

Parasoft Continuous Testing Accelerates Testing and Improves Quality

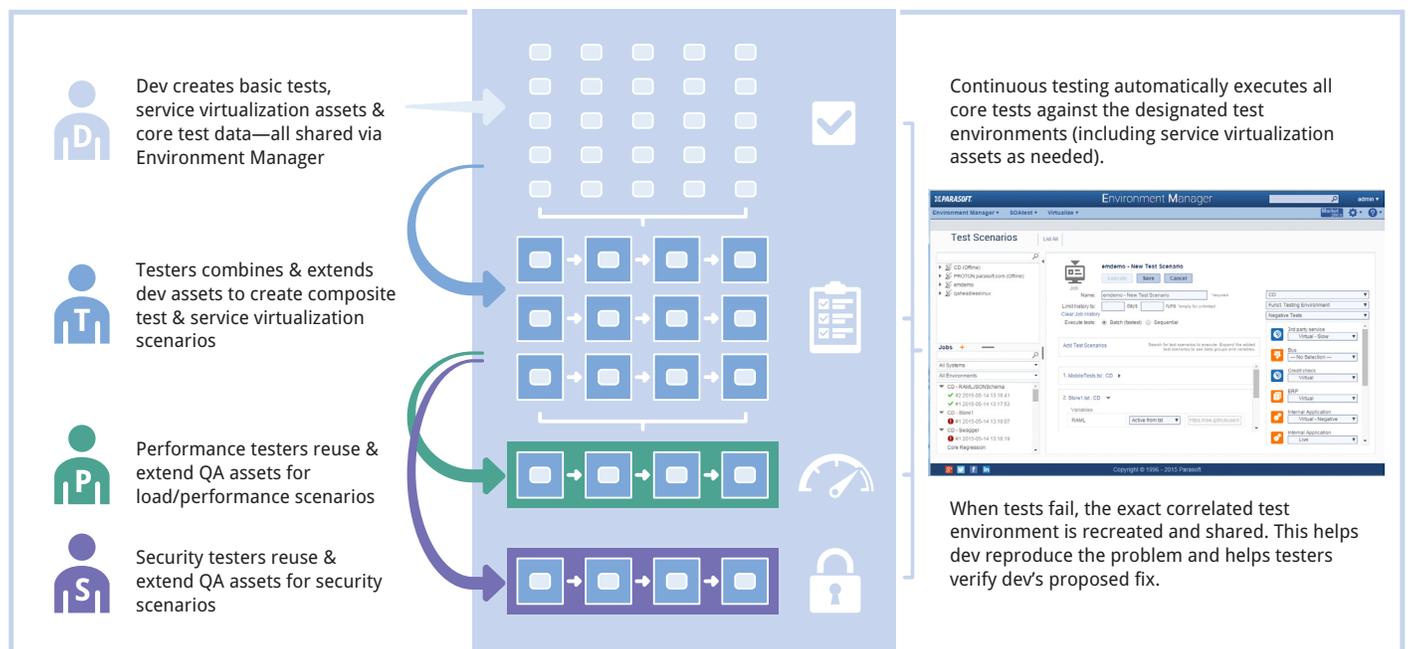
Today's DevOps and "Continuous Everything" initiatives require the ability to assess the risks associated with a release candidate—instantly and continuously. Parasoft Continuous Testing helps organizations rapidly and precisely validate that their applications satisfy business expectations around functionality, reliability, performance, and security. Even novice team members can configure and provision a complete test environment, then immediately execute tests against the appropriate test environment configurations.

Parasoft Continuous Testing features the following core capabilities:

- **Service Virtualization:** Provides on-demand access to complete, realistic test environments by simulating constrained dependencies (APIs, services, databases, mainframes, ERPs, etc.) through Parasoft Virtualize
- **API Testing with Load Test:** API/service unit testing, end-to-end functional testing, load/performance testing, and security testing through Parasoft SOAtest and Parasoft Load Test
- **Test Environment Management:** On-demand provisioning of complete test environments in order to rapidly evaluate a release candidate; allows your automated tests to run continuously versus complete test environments

Designed to Accelerate Testing

To promote productivity and increase accuracy, a common component architecture orchestrates core functionality across all capabilities. Moreover, core artifacts are designed to be reused and extended across teams and capabilities.

