall methodologies.

Technology Integrations and Partnerships

Yet another means to mainstream the mainframe, Compuware is integrating with solutions from AppDynamics, Atlassian, Jenkins, SonarSource, and Splunk, industry leading vendors in their respective categories, leveraging these partnerships to make widely-used tools applicable to the mainframe. By doing this, the mainframe can be included in broader enterprise Agile/DevOps processes. IT staff with little to no mainframe experience can perform mainframe-related tasks using today's leading toolsets overcoming the lack of mainframe skills in the current crop of new DevOps software developers.

AppDynamics

AppDynamics, a leading application performance management solution, allows rapid identification and resolution of issues in applications that use IBM DB2 for z/OS as the back-end database in cross-platform, mixed (mainframe/distributed) environments. The integration of the AppDynamics Application Intelligence Platform and Compuware Strobe allows DevOps teams to access DB2 diagnostics from their AppDynamics user interface, with context to the specific transaction. AppDynamics and Compuware plan to continue jointly innovating in ways that help IT unify DevOps across distributed and mainframe platforms.

Atlassian

Integration with Atlassian will enable enterprises to manage mainframe COBOL application code within Atlassian JIRA Software, a leading Agile/DevOps team planning and project management software. By integrating with JIRA Software, developers and operations teams can include mainframe COBOL application tasks in their JIRA-based environments. The initial integration will automatically create an issue in JIRA when a problem is detected. Using the Topaz Workbench, a developer tasked with that JIRA issue can then launch a COBOL debugging session that is pre-configured to address the precise point in the application where the problem occurs. This capability will enable large enterprises to unify their agile workflows across all code running on all platforms, creating a common, collaborative environment across the entire application development lifecycle.

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SonarSource

Compuware and SonarSource, a leader in continuous code quality management, managing technical debt and improving application longevity, have partnered to enable developers with little mainframe experience to quickly and easily deliver COBOL code and to provide more streamlined management of Agile mainframe development.

By integrating Compuware Topaz Workbench with SonarSource's SonarLint—which automatically discovers COBOL code defects with iterative code quality checks—mainframe-inexperienced developers can manage mainframe related tasks without putting application integrity at risk. Integrating Topaz Workbench with Jenkins (the leading open source continuous integration server) allows mainframe source code to be easily analyzed by SonarSource's SonarQube, a multi-project dashboard for tracking source code issues, complexity and technical debt. With this metrics-driven quality approach, developers can quickly update legacy applications to keep pace with changing business requirements, while ensuring application quality.

Splunk

Compuware is integrating with Splunk, a leading platform for operational intelligence. Splunk Enterprise collects and analyzes the wealth of data generated by enterprise IT environments so companies can more effectively drive operational performance and business results. Compuware Hiperstation will record and provide a mainframe application auditing data feed to Splunk so staff can see how the applications are actually being used. By adding Compuware's mainframe application auditing information to Splunk, enterprise IT can unify their security and compliance management efforts—and thereby achieve better results.

Summary Observations

Clabby Analytics has long been a huge proponent of mainframe computing, even while other analyst firms have warned enterprises to abandon the mainframe due to a pending skills shortage. These analysts have counseled customers to move applications off the mainframe to distributed systems or the cloud—even though there is no other system on the market that can process as many transactions per second, nor provide near-real time analytics while offering the same level of security, reliability and quality-of-service as a mainframe. Customers—particularly large enterprise customers—continue to view the mainframe as a strategic platform for running mission-critical applications, back-end transaction processing for web-enabled mobile apps, and for providing an important source of Big Data analytics.

Mainframe legacy applications have, however, long been developed and managed in a highly siloed manner with legacy tools by old-school developers. Little has been done to bring these mainframe siloes into the Agile/DevOps fold that enables web and mobile applications to be updated quickly, based on changing business requirements. Traditional mainframe Waterfall development has hampered enterprise application integration efforts, forcing enterprises to struggle with slow and inflexible processes.

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Enterprises now want their IT assets to work together in a synchronized fashion – and Compuware's new DevOps strategy enables enterprises to use a common development environment achieve mobile/social/distributed/mainframe synchronization.

What is particularly noteworthy about Compuware's approach is that the company has overcome its traditional not-invented-here syndrome, and is now aggressively recruiting software partners to deliver new, advanced, blended solutions.

We started tracking Compuware only last year, but we've been impressed by the company's approach to bringing new, state-of-the-art solutions to the mainframe world. We intend to follow Compuware closely for the foreseeable future, looking for continued creative innovation as the company strives to blend its software and the software offerings of its partners to bring new solutions to the mainframe marketplace.

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