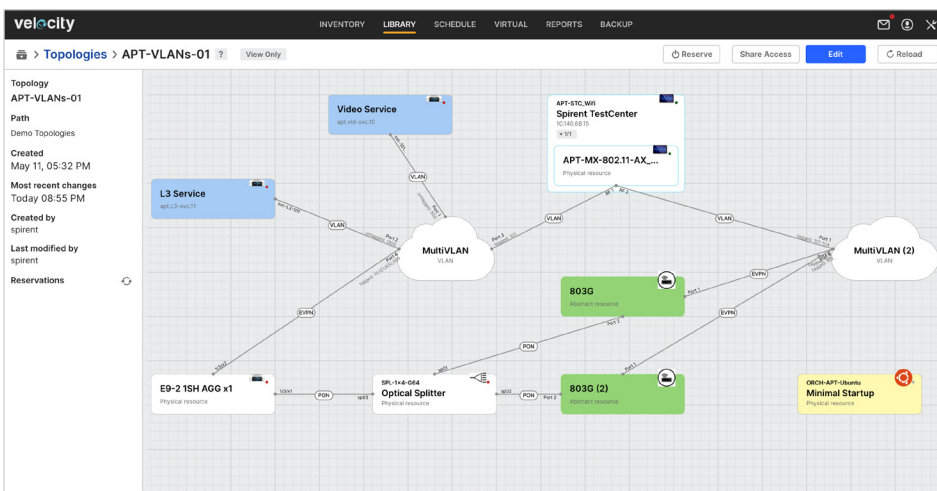# Spirent Velocity

Lab as a Service Platform

Consolidating Labs & Automating Testing with LaaS

Network test labs face urgent but conflicting drivers to accelerate testing, ensure quality and reduce costs. The Velocity Lab as a Service platform addresses all these needs by enabling multiple labs to be consolidated into a single, web-accessible resource which relies on automation to accelerate testing, reduce manual effort and maximize lab equipment utilization. Network equipment manufacturers and service providers who have adopted Velocity experience transformative benefits including radically faster test cycles and time to market, millions in Opex and Capex savings and reduced energy usage.

The **Velocity** Lab as a Service platform manages shared use of lab resources and provides extensive capabilities for building automated test suites including automated test bed setup and test execution.

"

Our goals for the Calix Virtual Innovation Lab include lifecycle test automation and far more efficient sharing of physical and virtual test resources across teams. Spirent's test automation expertise and Lab as a Service platform, Velocity, has delivered on all these goals. Previously it took us 50 man-hours to set up complex network environments. That workflow is now automated and takes only 10 minutes—we have achieved a 300x speed up in test environment set-up..

Michel Langlois
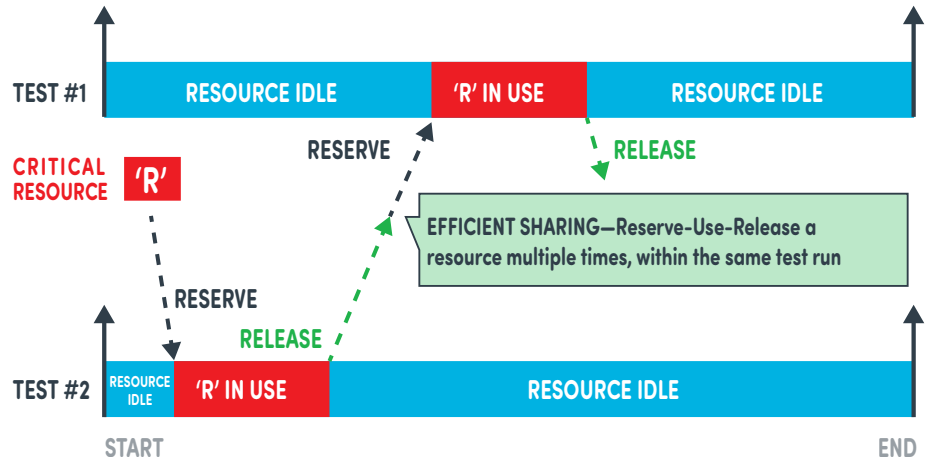*Chief Development Officer, Calix*

Highlights

- Consolidate multiple labs in different locations into a web-accessible resource, shared by all teams

- Accelerate time to market for new products & services by:

- Performing testing activities such as test bed setup 300x faster

- Expanding testing capacity with 24/7 remote access to test bed resources

- Reduce the time spent managing lab resources by 30%, saving millions in Opex annually

