HP Service Test software

Create service tests quickly in an intuitive, visual way, allowing you to discover defects at the earliest opportunity.

Data sheet

Testing what you can't see

It's common knowledge that a chain is only as strong as its weakest link. This is also true for composite applications that consume or call on services and components to complete a transaction; this collection of services and components is called the headless layer. The headless layer contains any number of services, message queues, database abstraction layers, and other GUI-less entities which provide important business logic to applications. Without proper functional testing, poorly designed and functioning services and components can negatively impact the quality of the overall system.

Despite the inherent risk of depending on functionality provided through the headless layer, the testing of services and components is often left to developers, if it's done at all. Why? Because there is no GUI. Because the service comes from the Cloud. Because it requires an understanding of the API. Because testers' t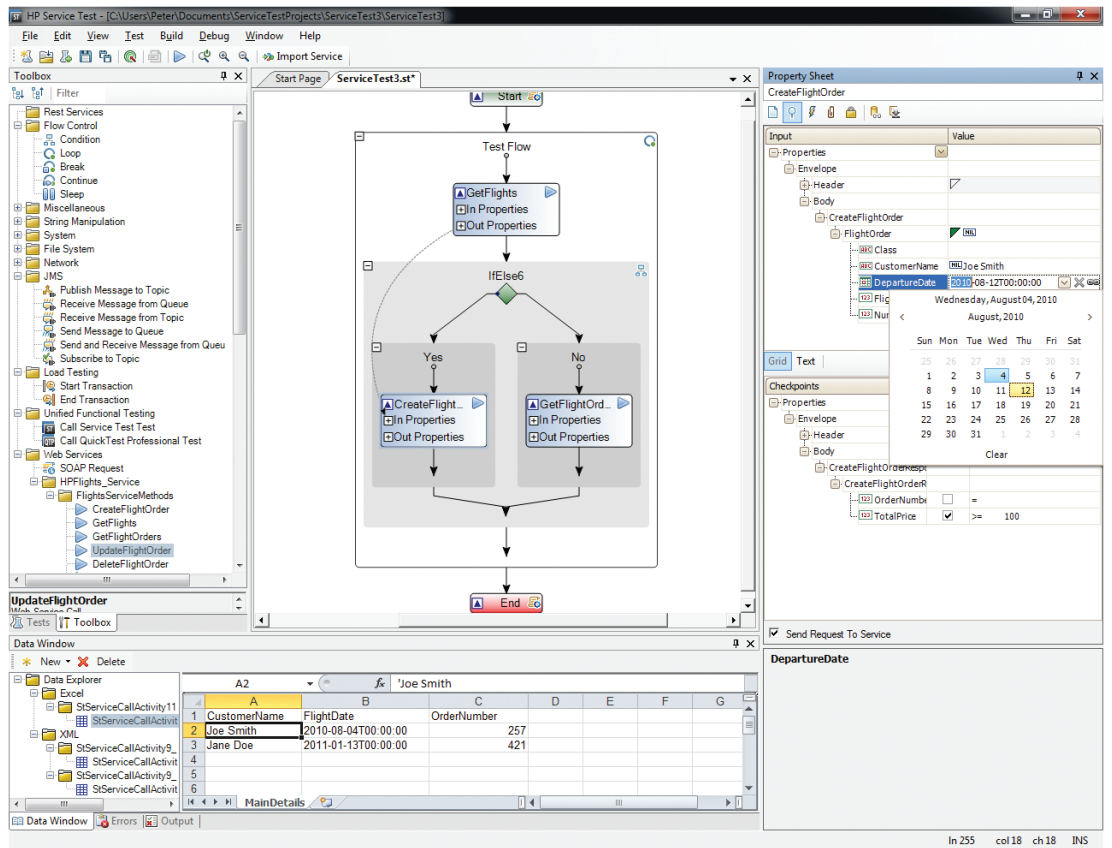ools and practices are focused on testing after the GUI (if there is one) becomes stable—late in the application lifecycle.

Another myth is any headless layer business logic is adequately validated through the application GUI. This approach has the obvious disadvantage of waiting until late in the application lifecycle to discover bugs when they're more expensive to fix, but has other shortcomings as well. The GUI might exercise only a subset of the service's functionality; what works for one application may fail later for another that exposes different paths in the business logic. What about aspects of the functionality not exposed through a GUI, such as performance and security?

Developers know their code and can therefore be blind to requirements-based defects. To properly validate the business logic provided by the headless layer and thus improve the overall quality of your composite applications, QA organizations must equip themselves with the necessary functional testing tools to take on the challenge of headless testing.

