



SPIRENT ITEST

THE SYSTEM AND DEVICE TESTING SOLUTION

Today's high-tech equipment testers and developers face numerous challenges. They must ensure the quality of increasingly complex services and products, meet tight time-to-market deadlines, and work with globally distributed teams with diverse skill sets. iTest® is a powerful testing solution designed to help teams maximize efficiency and resources. Built for testers, developers, and automation specialists, iTest automates feature, black box, and regression testing to accelerate system and device testing throughout the quality process.

Key Benefits

- Accelerate system and device testing throughout the QA cycle by reducing manual tasks
- Enable all team members to contribute to automation objectives, regardless of skill level
- Automate testing by easily implementing and automating pass/fail criteria within tests
- Use virtualization technology to cut time-to-market and enable offline testing
- Improve collaboration across teams and between companies with a standardized communication platform
- Leverage existing libraries and assets for immediate ramp up

The world's leading service providers (SPs), network equipment manufacturers (NEMs), and enterprises currently use iTest to test their consumer and carrier-class devices. iTest provides a comprehensive approach for rapidly developing, automating, and maintaining test cases. As a result, companies can deploy the highest-quality services, cloud infrastructures, and Long Term Evolution (LTE) networks on time, while maximizing their existing resources.

iTest Enterprise enables experienced feature testers and engineers to easily build fully automated test cases with pass/fail criteria. These robust, easy-to-read, and transferable test cases can then be used by other QA teams to speed up replication, defect resolution, and regression testing. The breadth of functionality within iTest Enterprise makes it an ideal choice for organizations with diverse resources and skill sets. It also enables expert testers and automation specialists to augment fully automated test cases with powerful abstraction technology. These sophisticated test cases can be run against numerous devices, quickly updated for design changes, and immediately used for lights-out regression testing at the end of the automation assembly line.

RAPIDLY DEVELOP TESTS

All testers, regardless of skill level, can use iTest to create and execute test cases—from feature tests to multi-device tests—for functional, load, stress, or scenario testing. iTest quickly captures every command, action, and response, then saves them as a test case that users can rerun or edit anytime.

With iTest, users can easily modify test cases by adding pass/fail criteria such as numerical and string validation. They also can add conditional execution, looping, "if then," and other logic functions for the most demanding system and device testing tasks.

iTest further accelerates automation by supporting advanced techniques, such as procedures, QuickCalls, and topologies. Users can build assets once and use them in any number of test cases. This eliminates redundant work, accelerates the speed of test creation, and reduces the time needed to move maintainable tests into regression.

SIMPLIFY DATA ANALYSIS

The iTest parsing engine allows users to quickly parse unstructured data into names and their respective values. Rules can then be created with a single mouse click. Using a preview feature, users can instantly see the results of a new rule and determine whether future test results meet the necessary criteria.

DOCUMENT ALL ASPECTS OF TEST CASES

iTest thoroughly documents every test case, automatically creating a test report each time a test is run. The test report details setup information, commands or actions, and

BUILD MAINTAINABLE TESTS

iTest enables users to build maintainable tests by applying powerful abstraction techniques. iTest abstracts devices, responses, and topologies, allowing users to independently manage specific elements of the test case. Should a response map or session profile require an update, all test cases referencing those files will be dynamically updated. Users no longer need to worry that their tests will break if they run the same tests against other devices under test (DUTs) or conduct system testing after the device or software changes.

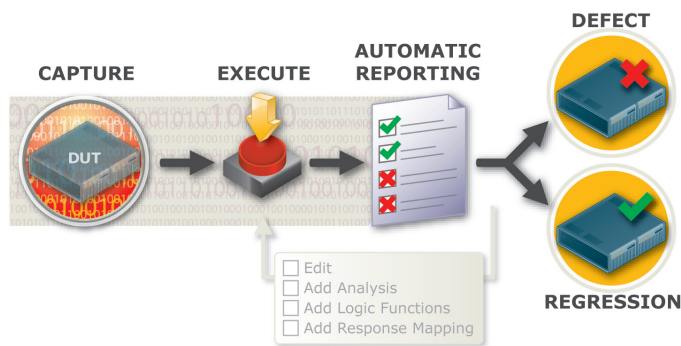
The screenshot shows the iTest Activities window with several callouts:

