

# Financial: Removing Test Data Management Bottlenecks for Agile Development and Continuous Delivery

A financial services provider was migrating to Agile to support a continuous delivery model. They soon discovered that completing 2-week scrums on time would be impossible unless they reduced the lengthy wait time for accessing a test environment configured with the appropriate test data. Service virtualization enabled them to provide immediate access to the necessary test environments; virtual environments with the appropriate data could be set up in hours rather than weeks. Since functional and performance testers can now easily access the same level of sophisticated data much earlier in each cycle, they have been able to expand test coverage and begin continuous regression testing.

## **The Challenge: Test Environment Access Delays Create Bottlenecks for Agile Scrums**

A financial services organization migrated to an Agile development process with continuous delivery because they wanted to bring new online capabilities to market faster. As they started adopting 2-week scrums, it soon became apparent that they could not meet their deadlines with the current delays impeding test environment access.

During each of the 20-25 sprints that typically run in parallel, functional testers need to access dependent back-end systems (exposed as nearly 100 services). Until the test data DBA populated them with appropriate test data, the testers could not exercise any test scenarios on the application under test. Due to the complexity of the data involved, manual configuration was a slow and arduous process—one that often took weeks. Without a means to streamline this process, completing 2-week scrums with the necessary level of testing was simply impossible.

## **Service Virtualization Enables Fast Easy Creation of Virtual Test Environments with the Proper Data**

Using Parasoft Virtualize, the organization created and deployed nearly 100 virtual assets that emulate the behavior of the back-end systems. To tackle the test data management challenge, they established a system whereby data could be captured from the actual back-end systems, manipulated as needed for specific test scenarios, then automatically deployed to the associated virtual assets.

Now, a properly-configured test environment can be configured and deployed to a testing team in a matter of hours instead of weeks. In fact, they are typically ready from the earliest phases of each sprint—before any coding begins. This effectively eliminated the roadblocks that the functional testing team had been facing for years.

## Enabling Nightly Load Testing to Support Continuous Delivery

The organization is now beginning to extend their service virtualization adoption from functional testing to load testing. To support the organization's continuous delivery initiative, the performance test engineers have been tasked with running automated load tests every night on each new build. This was not previously feasible due to the highly-restricted access to the production-like test environment they had been using for load testing as well as the difficulty of populating the environment with the appropriate test data (discussed above).

By leveraging "always-on" virtual assets configured with the appropriate data, the performance test engineers now have the level of access to (and control over) dependencies that they need to execute continuous testing.

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