- Improve lab Capex efficiency by 350% by sharing resources efficiently

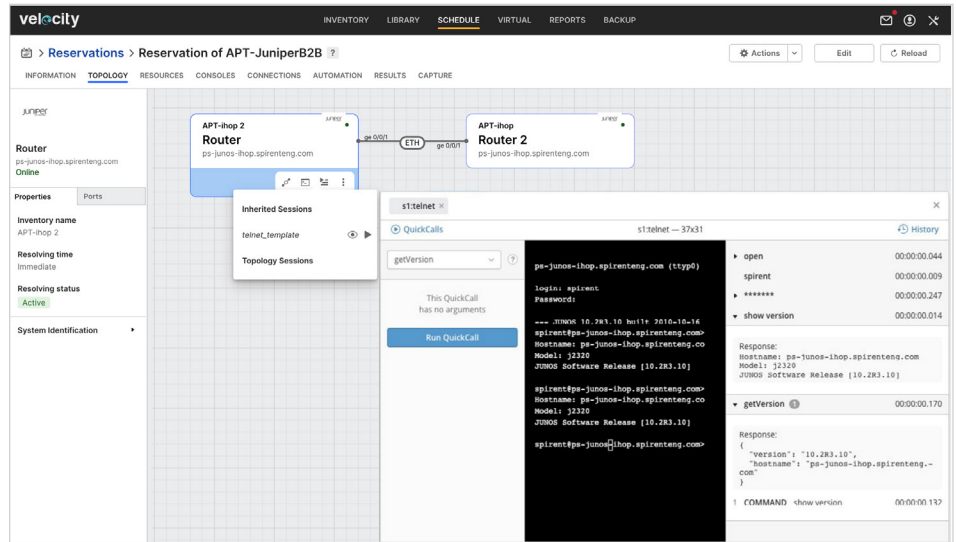- Reduce energy use by 60% by automatically powering down unused equipment

Key Features

Just-in-Time Resource Reservation: Reserve resources when needed and release them when no longer needed, even when the test is still running.

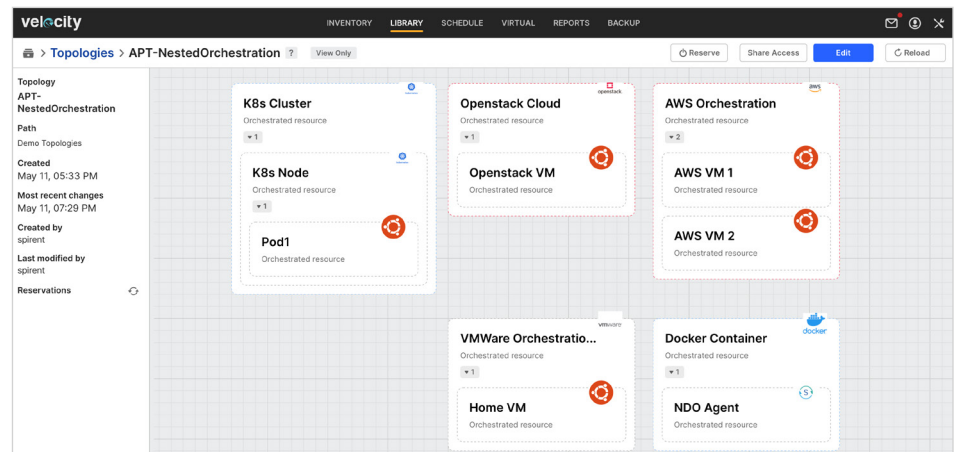**Interactive Workflow Automation:** Create automation workflows and scripts, test them, sync, publish and share with other teams via popular tools such as Git
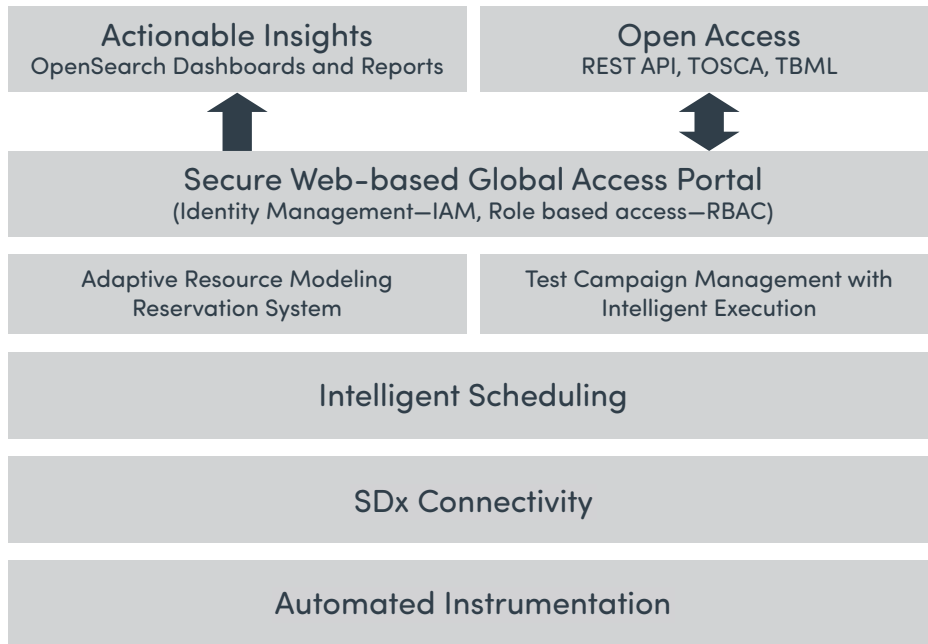