- Callout 1 (top left):** "iTest Activities streamline testing efforts around the most common automation tasks." This points to the 'Activities' sidebar on the left, which includes options like 'Develop a Test Case', 'Add steps by capturing', 'Execute test case', 'Analyze response', and 'Review test reports'.
- Callout 2 (top right):** "Create & edit test cases in an easy to edit format that doesn't require scripting." This points to the 'Steps' table in the main window, which lists actions like 'open', 'command', 'analyze', 'for', 'sleep', 'close', 'open', 'click', 'goBack', and 'getInnerText'.
- Callout 3 (bottom left):** "Quickly add automated test steps through capture and analysis. Easily execute your test and view test reports or share result with others." This points to the 'Response' pane at the bottom, which shows raw network data like 'command: ifconfig' and 'lo0: flags=8049<UP,LOOPBACK,RUNNING,MULTICAST> mtu 16384'.
- Callout 4 (bottom right):** "Add analysis to create robust test cases. Responses can be abstracted to allow test case portability and ease of maintenance." This points to the 'Charts' pane at the bottom right, which displays a line graph with data points over time (12:43:10 to 12:43:25).

corresponding device responses in a logical, chronological progression—all in the language of the device. Users can use this report to validate that a test was run and whether it passed or failed. If the test uncovers a defect, they can submit the HTML test report to their bug tracking system. Any tester with iTest can then rerun the test to reproduce the bug and fix it.

SHARE TEST ASSETS

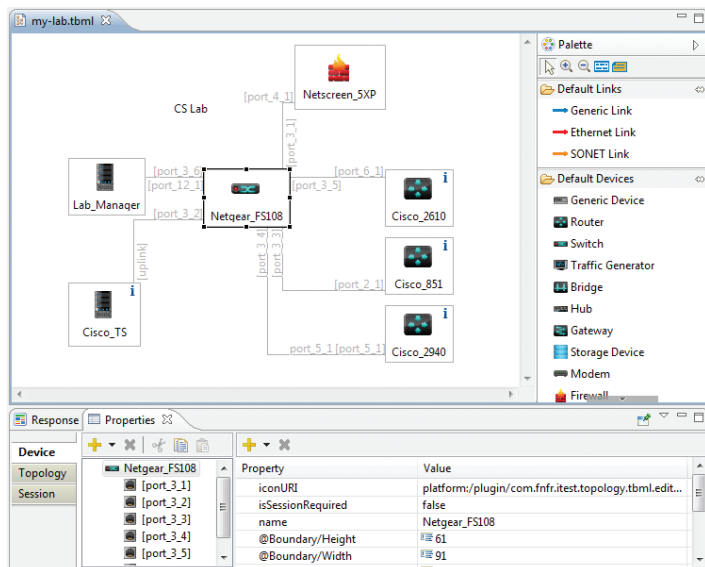
Test cases and reports built with iTest can be shared with different teams internally as well as with partners and customers. This provides a standardized communication platform that helps organizations streamline communication across geographies, roles, and test environments. As a result, they can dramatically reduce the time spent reproducing and fixing defects.



iTest leverages an innovative capture mechanism to quickly build test cases without scripting that are automatically documented. These tests can be instantly rerun or augmented for sophisticated testing.

IMPROVE PRODUCTIVITY WITH VIRTUAL TESTBEDS

The virtual testbed (VTB) module in iTest can emulate responses from one or more devices in your topology, allowing organizations to develop tests months before a feature or device is out of development. VTB further accelerates time-to-market by enabling organizations to test negative use cases and validate complicated tests in minutes. In addition, VTB provides offline and remote capabilities, freeing testers from noisy labs and enabling better utilization of costly lab equipment.



The Graphical Topology Editor provides drag-and-drop functionality to quickly create a testing topology. Right click to immediately connect to a device for test case creation or ad hoc testing.

