

Spirent **Lab Management**

A Solution for Lab Optimization and Resource Orchestration

Spirent Lab Management provides service providers, equipment manufacturers and enterprises a lab optimization solution that maximizes the utilization of their lab environment. With a “lab-as-a-Service” (LaaS) approach to reserving a test environment, testers are able to select and reserve the lab assets needed and run test cases allowing for 100% equipment utilization and lights-out lab administration. Lab managers who are able to track and report on asset utilization and management have the visibility to see who is consuming the assets.

Self-Service Labs

Companies are faced with shrinking CapEx & OpEx budgets. Many are looking to economize through lab consolidation and asset virtualization. But most are unable to determine how much their existing resources are utilized. As a result, decisions are made with inadequate information.

Added to this challenge is the introduction of distributed test teams. As the labs consolidate into centralized “mega” labs, access to resources is cut off from the individual testers, leaving the responsibility of setting up and taking down testbeds to the lab management team. This additional workload is causing conflicts in release schedules due to the inability to create the necessary environments as needed.

Virtual testbeds are becoming popular, but also come with their own set of challenges, including overcoming the complexities of administering private, public and hybrid clouds for testing.

To overcome these obstacles, a highly flexible, self-service lab is the obvious solution. As test cases and requirements change, so must the test environment. The faster a topology can be set up, the faster testing can be completed. Automatic reservation and configuration allows testers to quickly validate functionality without the need to wait for others to configure the testbed.

Combined with test automation, the result is a lab environment that supports virtual and physical labs. Lab-as-a-Service (LaaS) solutions provide the flexibility, scalability, reusability and maintainability while minimizing CapEx and OpEx costs.

Benefits

Spirent’s Lab Management Solution not only addresses the testers’ technical challenges but the business concerns facing management as well. By providing the people involved with a solution that optimizes processes through flexible and easy-to-use products in the test environment, companies are able to accelerate time-to-market, improve quality and maximize visibility and utilization.

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Solution Approach to Problem Solving

Spirent delivers comprehensive and qualified components for each element of the automation solution equation.

Products

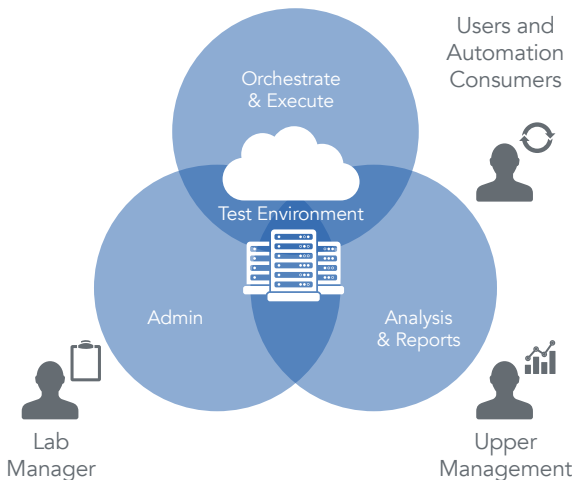
- Lab management for both the physical and virtual test labs, as well as hybrid environments
- Vendor-agnostic support of equipment and test tools
- Orchestration of test cases, resources and reporting

Process

- Drag-and-drop interface for quick topology creation and test scheduling
- Auto notification for work flow and cable management
- Highly adaptable that integrate easily into Agile and DevOps processes

People

- Professional specialists to provide the leadership and expertise needed to design and promote a new test culture that comes with test automation
- Training and mentoring of the teams to create in-house experts to help drive innovation and acceleration into the solution
- Development services for long-term lab management goals



Spirent Lab Management–Self-Service Labs

Designed for both virtual and physical testing, Spirent’s Lab Management solution provides the visibility, test case management and resource orchestration to companies looking to maximize utilization through a self-service lab.

Self-service labs require the ability to address the various needs of those using the resources on an on-demand basis. Developer/QA, Lab Managers and Upper Management each have specific requirements that include:

- **Physical inventory and cabling**–Ability to auto-discover existing inventory and manage both virtual and physical connections
- **Testbed orchestration**–Creation of topologies with automated scheduling, execution and reporting
- **Team and equipment organization**–Visibility in a multi-tenant environment where user groups and equipment groups are available for specific projects
- **Schedule management**–Reservation system to facilitate 100% lights out test automation
- **Topology activation**–Control of Layer 1 and Layer 2 switches to dynamically connect resources, even in multi-stage configurations
- **Workflow control**–Requestor/approver and delegation control of reservations with automatic notification of tasks such as cabling
- **Test execution**–At-a-glance view of test run status and results

Self-service approach to lab management frees up dedicated resources while improving team productivity and equipment utilization



Lab-as-a-Service (LaaS)

Self-service labs, also known as Lab-as-a-Service (LaaS), provide the necessary flexibility for Developers/QA testers to reserve resources, select test cases and set schedules for execution, which in turn can reduce CapEx/OpEx costs by maximizing existing investments. Prior to implementation of LaaS, many organizations created separate special-purpose labs for different teams in the development/delivery pipeline

including separate labs for development teams, QA, pre-production, release and production environments. Each of these labs had its own infrastructure, tools, systems under test, and support staff with varying degrees of capabilities. The result was that most of these labs suffered from a lack of coordination, insufficient assets to meet peak demands and could not use economies of scale needed for the entire organization to optimize performance.

Multi-continent Lab Consolidation Example

Challenge

A service provider with labs across multiple continents was looking at equipment consolidation to reduce CapEx and OpEx. With over 1,500 testers using over 50,000 devices the ability to manage the lab resources became critical. In addition, external vendors isolated to portions of the lab equipment restricting visibility due to multi-vendor bake-offs.

Spirent Lab Management Solution

Taking a holistic approach of looking at the People involved, Products used and the Processes, a Spirent Lab Management solution was implemented leveraging Spirent iTest for agnostic vendor automation support and Spirent Velocity for test case management and lab orchestration. Not only were the CapEx and OpEx objectives met, utilization and daily health checks with reporting dramatically increased.

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About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks.

We help bring clarity to increasingly complex technological and business challenges.

Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

For more information, visit: www.spirent.com

Realize More with Spirent Automation Platform Technologies

Spirent's APT Solutions are a suite of solutions designed to address the myriad of challenges confronting companies in the IP Network industry. Every company's situation is different, which is why Spirent's approach to helping each customer is unique, but the process for solving problems is at the core of everything we do.

Spirent APT Solutions Assist with...

Avoiding project delays—Agile product development—New development processes are adopted, but the testing infrastructure is not improved to keep pace. Testers are becoming part of the development team and working in parallel with the developers to create and test products in short iterative cycles. Tests must often be created before the product is ready.

Processing integration—Continuous Integration—New deployment tools are being adopted to accelerate deployment of new releases into production. The largest reported challenge facing continuous integration and DevOps teams is the automation of the testing required to ensure readiness for production.

Cost overruns—Expanding product requirements—Being more responsive to customers' demands is critical to any business' success. In an effort to satisfy customers, product release requirements often expand, but the delivery date is not moved.

Improving quality—Growing product complexity—As new features are added exponentially to products, comprehensive testing exceeds the capacity of the existing team

Spirent Automation Solution Suite

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

Spirent Velocity—A robust virtual/physical testbed orchestration and test case management solution for facilitating lab management and scheduling, as well as, executing and analysis of test cases.

Spirent Professional Services—Provide qualified test experts with hands-on solution knowledge with a deep bench of professionals to deliver solutions.



Contact Us

For more information, call your Spirent sales representative or visit us on the web at www.spirent.com/ContactSpirent.

www.spirent.com

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