

CASE STUDY

ZEPHYR DRIVES BETTER INTERNET OF THINGS TESTING FOR HONDA



The process of creating an automobile has shifted significantly from what it was when cars first came on the scene, to the point where some manufacturers mainly use machines instead of human labor. Having software for this equipment is paramount to the quality of the cars and the overall vendor's reputation.



A big name in the car industry, Honda has a reputation of excellence to uphold for both its loyal buyers and new clients interested in their line of offerings. It uses software to maintain product quality but required a different method of testing for its programs.

Honda's needs and challenges

The company has its own home-grown software that controls process loads and quality management of their products. Honda leverages this program to gather the value of nuts and bolts installed, gathering serial numbers of installed parts and the actual torquing of bolts. The software records each serial number into their database, and how much torque is put onto an individual bolt to ensure it's in the right range. The program must provide an archive of historical data to ensure that if a part malfunctions, Honda representatives can review if there was a problem with that specific component and further investigate the issue.

Because they have an internal team that develops the program, Honda needed a test management system that would handle all cases related to the advancement of the software. Initially, Honda relied on Excel documents and internally managed the linkage between features and test cases. This led to significant problems in delivering updates on time and ensuring the consistent quality of the manufacturer's cars. One Honda plant was using HP Quality Center, a legacy program that wasn't integrated into Jira, making it impossible to link requests right to the test cases.



Zephyr improved testing capabilities

For Honda, picking the top selling test management add-on in the Atlassian marketplace, was easy. The ability to create one test case and execute it against different test cycles was seen as a major benefit of the test management system. Additionally since it has the exact same UI as Jira, new users could learn how to use it quickly.

The car manufacturer has multiple plants, and each one was managed separately by different development and QA teams. After integrating Zephyr (Native Jira Edition), all sites are able to develop in a single code base, giving management a holistic view of all the project teams. Honda currently runs about 545 test cases through the program. Even for locations that are separated

geographically, they are now all able to operate together and see the updates and tests being done, fueling a wider collaboration effort that was not previously possible. Developers can now ensure that all of their cases are accurately relayed and are tracked across the board.

The screenshot illustrates the integration of IronClad's test management tools with the Jira platform. It shows how test cases are linked to Jira issues and how they are assigned to specific test cycles. The interface provides a clear overview of the test environment, allowing for efficient management and tracking of software quality.

Benefits seen from test management

After using Zephyr, Honda became more agile in their operations and software development processes. Honda representative Joseph Allen noted that automated testing was a major effort they wanted to strive toward, and Zephyr is a solution that will help them achieve this goal. The automation can reduce production times and increase test accuracy, leading to stronger software and lower development and release costs. Now that Honda has incorporated Zephyr as their test management solution they're looking to see how ZAPI and Blueprints can play a vital role in their testing process.

"I can relate test cases directly to each build that we have, so I can easily select a bunch of test cases that we've already got created, assign those to a release cycle, and have the QA team test those same issues again," Allen stated.

Honda has seen many other significant benefits from Zephyr that go beyond increased automation efforts. The developers at Honda used to do all the testing previously, opening the potential for errors and redundancy.

Using an iteration cycle for their software, the company receives a new build every two weeks. The ability to clone a test case for all simulation tests and have the QA team understand which elements they need to execute is a critical advantage offered by Zephyr. This ensures that processes are accurately replicated every time, leaving little room for error. By consistently checking for errors, the QA team can avoid having to address issues later in the production lifecycle, which is costly and time-consuming.

Honda's needs show that organizations across all industries are looking for capable test management systems. Zephyr has the flexibility and functions to better enable QA and development teams, ensuring better collaboration and upholding quality standards.

"I would say Zephyr (Native Jira Edition) makes [collaboration with QA] easy, since we can have that linkage between test cases, and the Jira issues, anybody that's working on them, they can easily go back to the Jira issue and look and see what developer worked on it, and ask them questions and try to get more information out of them if they need information," Allen said.

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