

Leading NextGen Firewall Manufacturer Upgrades to a Software Defined Lab with Tokalabs

Running a performance test lab for quality, proof-of-concept, or a technical sales initiative is a real challenge that requires constant maintenance, redeployments of network equipment, and configuration changes. This is compounded with the proliferation of Internet-of-Things devices and the rapid expansion of the cloud. In the security space, recreating these changing hybrid environments is imperative to measure the quality of security products that protect against an array of malicious attacks.

To keep up with the changes within the massive scale of lab resources, a leader in next generation security platforms adopted Tokalabs to get ahead of the game.



The Challenge

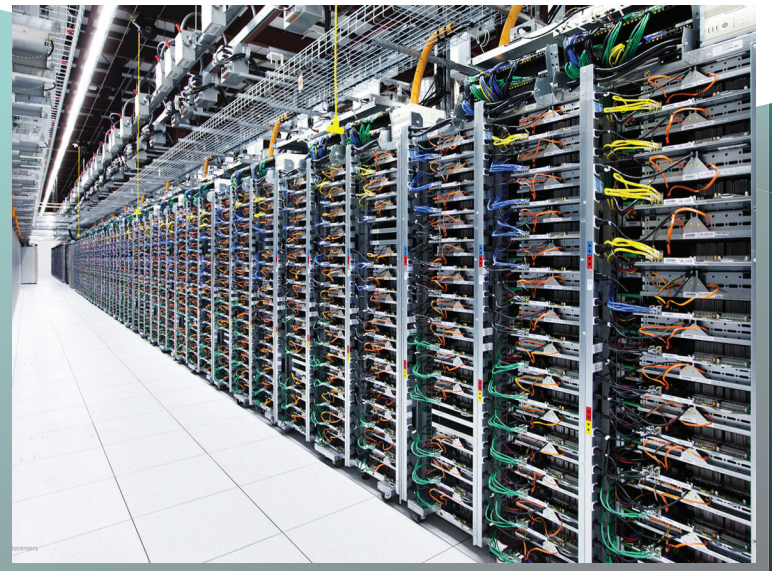
The primary challenge is the time lost due to the repetitive tasks of provisioning the test beds within the lab. Technical Marketing Engineers (TMEs) at the leading next generation security provider were constantly tasked to provide comparative benchmark numbers for large deals in order to highlight their products' strengths over competitors. In addition, the TMEs were responsible for providing datasheet performance numbers while their development team released new products and updated existing software.

The TME team was responsible for physically racking and cabling devices, configuring the test beds, and running the requisite benchmarks. Lastly, a tear down process was executed that included physically moving cables and devices and updating devices with software configuration changes. This entire process was repeated for every set of devices and firmware revisions.



To put the scale of this problem in perspective, the TME team is responsible for calculating the performance metrics for all major releases as well as critical customer patches across their entire portfolio of firewalls. For this multi-billion dollar company, the stakes are high.

While new products along with major releases and patches were released at a fast rate, the TME team spent more time configuring than actually testing, severely hampering the team's ability to stay on target. In an effort to keep up, high profile projects were often outsourced to the QA team, which only increased the QA team's backlog and resulted in delayed product deliveries to customers.



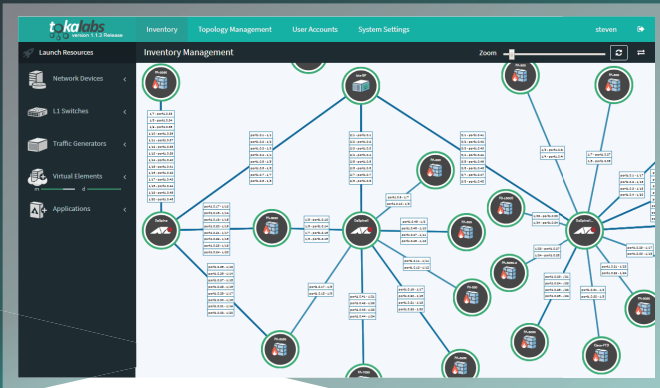
Additionally, network resources such as load generators and servers sat idly while precious time for testing was instead spent on the tedious configuration and the provisioning of test beds. In some cases, engineers were required to wait for one set of tests to complete before physically moving the devices or cables for another set of tests. This was due to the often limited number of devices procured by the team.

The team had also built an existing automation framework with libraries of tests but integrating this framework for test environments that were constantly changing proved to be a challenge.



The Solution

By deploying Tokalabs' Software Defined Labs™ (SDL) technology, the TME team now only needs to cable and configure their lab devices once eliminating the tedious setup and teardown processes. Using the Tokalabs SDL Controller, these devices are abstracted and managed centrally, and in software, thereby providing full visibility of every physical, virtual, and public and private cloud instance.



The need to physically recable is eliminated. Through a centralized networking fabric that is maintained by the SDL controller, an exponential number of test beds can be constructed on-demand through software.

The SDL Controller allows every team member to dynamically create and reserve their own test beds and save them as templates or snapshots for future use. Additionally, they use the controller to automate and schedule their test executions, and then release the resources back into the pool once completed.

Efficiency Enhanced

Each engineer can easily create hundreds of reusable templates, eliminating the repetitious work of reconfiguring test beds. Additionally, the SDL Controller tracks and reports resource usage and every change made through a robust set of logs. This allows the team to ensure that their resources/devices are used efficiently.

Improved Collaboration

The TME team is now able to complete all product management collateral and performance benchmark testing. They can also share contained and controlled test beds with other engineering teams thereby improving collaboration. Test beds can be reverted to their original states after usage using the controller's automation features.

Automation Integration

The TME team can now import their existing automation framework and run the tests by selecting their test beds in the controller's GUI or using its REST APIs. All test libraries and scripts are retained and made available through the controller. Tests are easily portable since the controller uses abstract IDs for devices and elements that can be referenced by the tests.

Deploying Software Defined Labs enabled the TME team to:

- Cut Infrastructure Costs by 50%
- Reduce time to test completion
- Maximize utilization of lab resources

Additionally, the TME team creates new test scripts using the controller's Automation Builder without writing a single line of code. The controller provides a consolidated view of results for imported tests and tests created using the Automation Builder.

Better Business

By eliminating the repetitive and time-consuming setup and teardown processes and creating shareable and contained test bed environments, the TME team has been able to reduce its backlog and keep up with the product release cycles. Integrating automation efficiently and having a detailed results view has also improved the quality of their products. This has translated to reduced costs and more returns for their overall business.