

Retail: Accelerating Test Environment Configuration and Parallel Development for a Transition to Agile

A leading retailer needed to streamline performance test configuration and parallel development efforts in order to enable the organization's transition to Agile. For performance testing, Parasoft's service virtualization dramatically decreased test data configuration time while empowering them to increase performance testing breadth, accuracy, and control. For parallel development, Parasoft Virtualize allowed them to rapidly model the anticipated behavior of evolving services so the front-end and back-end could be developed in parallel.

The Challenge: Resolving Delays and Deadlocks to Enable a Transition to Agile

One of the nation's largest retailers recognized service virtualization's potential to alleviate the performance testing and parallel development challenges they were facing. Their performance testing was complicated by the difficulty of configuring test data. Setting up all the appropriate test data for performance testing took days due to the complicated coordination required between many different dependent components. Getting all the dependencies into the proper state was a challenge—as was rolling the environment back to the previous state once testing was completed.

Moreover, the team was attempting to test against dependent components in a staging system where response times were highly variable and often did not truly reflect the performance expected for their production-grade equivalents. As a result, it was difficult for the team to pinpoint the true source of any detected performance degradation.

Knowing that the company's planned transition to Agile would bring more frequent (and shorter) testing cycles, the QA teams anticipated that the scope and severity of these obstacles would soon come to head if not properly addressed.

Service Virtualization Expedites and Enhances Performance Testing Efforts

With Parasoft Virtualize's service virtualization, performance test engineers could easily emulate the behavior of various dependent components (CRM, ERP, etc.) as needed for various test scenarios. This enabled the test engineers to rapidly test their system against numerous environments, reducing delays while increasing test coverage.

With the dependent systems (exposed as services using REST, SOAP, and HTTPS) represented as virtual assets, they could easily configure realistic responses for each component—enabling them to more accurately assess the performance of the application under test. They were also able to adjust the performance of each component using GUI controls for timing, latency, and delay. This enabled them to instantly reproduce performance conditions that would otherwise be difficult to set up and control. For instance, at one point they decided to simulate various levels of slow performance in the CRM so they could zero in on how their application responded to such bottlenecks.

Accelerating Parallel Development of the Front End and Back End

The next anticipated application of the solution is to accelerate parallel development of the front end and back end services as the organization transitions to Agile. Using Virtualize's intuitive GUI for virtual asset creation, the team can model virtual assets that emulate the anticipated behavior of the evolving back end services. The front end team can then develop and test against the virtual assets rather than wait for the actual services to be completed.

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