Figure 1:
The new HP Service Test visual test design interface

Finally, a fast, non-technical approach to headless testing

HP Service Test offers a simplified approach to headless testing. Rather than create a highly technical script, HP Service Test has a new graphical interface that visually constructs tests on a canvas. HP Service Test also includes an extensive toolbox of ready-to-use activities, and can be extended to support additional technologies not supported out of the box. The canvas and toolbox provide a nearly codeless testing approach that allows QA teams to:

Produce automated tests quickly and easily	which allows QA teams to extend testing to more testers in the organization with minimal training.
Begin testing as soon as services and components are available, sometimes even before, usually in the early iterations of the application lifecycle	which allows QA teams to discover defects sooner when they're easier and cheaper to fix.
Automate early for high levels of script reuse throughout the application lifecycle	which increases test coverage and shortens testing cycles.
Harden the building blocks of composite applications with independent validation of the headless layer	which means reducing risk and improving the overall quality of consuming applications.

How it works

With HP Service Test, testers can begin testing with a few clicks of a mouse. Simply drag an activity from the toolbox (on the left) and drop it on to the central canvas where it becomes part of the flow of the test. Common service types supported include WSDL, JMS, HTTP, and REST. Each step in the test is configured using the property sheet (on the right) where you define the flow of execution as well as the flow of data; the output from one step can be the input of another. This approach hides the implementation details from the user, who is no longer required to use a programming language to begin testing. The result is a codeless approach for most testing needs.

HP Service Test provides powerful data handling and supports text-based data tables as well as Excel files which can be created to match the format of the input and expected out of each step. XML data sources also provide a natural way of editing and supplying XML structures to steps.

Advanced users and developers can customize the behavior of a test by implementing event handlers for events exposed by a test step, or they can add their own custom code modules to the test flow. Event handlers and custom code modules are written in C#.

And with the breadth of technologies on the market, no vendor can provide an activity for every possible task a tester might need. This includes your own proprietary protocols and message formats. Users and partners interested in extending the capabilities of HP Service Test can use the Framework API to add tailored activities to the system for general use.

Key features and benefits

• Modern, intuitive visual test designer extends testing to non-developers

• Out of the box support for WSDL, JMS, HTTP, REST, and more

• Modular approach to supporting service technologies for simplified maintenance

• Flexible and extensible service processing

• Easy web services security configuration WS-Security, X509, Kerberos, SAML and more

• Regression testing from a baseline (load from replay)

• Powerful data handling supports text-based data tables, Excel, and XML

• Extensible platform for integration and API testing

• Unique integration through HP Unified Functional Testing software to provide multi-layer testing

• Complete test management with HP Quality Center and HP Service Test Management

• Integration with HP LoadRunner and HP Performance Center

Complements other HP Software solutions

HP Service Test is fully integrated with other world-class solutions from HP Software, giving you access to a comprehensive range of capabilities throughout the application lifecycle.

Complete test management with HP Quality Center and HP Service Test Management

HP Quality Center provides a centralized, web-based location for the storing and execution of tests as well as complete test management, from requirements through tests to defects, with real-time traceability and analysis.

HP Service Test Management extends HP Quality Center by providing management and information for composite applications. Access to this information allows QA teams to test earlier in the development lifecycle, determine the impact to the application when a change is made to a service or component, and execute only the tests needed to validate the change—avoiding costly over-testing and risky under-testing. This shortens test cycles and allows QA teams to respond more quickly to modifications made by developers.

Address both GUI and headless testing with HP Unified Functional Testing

HP Unified Functional Testing software accelerates functional testing for modern applications by simplifying test design and maintenance for both GUI applications and non-GUI services and components (that is, the headless layer). It provides functional and regression test automation for every major software application and environment including advanced Web 2.0 toolkits, development technologies, services, and ERP and CRM applications. HP Unified Functional Testing offers simplified test design using keyword and visual drag-and-drop methods, extending automation testing to more testers, while maintaining flexibility and control for power users. It not only validates GUI and non-GUI service and components, but can also validate and report on an integrated test scenario of a process that traverses multiple GUI and non-GUI layers of a composite application, reducing risk and improving the overall quality of your modern application. HP Unified Functional Testing includes HP Functional Testing software (HP QuickTest Professional and all of the add-ins), HP Service Test software, and integrated test scenario capabilities.

About HP BTO Application Solutions

HP's application solutions help ensure modernization initiatives deliver business outcomes instead of failing under the burden of outdated, legacy delivery mechanisms. Where rival solutions mistake the software development lifecycle for a total picture of the application, HP sees core delivery in the context of the complete application lifecycle—from business idea through retirement. Furthermore, by providing unified management and automation solutions, HP offers customers not simply more tools and integrations but greater simplicity. The result for enterprise application teams is improved predictability, repeatability, quality, and change readiness in both the core and complete lifecycle.

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