Visual Topology Editor: Connect, configure, and orchestrate physical machines, virtual machines, and container deployments with a simple drag-and-drop user interface.
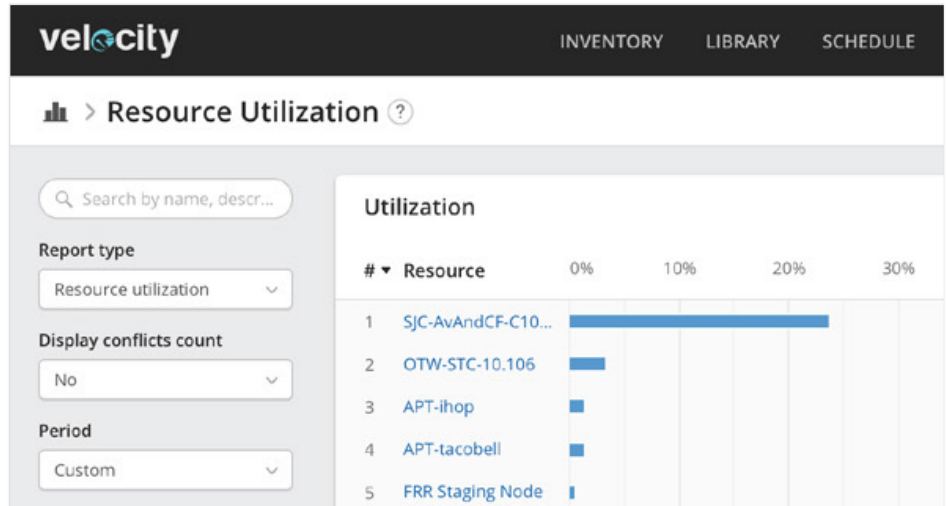
Lab as a Service Platform Architecture

Actionable Insights OpenSearch Dashboards and Reports	Open Access REST API, TOSCA, TBML

Secure Web-based Global Access Portal (Identity Management—IAM, Role based access—RBAC)	
Adaptive Resource Modeling Reservation System	Test Campaign Management with Intelligent Execution
Intelligent Scheduling	
SDx Connectivity	
Automated Instrumentation	

- **Actionable Insights:** Highly configurable WYSIWYG editor to create customized, exportable dashboards, reports and KPI widgets with real-time triggers and event notifications.

- **Open Access and Control:** Complete documented RESTful API for access and control of system resources with supported data interchange using TOSCA and TBML.

- **Secure Global Access and Management:** Configurable Integrated Identity Access Management(IAM) and Role-based Access (RBAC) provides integrated business and system policies using LDAP, Active Directory and Single Sign-on.

- **Adaptive Resource Modeling:** High granularity of resource inventory enables greater flexibility to model the natural hierarchy of environment attributes, from lab geographies, to rack details, to device components, to application capabilities. This enables users to adapt and reserve their models based on their unique workflow needs.

- **Test Management with Intelligent Execution:** Map any type of automated script from SCM systems (Git) to create, schedule and execute environment-aware test campaigns. Test campaigns can be configured to inherit changing environment attributes.

- **Intelligent Scheduling:** Calendar-less scheduling queue enables reservation of any system resource, based on configurable real-time availability attributes. Intelligent scheduling uses Resource Queuing, a unique just-in-time 'micro-reservation' method of reserving and deferring resources until they are 'called' in a test script.

- **SDx Connectivity (Software Defined connectivity):** Automate any-to-any interface connections (L1– L7) based on environment workflow or testcase specifications

- **Automated Instrumentation:** Dynamically discover, orchestrate and provision physical, virtual and hybrid environments

Analytics & Reporting Examples

Resource Utilization: Get an accurate view of resource utilization to make better business decisions.

velocity   INVENTORY   LIBRARY   SCHEDULE

📊 > Resource Utilization ?

🔍 Search by name, descr...

Report type
Resource utilization ⌄

Display conflicts count
No ⌄

Period
Custom ⌄

Utilization

# ▾	Resource	0%	10%	20%	30%
1	SJC-AvAndCF-C10...				
2	OTW-STC-10.106				
3	APT-ihop				
4	APT-tacobell				
5	FRR Staging Node				

Execution Reports: Access and download test results in multiple formats; directly create bugs in Jira and automatically attach all relevant testing data

✓ PASSED

Execution report
make_break_example.fftc

Powered by
velocity

Automation Asset: make_break_example.fftc
Location: main/ai_spirent_demo_assets/test_cases/velocity/negative_tests/make_break_example.fftc
Owner: spirent
Report Detail Level: Include all execution messages and steps
Execution Started: Dec 12, 2019 8:14:13 PM
Execution Ended: Dec 12, 2019 8:15:09 PM
Execution Duration: 00:00:55.661
Execution Status: Completed

Velocity Lab as a Service platform is part of Spirent's Lifecycle Service Assurance solution suite for automating validation and assurance across the network lifecycle.
For more information please visit: www.spirent.com/Solutions/Service-Assurance

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