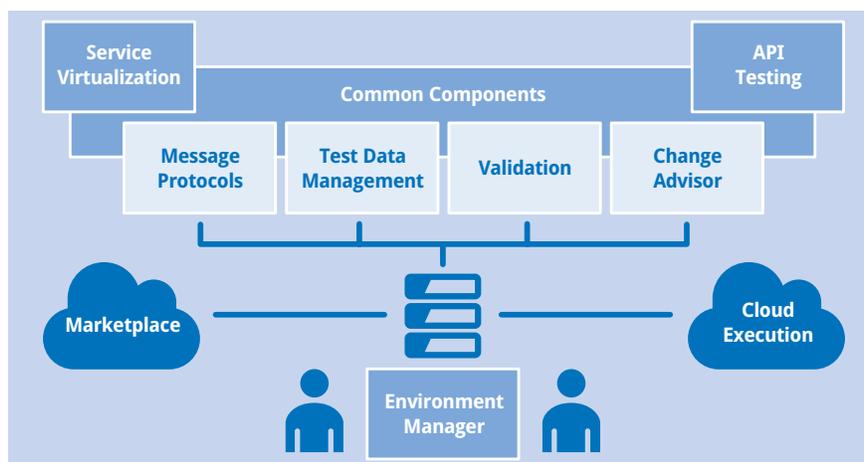


The following table outlines key benefits of having this integrated solution leveraging common components and shared, reusable test artifacts.

<p>Reusable Building Blocks</p>	<p>“It seems like we start from scratch and re-create the wheel with every release cycle.” API tests are built by developers in SOAtest or Environment Manager, then extended by QA into complex end-to-end functional test scenarios, which are then leveraged for load/performance testing as well as security testing.</p>
<p>Reuse Data Across Tests and Tools</p>	<p>“Test data is always changing and is hard to manage.” Test data can be extracted from (or injected into) any tool—not only Parasoft testing and service virtualization tools, but also any other tools integrated into the open platform (e.g., Selenium, Appium, etc.). Test data sets are centrally managed to ensure easy extension, updating, backups, rollbacks, etc.</p>
<p>Eliminate Testing Roadblocks</p>	<p>“Waiting to access a complete test environment results in missed milestones.” If end-to-end test scenarios need to access dependent systems that are not available or are difficult to configure for testing, those dependencies can be simulated via Parasoft’s service virtualization capability. These service virtualization assets can be constructed from the same artifacts (e.g., traffic files, service definitions) and UIs used for test construction.</p>
<p>Easy Environment-Based Test Automation</p>	<p>“Our automated tests are limited by access to dependent systems or services.” Any team member can identify appropriate tests by searching test library metadata, configure a corresponding test environment with the desired service virtualization assets and “real” system configurations, then set up automated tests that are continuously executed in context of the specified environment.</p>
<p>Defect Reproduction</p>	<p>“We waste time finger pointing because we cannot reproduce defects.” If a test fails, the correlated test environment can be re-created with the click of a button to reproduce the failing test case within the exact same environment configuration. This accelerates the process of defect remediation and eliminates the time-consuming, frustrating plight of Development being unable to reproduce problems reported by QA.</p>
<p>Instant Change Notification and Intelligent Asset Updating</p>	<p>“We’re wasting time building tests that access out-of-date integration points.” Change Advisor alerts users across all Parasoft interfaces (e.g., desktop thick client, server, Web UI) when test or service virtualization assets have become out of sync with the corresponding API or service. Moreover, centralized change templates help users update all test and service virtualization assets quickly and intelligently.</p>

Elements of Parasoft Continuous Testing

Parasoft Continuous Testing is composed of the following key elements:



API Testing (Functional, Load/Performance, Security) with Parasoft SOAtest and Load Test

