



Spirent TestCenter Test Automation

Product Overview

Test Automation is an integral component of Spirent TestCenter. Automation is integrated into each Spirent TestCenter software component. The automation framework enables test engineers to meet their objectives—achieving more complete test coverage and more consistent results with fewer people, who are not required to be programming experts.

The automation interface uses a small set of commands with dashed parameters, providing the simplicity normally associated with a command line interface rather than a traditional programming language. But that does not mean you are limited to simplistic test designs. Spirent TestCenter supports a high level of granularity for creating custom test cases. And the automation interface is consistent across a breadth of technologies, so experience gained working with one technology will pay off when you work with another in the next project. Spirent TestCenter automation helps create stable, repeatable tests as it minimizes manual configuration errors.

Applications

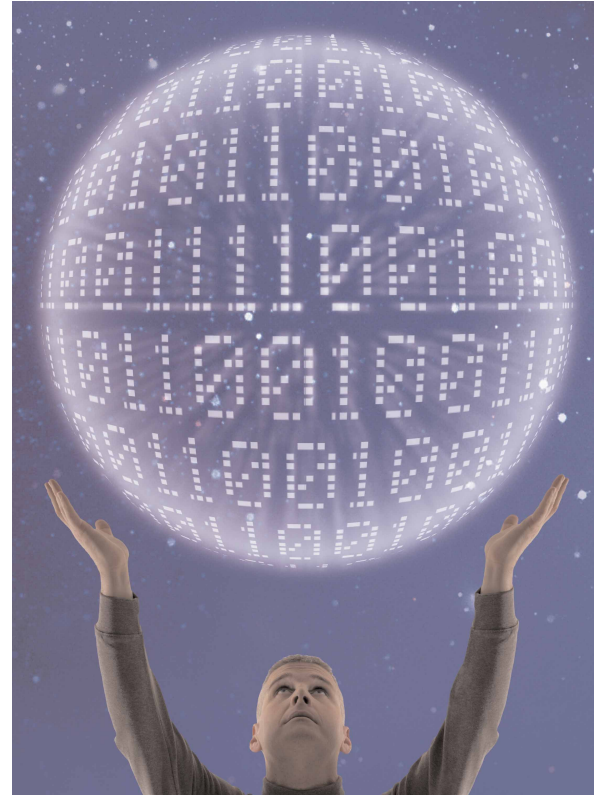
Automation can be used to reduce the effort and costs associated with testing in many functional departments of a business.

Regression Testing

As products mature and move through the development lifecycle, existing features must be tested to assure that new features and enhancements have not introduced errors into legacy code. Automated regression testing is the practice of developing a set of test cases to be executed each time a product or service is modified. A regression suite that requires little human intervention is the ideal goal, as this saves time and reduces the amount of development resources required.

Pass/Fail

Manufacturing and regression environments benefit from test automation with pass/fail reporting and the ability to drill down for more detail. Time is saved by reducing both the time spent interpreting complex results and the need for human intervention.



New Features

As new features are developed, frequent testing at development milestones can reveal bugs early on, allowing for faster resolution and reducing time-to-market. Automating new feature testing in R&D test beds makes testing of incremental builds painless and therefore more likely to happen. These tests can be passed on to QA for re-use, introducing even more efficiency into the organization.

GET IT DONE FASTER WITH Spirent TestCenter

- Common automation framework for all technologies
- Run hundreds of test cases automatically
- Pass/Fail results or detailed histograms
- Real-time results
- Interactive controls or batch mode
- Use Tcl for quick and simple automation

