

CASE STUDY

# Calix Consolidates Labs into a Single Automated Lab with Spirent Velocity Core

New Self-Service Lab Reduces Test Setup from Days to Minutes,  
Lowers Energy Costs & CAPEX



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## The Challenge

Calix identified that deployment of NG-PON2 (Next Generation Passive Optical Network) across enterprises, Wi-Fi 6, 5G fronthaul, IoT and consumer broadband segments would significantly increase the complexity of product development and scale of testing required. Furthermore, the dramatic increase in network capacity enabled by NG-PON2 made it uneconomical to follow a traditional paradigm of scaling out testing across geographically distributed labs.

## Key Requirements

Calix decided the only way to scale its product testing was to consolidate their regional labs into a single lab serving all teams and geographies worldwide. The primary goal of the lab was to accelerate the entire cycle from new product development to live network revenue-generating deployment. To support this goal as well as efficiency and cost reduction goals, the following requirements were identified:

- **Self-service web portal**, accessible by hundreds of simultaneous users across the globe, to seamlessly define and spin up network test environments.
- **Zero touch provisioning** with dynamic realization of physical, virtual and hybrid network topologies, and traffic generation.
- **On-demand power up** of equipment during a reservation and power down when done to reduce energy consumption.
- **Automation of manual workflows** such as equipment conflict resolutions to allocate resources to the highest priority needs.
- **Equipment utilization reporting** across any class of resource to facilitate CapEx planning.



Lab test setup that used to take 50 hours now takes 10 minutes – a 300x speed up

Calix

Calix Consolidates Labs into a Single Automated Lab

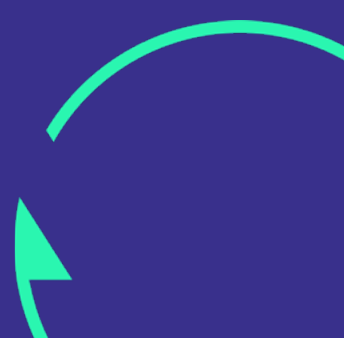


## Customer Profile

Calix Inc. is a global provider of cloud and software platforms, systems and services required to deliver unified access networks and smart premises. Calix platforms and services help their customers build next generation networks by embracing a DevOps operating model, optimizing the subscriber experience and turning the complexity of the smart home and business into new revenue streams.

## Highlights

- Accelerated product lifecycle, from lab to live network deployment
- Lab test bed setup accelerated by 300x
- Significant reduction in equipment CAPEX and energy costs





## Spirent Solution

Calix selected Spirent's **Velocity Core** as the means to optimize shared lab resource utilization across teams and geographies, delivering dramatically increased efficiency and reduced CapEx and OpEx. After a proof-of-concept, Calix partnered with Spirent to architect and implement **Velocity Core**. The lab automation it provided enables unprecedented automation of complex heterogeneous compute, network and storage environments (physical, virtual, hybrid) significantly increasing the frequency by which test environments can be activated and deactivated. The result is major reductions in test cycle time, supporting Continuous Testing (CT) in a DevOps pipeline, increasing utilization of available resources, and reducing infrastructure-related CapEx.

The solution provides a flexible and open REST API to facilitate customization and integration with other systems, which makes it uniquely suitable for DevOps pipeline integration in heterogeneous environments. **Velocity Core** enables systems and users to rapidly instantiate environments in minutes, and easily model, automate and securely share environments with anyone, anywhere at a global scale.

Spirent's lab automation experts worked closely with the Calix team to assure the lab consolidation would deliver on their promise to bring high-quality networking solutions to market faster. Spirent's **Velocity Automation Portfolio** and services help customers build automation for next generation networks by embracing DevOps operating models, optimizing user productivity, and leveraging analytics and data visualization.

Test setup  
reduced from  
**50 hours to  
10 minutes**  **INCREASED**  
setup speed by  
**300x**



Lab Users in Regional Locations



Our goals include lifecycle test automation and far more efficient sharing of physical and virtual test resources across teams,” said Michel Langlois, Chief Development Officer at Calix. “Spirent’s test automation expertise and Velocity, have 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.

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