CA technologies
A **Broadcom** Company

Case Study

Williams Northwest Pipeline Supports Business Goals with Broadcom Continuous Testing Solutions

Client Profile

Organization: Williams
Industry: Energy
Employees: 5,600

Business

Williams is a Fortune 500 energy infrastructure company, providing natural gas processing and transportation. Based in Tulsa, Oklahoma, it employs 5,600 people through operations across the US.

Challenge

To keep pace with business demands, Williams needed to deliver higher quality applications and updates more quickly and with fewer defects. Manual testing processes were hampering its ability to achieve this.

Solution

CA Technologies, A Broadcom Company, implemented a suit of solutions on Williams' Northwest Pipeline to automate and improve software testing. CA Services also provided customization, education and implementation support to provide end-to-end release management.

Benefit

Northwest Pipeline has improved the speed and quality of software delivery, which frees up resources for new business projects, and will help the company achieve its business goals of providing the best service for less cost.

Business

Making Energy Happen

Williams is an energy infrastructure company focused on connecting North America's significant hydrocarbon resource plays to growing markets for natural gas and natural gas liquids (NGLs).

Williams' interstate gas pipeline and gathering and processing operations span the US. Operations include strategic assets in the deepwater Gulf of Mexico, the Rockies, the Pacific Northwest, and the Eastern Seaboard.

Founded in 1908, Williams employs more than 5,600 people. It is headquartered in Tulsa, Oklahoma, and has other major offices in Houston, Pittsburgh, Oklahoma City, and Salt Lake City.

The company's goal is to be the low-cost provider of natural gas to its marketplace, and to be the best at delivering natural gas to customers.

Challenge

Safeguarding Compliance and Software Quality

Although operating in the energy sector, Williams relies heavily on IT to help achieve its business goals and deliver value to its shareholders. Delivering software and updates to the organization reliably and efficiently is therefore vital.

The company was founded more than a hundred years ago and has many well-established processes which have been modernized over time. Williams' software developers were highly experienced, but were keen to modernize their software testing processes.

"For many years, we have tested software manually using developers as well as expert business users," explains Patrick Meeks, IT Manager of West Operating Area at Williams. "It worked well initially, but this approach was struggling to keep pace with the demands of the business. We needed to deliver applications and updates more quickly, of higher quality, and with fewer defects."

Williams had already begun to explore automating parts of the release stream, such as API testing, as well as using mocking and service virtualization technologies, but was keen to extend it with a more comprehensive approach.

Solution

Continuous Testing of Apps

After extensive research into testing automation tools and reviewing Gartner's layered testing approach, Williams selected Broadcom Continuous Testing solutions: *Agile Requirements Designer, Test Data Manager, Service Virtualization, and Nolio Release Automation*.

"CA Technologies offered a compelling solution with its integrated tools that provide seamless, end-to-end test management," explains Meeks. "In addition, Broadcom Continuous Testing solutions were able to manage all the technologies used across our applications, which other solutions were unable to do."

CA Services provided a proof of concept to ensure that the solutions fully met Williams' needs. "One particular application used a messaging protocol that is completely different to other Web applications," comments Meeks. "It was critical for Service Virtualization to work with the AMF protocol, so as part of the proof of concept, CA Technologies wrote a custom extension to achieve this."

Meeks was keen to benefit from the experience of CA Services in adopting the solutions. "We had no in-house experience of testing tools before so it was a natural progression to bring back the CA Services people who already understood our business to help us smoothly implement the tools. CA Services also educated our team and the managed services provider we are using for testing going forward."

Following the CA Services engagement, Northwest Pipeline and its testing partner iterated through different approaches until settling on the most efficient process to meet its needs, enabling it to rapidly add business processes into its testing portfolio.

Solution (con't)

"CA Technologies has been instrumental in helping us go beyond test automation to achieve end-to-end release automation for the future benefit of the entire Williams IT organization.
– Patrick Meeks, IT Manager, West Operating Area, Williams

Northwest Pipeline is also using Agile Requirements Designer to model business rules and optimize the possible number of test cases, while Test Data Manager enables the team to supply the data elements necessary for each test case, including cloning or synthetically generating data if required. With Service Virtualization, the team can program the testing steps and, in the event any step fails, analyze the root cause and fix the code.

As the final piece of the puzzle, Nolio Release Automation enables the team to rapidly and reliably release apps on demand.

Benefit

Satisfying Industry and Business Demands
In order for Williams to achieve its goal of being the best energy infrastructure provider, its IT department must also be best in class. By providing automated and end-to-end testing, and release management, the Broadcom Continuous Testing solutions enable the company to improve quality and enhance the capabilities of its development team, helping it to achieve this goal.

Meeks comments, "With Broadcom Continuous Testing solutions, we can identify and rectify defects more quickly and easily before they are released into production. This will help us improve the speed and quality of software delivery."

Fewer defects and increased automation also mean that the development team has more time available. The team can add new projects to their portfolio, thereby delivering greater value to the business.

By improving and automating software testing with Broadcom Continuous Testing solutions, Northwest Pipeline is now able to:

- Deliver high quality software reliably and more quickly.
- Free up IT resources for new business projects.
- Keep pace with business needs.

"Broadcom Continuous Testing solutions enable us to provide greater support and value to the business, which will help us achieve our goals of providing the best service for less cost," concludes Meeks.

For more information, please visit ca.com.