LEVERAGE ITEST IN EXISTING TEST ENVIRONMENTS

Spirent is dedicated to openness by supporting multi-vendor environments, and is a leader in driving open standards via compliance through the Network Test Automation Forum (NTAF). iTest is device-agnostic, providing a robust automated solution that works in a complex environment and integrates easily into existing infrastructures-including in-house script libraries, commercial test equipment, and other technology solutions.

Such versatility enables users to leverage existing test assets and quickly add iTest to their current regression infrastructure. Spirent offers iTest modules that integrate with third-party vendor products such as HP ALM (Quality Center), IBM® Rational Quality Manager (RQM), Ixia traffic generators, and more.

END-TO-END TESTING

iTest includes several optional modules that allow testers to include common test components as part of their overall and end-to-end testing scenarios.

Virtualization

Orchestrate Virtual Machines (VMs) from iTest using the VMware vSphere integration. Enables users to Start/Pause/Stop VMs, create VMs from scratch or clone them from VM templates. Invaluable in testing virtualized environments which involve setting up VMs and starting them to perform tests.

GUI Testing

Launch a GUI session from iTest using Web, Swing, Flash, VNC and IBM Rational Functional Tester modules to connect to Windows®, Mac®, or Linux®. Drive OS related controls as part of your Triple Play Testing, VoIP Testing or VPN Connection tests. Great for testing controls & native OS applications such as Windows control panel, Network configuration dialog, VPN dialog and Video players.

Enterprise Application Testing

Test and automate Web services that are based on SOAP and REST protocols. Provides a more direct and accurate way to test certain types of enterprise applications like Element Managers (EMs), Business Applications (OSS/BSS) and bug tracking systems like Bugzilla. Use iTest to interact directly through the programming API which is less prone to change than Web interfaces.

ITEST ENTERPRISE FEATURES

- Capture
- Replay
- Document
- Modular Test Procedures
- Topology, Testbed, & Device Abstraction
- Basic Logic/Programming Functions
- Debug Mode
- Graphical Topology Editor
- Multithreaded Execution
- Intelligent Response Parser
- Comment Output
- Cross Platform Support
- Real-Time Response Analysis
- Automated Pass/Fail Determination
- Advanced Logic
- Test Suites
- Scheduling and Jobs
- Response Mapping

MODULES INCLUDED WITH ITEST ENTERPRISE

- Command Prompt
- Database Client
- File
- HTTP
- IBM Rational Functional Tester Launcher
- Mail
- NTAf Integration
- Process
- Serial Port
- SSH
- Syslog
- Tcl Shell
- Telnet
- UDP
- XMPP Chat Client

OPTIONAL MODULES FOR ITEST ENTERPRISE

- Flash (Flex)
- HP ALM (Quality Center) Integration
- IBM Rational Quality Manager (RQM) Integration
- Ixia IxExplorer
- Ixia IxLoad
- Ixia IxN2X
- Ixia IxNetwork
- Java Swing
- SNMP
- Spirent Avalanche
- Spirent Landslide
- Spirent SmartBits
- Spirent TestCenter
- Virtual Testbeds (VTB)
- VMware vSphere
- VNC
- Web
- Web Services (SOAP & REST)
- Wireshark

SPIRENT SERVICES

Spirent Global Services provides a variety of professional services, support services and education services—all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services website at www.spirent.com or contact your Spirent sales representative.

SPIRENT ITEST RESOURCES

For more information on Spirent iTest products and solutions, including evaluation, partners, case studies, whitepapers and more, visit: <http://www.spirent.com/itest>



AMERICAS 1-800-SPIRENT • +1-818-676-2683 • sales@spirent.com

EUROPE AND THE MIDDLE EAST +44 (0) 1293 767979 • emeainfo@spirent.com

ASIA AND THE PACIFIC +86-10-8518-2539 • salesasia@spirent.com

© 2012 Spirent Communications, Inc. All of the company names and/or brand names and/or product names referred to in this document, in particular the name "Spirent" and its logo device, are either registered trademarks or trademarks pending registration in accordance with relevant national laws. All rights reserved. Specifications subject to change without notice. Rev. C 01/12