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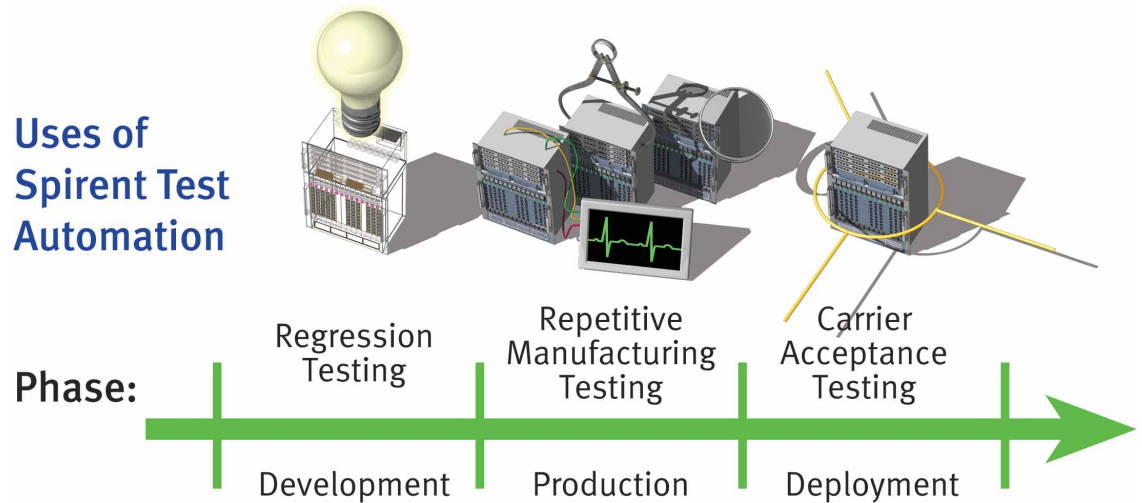
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Uses of Spirent Test Automation



Scalability Testing

Scalability testing involves verification that a system can support a large number of ports, streams, sessions, routes or users. As the numbers increase, manual configuration via a GUI becomes impractical. By automating scalability tests, engineers can push the limits of the test bed in less time and with lower risk of configuration errors.

Vendor Evaluation and Acceptance Testing

During vendor evaluation, the claims of multiple vendors must be evaluated to select the best fit for the application. This involves a high amount of repetition as the same tests are run on equipment from multiple vendors. Automation of these bake-offs is essential not only to save time but also to assure consistency and repeatability so that valid comparisons can be made.

Network Design Validation

Network designs must be tested to verify that the intended goals are achieved and that unwanted side effects are not introduced. As multiple iterations and modifications are made, this testing can become repetitive and time-consuming. Automation of network design validation testing can reduce time and cost requirements.

Configuration Validation

When a device is deployed in a large network, minor mistakes in configuration can have major implications for performance and reliability. Validating that traffic flows through the device as expected is necessary to avoid costly errors. Automating such tests reduces the effort and cost of testing, making it more likely to occur.

Benefits

Spirent TestCenter automation improves the productivity of test engineers by helping them to focus resources on testing new features, rather than doing manually re-tests of mature features. TestCenter's simple, easy-to-learn Tcl

interface reduces reliance on computer programming skills, minimizes the number of commands to learn and streamlines test design with its default settings and high-level test objects.

Equipment manufacturers and service providers can leverage Spirent TestCenter in several ways to elevate their automation strategy and improve product or service quality. Since TestCenter's single automation interface crosses a breadth of technologies, diverse testing requirements can be merged into a unified automated process. TestCenter customers can reduce the need for human intervention, which saves time and reduces errors. Complex test results can be simplified to produce reliable pass/fail output. TestCenter's automation features can also make it easy to integrate and load the automation interface into existing environments allowing for complete automation of DUT configuration and other test-bed devices.

Key Features

- *Provides high-level standard test methodologies*—an automation interface for RFC2544 and RFC2889 tests with sample scripts
- Continuity between features and results in GUI and automation
- *Cross-platform*—able to run on Windows, Linux and Solaris platforms
- *CLI-like syntax*—select from easy-to-use commands to manipulate configurations (create, delete, config, get) and to perform actions (start, stop, run)
- *Support common Tcl constructs*—optional dashed arguments with default values, package required for quick initialization, namespaces to avoid collisions, intelligent error handling and decipherable return values

Ordering Information

Automation is integrated into Spirent TestCenter. When you license any TestCenter software component, you license the same functionality in the application GUI and the automation API.

Spirent TestCenter Software Components

TPK-1000	RFC-2544 with VLAN Network Device Benchmark Test Package
TPK-1001	RFC-2889 with VLAN Switching Benchmark Test Package
BPK-1001A	Packet Generator and Analyzer Base Package
BPK-1002A	STP/RSTP/PVST+ Base Package
BPK-1003A	IGMP/MLD Host IP Multicast Base Package
BPK-1004A/1004B	Unicast Routing Base Package
BPK-1005A/1005B	Multicast Routing Base Package
BPK-1006A/1006B	MPLS/LDP/RSVP-TE Base Package
BPK-1007A/1007B	PPPoX Base Package
BPK-1008A/1008B	DHCP Base Package

Part numbers ending in "A" indicate a limited-performance version; those ending in "B" indicate the full performance version.

Spirent Global 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.spirentcom.com/gs or contact your Spirent sales representative.

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