

Spirent Automation Solutions

ITO Create Test Cases with iTest Enterprise



The Rapidly Expanding Test Development Challenge. Striving to avoid testing gridlock as complex testing requirements expand and timelines tighten, organizations need an effective centralized way to author, manage, execute, schedule and generate reports on tests, and they must work with globally distributed teams with diverse skill sets. There are no easy solutions, but understanding the top challenges facing testing groups helps to define the most effective solutions.

The Solution: Spirent iTest Enterprise

Spirent iTest is an integrated test authoring and execution tool built for testers, developers, and automation teams. It provides QA organizations with a unified approach for rapidly developing, automating, and maintaining test cases. Built for manual testers, automation specialists, and managers alike, iTest Enterprise improves the productivity of the entire test organization. Spirent's Network Automation Solutions are the product of three generations of automation solution delivery from Spirent. Spirent's expertise in Test and Lab Automation solutions includes being a founding member of the NTAF (Network Test Automation Forum) the industry body defining standards for test and lab automation.

The Benefits of Spirent iTest Enterprise

- Dramatically speeds test cycles and increases coverage
- Assures ROI, low total cost of ownership, and future-proofs automation success
- Maximizes productivity and cuts costs by automating testing practices at key levels: process, asset sharing, and communication
- Reduces time-consuming and error-prone manual tasks and saves OpEx by accelerating all QA system and device testing
- Enables all team members to contribute to automation objectives, regardless of skill level
- Uses virtualization technology to enable offline testing and accelerates time to profit
- Improves collaboration and standardized communication between local, siloed and global teams

The Test Development Challenges

Category	Pain Points
Quality Improvement	The broad range of testing must include feature tests and multi-device tests for functional, load, stress and or scenario testing; Global test teams – with scripting skills ranging from none to experienced – need to easily build fully automated test cases with pass/fail criteria that can be shared across regions
Time to Market	QA teams must speed up bug replication to facilitate defect resolution and regression testing
Cost Management	Automation testing must eliminate redundant work and support advanced techniques such as procedures, QuickCalls and topologies, to build assets once, and use in any number of test cases
Process Visibility	Test teams must be able to modify test cases by adding pass/fail criteria such as numerical and string validation



Create Test Cases with Spirent iTest Enterprise Solution:

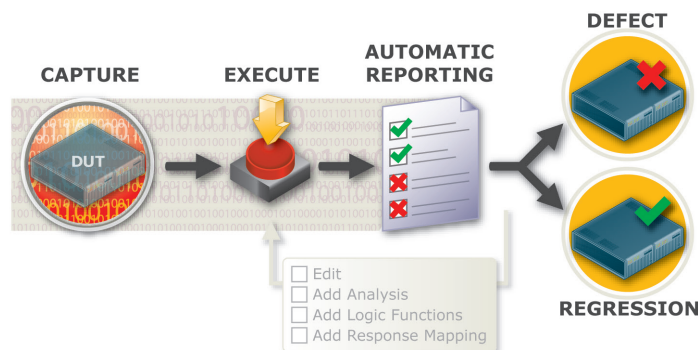
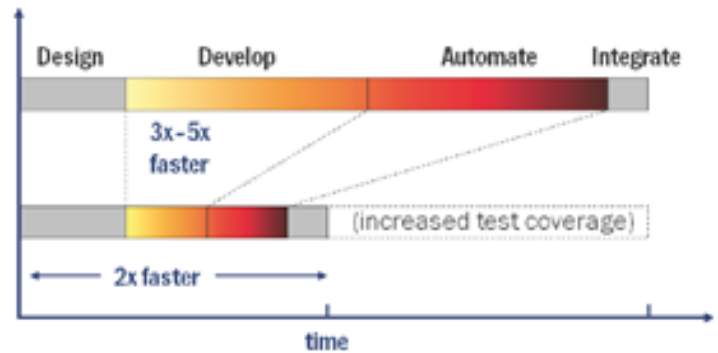
iTest Enterprise improves the productivity of the entire test organization by allowing you to:

- Rapidly author complex, heterogeneous and automated system tests
- Accelerate testing throughout the QA organization by reducing manual tasks
- Enable all QA team members to effectively contribute to automation testing, 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
- Optimize collaboration across teams and between companies with a standardized communication platform
- Leverage existing libraries and assets for immediate ramp up
- Streamline testing by integrating automated processes with existing testing infrastructures

Spirent iTest Enterprise transforms network test automation with its vendor agnostic object-oriented architecture with powerful automation features delivering a new paradigm in testing efficiency and productivity. Orchestrating personnel testing resources, iTest maximizes automation reuse and empowers non-programmers to drive the creation and execution of test automation campaigns.

