Implementing Lab as a Service (LaaS)

Test Optimization Solutions to Enable Service-Oriented Labs

Introduction

Companies are looking to vastly improve the state of test labs across entire organizations. Quite often, test labs are fragmented, isolated, and inefficient in terms of CAPEX and OPEX. Individual test labs have become islands; unable to leverage the collective investments being made across the organization. One approach to solving this problem is to shift to a service-oriented lab infrastructure – in other words, implement Lab as a Service (LaaS). Service-oriented labs can operate with much higher efficiency due to their larger scale, dedicated management, and proper tooling. In addition to providing significant CAPEX and OPEX savings, implementing LaaS actually improves the quality of tests being conducted.

Challenges Implementing Lab as a Service

Deploying a service-oriented lab infrastructure, however, poses a significant set of challenges. Simply consolidating equipment from multiple smaller labs into a larger facility will not yield the desired results. In fact, most CAPEX and OPEX issues will worsen due to the increased complexity inherent with larger, multi-use labs. Additionally, meeting the requirements for global 24x7 operations requires new tools and techniques that may not exist in single-use labs. Careful consideration and innovative solutions are required to achieve the desired results.

NetScout Lab as a Service Solution

NetScout delivers a proven solution for implementing an optimized service-oriented lab. By providing easy to use, intelligent, scalable technology at the lab’s logical core, the objectives of LaaS can be met.
This innovative approach combines layer 1 switching with layer 2-4 intelligence in order to provide functions that are not otherwise practical using legacy technology. Layer 2-4 functions such as test stream aggregation and rate conversion, or enabling a tap with a filtered data feed for analysis can be provided via a software interface and without requiring physical access to the lab.

**NetScout Test Optimization Benefits**

The NetScout nGenius® 3900 Series Packet Flow Switch, along with our TestStream™ Management Software, provides the ideal platform to enable service-oriented labs to meet the key objectives of increasing utilization of all resources, reducing cycle time for tests, and realizing significant savings on CAPEX and OPEX.

**A Test Optimization Solution from NetScout Can Help:**

**Increase Utilization**
- Fewer devices, higher efficiency, and optimized packet flow
- Improved access to servers, storage, and network equipment
- Less downtime and reduced errors during testing and reconfiguration

**Reduce Time**
- Execute topology moves, adds, and changes instantly and reliably
- Reduce personnel time & prevent errors during reconfiguration & troubleshooting
- Increase uptime, quickly isolate and resolve problems

**Save Money**
- Reduce capital costs with more equipment & tool sharing
- Lower operating costs through increased performance and automation
- Reduce capital costs by extending the life of expensive test tools

**Traditional Labs**

**NetScout Solution**

Figure 1: Traditional labs can be exceedingly wasteful of CAPEX and OPEX due to ongoing infrastructure costs coupled with poor utilization. Implementing a Lab as a Service model can not only solve these problems, but also improve test quality.

Figure 2: A NetScout solution enables customers to deploy service-oriented labs by providing innovative functionality combining layer 1 switching with layer 2-4 intelligence. With such a solution, customers quickly realize the CAPEX and OPEX improvement potential of LaaS.