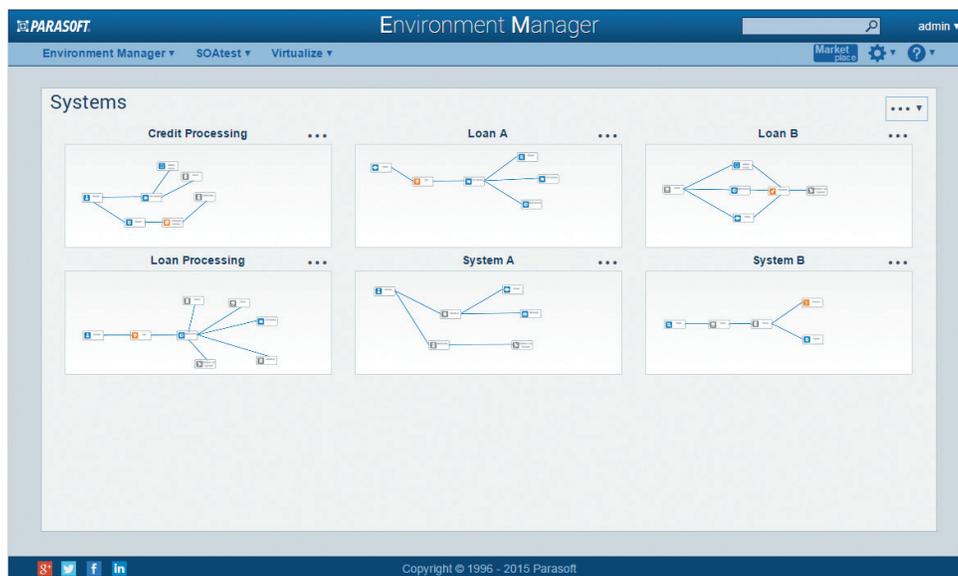
Parasoft API Testing provides unprecedented test automation to help testers ensure the security, reliability, and performance of transactions across modern business systems. From a single intuitive interface, it automates “end-to-end” test scenarios across multiple endpoints (APIs/services, databases, Web UIs, ESBs, mainframes...). Beyond robust support for REST and web services, the solution supports an industry-leading 120+ protocols/message types.

- Integrate functional/load/security testing with test data management, service virtualization, and defect prevention
- Generate extensible, reusable, easily maintainable tests with 100% coverage
- Automate continuous regression testing with sophisticated validations
- Construct advanced end-to-end test scenarios combining tests for the web layer, API layer, mobile application, etc. into a single integrated scenario

Service Virtualization with Parasoft Virtualize

Parasoft Service Virtualization helps development and QA teams access the complete, realistic test environments needed to develop or test an application—anytime, anywhere. Testing is often delayed or cut short because it’s difficult to access the complete, realistic test environments required to test meaningful transactions. By replacing unavailable dependencies with easily accessible and configurable “virtual assets”, service virtualization allows teams to start testing earlier, test more completely, and test continuously.

- Capture and simulate live system behavior from recording
- Rapidly model incomplete/unavailable components from service definitions and logs
- Easily configure complex test conditions (e.g., “what-if,” security, concurrency, fail-over, performance, and negative test scenarios)
- Simulate any system interactions—supports REST & web services, plus an industry-leading 120+ protocols/message types



Test Environment Management with Parasoft Environment Manager

Parasoft Environment Manager integrates and extends the above API testing and service virtualization capabilities via an intuitive web-based interface for creating, managing, sharing, and executing test environments (including service virtual assets) and tests. Environment Manager unites test environment management (test environment setup, visualization, validation, and provisioning), service virtualization (virtual asset creation, configuration, and deployment), and API testing (test creation, management, and execution).

- Visualize the dependencies associated with an AUT and specific test environments
- Easily configure all test environment components—including virtual asset performance, test data, and response logic
- Instantly provision “disposable” test environments with zero impact to the organization
- Identify test environment issues before they compromise the accuracy of your test results

Common Component Architecture

A common component architecture enables reuse of critical test artifacts across team members, capabilities/tools, and testing types—increasing both efficiency and accuracy. It includes:

- **Message protocols:** The industry's leading support for message formats and protocols is standardized across tools. Moreover, custom extensions for specialized needs can be created once and leveraged everywhere
- **Test data management:** Centralized creation and management of secure test data that can be applied across all solutions and integrated tools (including open source tools), as well as across team roles and test types (API/service, integration, performance, security...)
- **Validation:** Centralized, reusable test validations can be applied across all solutions and integrated tools (including open source tools), ensuring consistency while reducing rework
- **Change Advisor:** Instantly alerts the appropriate team members to changes that impact their test or service virtualization assets, and enables fast, intelligent updating of assets through a centralized change template

Parasoft Marketplace

Parasoft Marketplace provides easy access to an array of complementary service virtualization and API testing extensions developed by Parasoft, Parasoft's partners, and the Parasoft user community. This public marketplace is complemented by a private library which allows you to share extensions and scripts across your team, division, organization, and partner ecosystem.

Cloud Execution

Artifacts and execution environments are portable to cloud infrastructure, allowing for elasticity and leveraging on-demand bandwidth.



USA PARASOFT HEADQUARTERS / 101 E. Huntington Drive, Monrovia, CA 91016
Phone: (888) 305-0041 / Email: info@parasoft.com