Automation Advantages in Lab Management with Spirent iTest

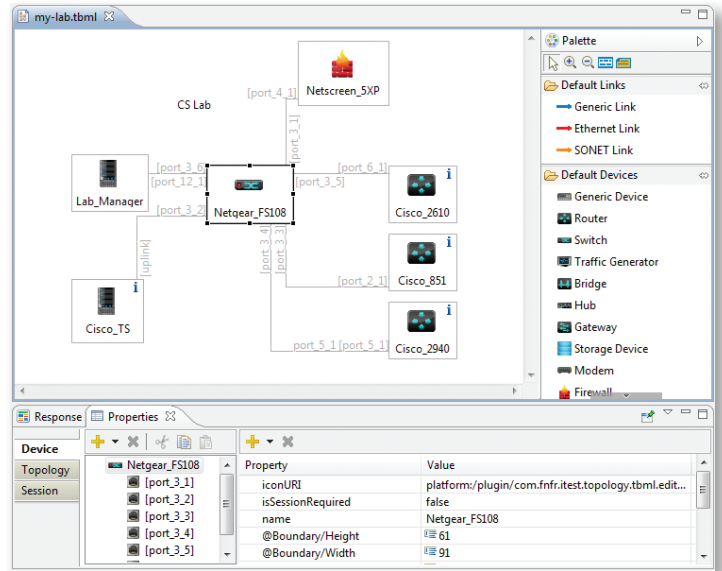
Category	Solution Benefits
Quality Improvement	Assure new feature quality while validating existing core functionality
Time to Market	Accelerate test case development and expand testing capability to 24/7
Cost Management	Increase verifiable ROI with repeatable test cases, multiplying test productivity
Process Visibility	Assess release viability rapidly, avoiding lengthy and less transparent manual testing



Create Test Cases with Spirent iTest Enterprise Solution—Features

iTest Enterprise components include:

- Capture, replay, documenting and modular testing procedure capabilities
- Topology, testbed and device abstraction with graphical topology editor
- Basic logic/programming functions with multi-threaded execution and intelligent response parser
- Vendor agnostic functionality, cross platform support
- Real-time response analysis, automated Pass/Fail determination, and advanced logic
- Test suites
- Scheduling and jobs, as well as response mapping
- Mac OSX native run capability
- Sessions span for multiple tests and NETCONF session
- Spirent TestCenter GUI integration and extended commands to iTest test cases



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

Modules Included with iTest Enterprise

- Command Prompt
- Database Client
- File
- HTTP
- IBM Rational Functional
- Tester Launcher
- Mail
- NTAf Integration
- Process
- Script Library Support
- 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 IxEplorer
- Ixia IxLoad
- Ixia IxN2X
- Ixia IxNetwork
- Java Swing
- SNMP
- Spirent Avalanche
- Spirent Landslide
- Spirent TestCenter
- Virtual Testbeds (VTB)
- VMware vSphere
- VNC
- Web (w/Selenium)
- Web Services (SOAP & REST)
- Wireshark
- NETCONF

Use Cases—Spirent iTest Enterprise

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

Document All Aspects of Test Cases: iTest documents every test case, creating a test report each time a test is run. The report details setup information, commands or actions, and corresponding device responses in a logical progression. This report is used to validate a test was run and whether it passed or failed. If the test uncovers a defect, the HTML test report can be submitted to the bug tracking system. Any tester can then rerun the test to reproduce the bug and fix it.

Build Maintainable Tests: iTest abstracts devices, responses, and topologies, allowing users to manage specific elements of the test case. If a response map or session profile requires an update, all test cases referencing those files are dynamically updated. This facilitates reuse of test cases with other devices under test (DUTs).

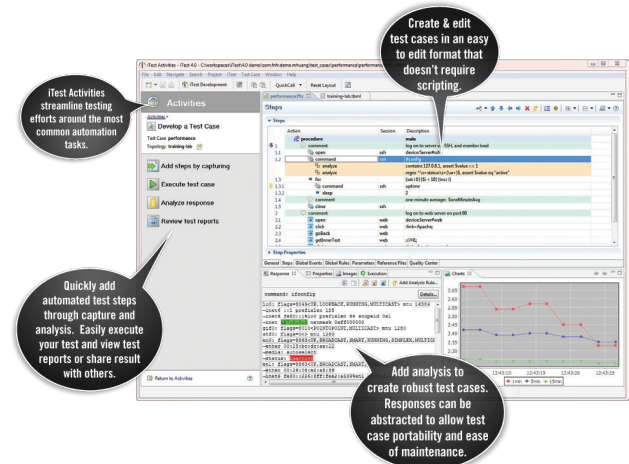
Share Test Assets: Test cases and reports built with iTest can be shared in a standardized communication platform with different teams, internally and externally, across geographies, roles, and test environments. Dramatic reduction in time spent reproducing and fixing defects benefits the entire organization.

A Broad Range of Test Environment

Virtual Test Beds: The virtual testbed (VTB) in iTest can emulate responses from one or more devices into your topology, allowing organizations to develop tests months before a feature or device is out of development. VTB has many more features for virtual testing.

Existing Test Environments: iTest is device-agnostic, providing a robust automation 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.

End-to-End Testing: Spirent iTest has several module solutions to facilitate: Virtualization, GUI Testing, Enterprise Application Testing, and more.



Spirent Test and Automation Tools

Create test cases with: Spirent iTest Enterprise—An integrated test authoring and execution solution for rapidly developing, automating, and maintaining test cases.

Connect topologies with: Spirent iTest Lab Optimizer—A fully integrated test lab automation solution – for both physical and virtual resources – supporting continuous integration, with resource scheduling and allocation of multi-site organizations.

Execute test cases with: Spirent iTest Play—A robust test case execution tool for global test campaign orchestration, facilitating comprehensive management and rapid scheduling, as well as, executing and analysis of test cases.

Spirent Expertise

Spirent Professional Services staff comprises an accomplished team of certified networking and testing automation professionals. Years of training with extensive hands on experience testing and troubleshooting diverse systems, enrich their support capabilities for our customers.

Contact Us

For more information, call your Spirent sales representative or visit us on the Web at:

http://www.spirent.com/About-Us/Contact_us.

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

© 2014 Spirent Communications, Inc. All of the company names and/or brand names and/or product names and/or logos 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. A 07/14

