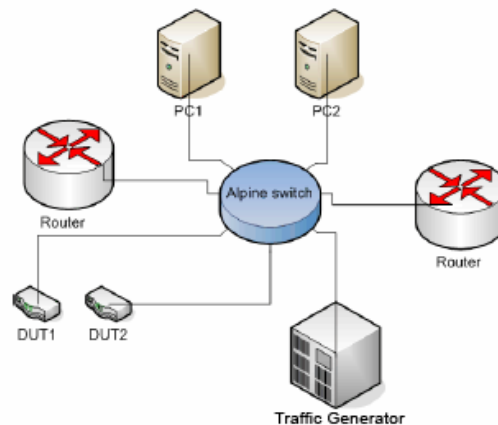


Lab Manager Case Study: IP Infrastructure Systems Integration and Functional Testing

The Challenges:

- > High capital equipment expenditures
- > Need to increase capacity
- > Space restrictions which limit buying more equipment
- > Inefficient network architecture posing constraints on equipment usage rules
- > Inability to share/leverage the test equipment at the port level, resulting in under-utilization of equipment

Ericsson's IP Routing Technologies group is bringing cutting edge lab automation techniques to the company, and they turned to Gale Technologies to help them realize an automated lab infrastructure for both their manual and automated testing. This document provides an overview of the challenges faced by this group before implementing the solution, and the benefits, both real and projected, gained after implementing Lab Manager.



Before: The test bed as one entity supports only one test at a time

The Challenges

The group performs a mix of functional testing, regression testing, and basic interoperability testing, some of which is automated and some of which is manual. A single set of devices, interconnected by a layer-2 switch, allowed the team only to share equipment at the device level and essentially run tests serially.

Test throughput was constrained by inefficient use of the test bed, while the lab did not have the resources or space to purchase duplicate test beds to enable parallel testing.

The Solution

Gale Technologies created a software-controlled automated architecture made up of:

- > Physical layer cross-connect switches to which all ports of all devices in the test bed are connected, allowing for dynamic topology-building at the port level

"We're delighted with your solution right now as we put it to more conventional uses in our manual test environment. Once we have the solution in place for the automation environment, it should be a powerful testament to your solution and ours!"

"Lab Manager is the best investment we've made in the lab in 6 years."

North America:

2600 San Tomas Expy,
Suite 100
Santa Clara,
CA 95051
T: 408.213.4900
F: 408213.4901

Europe:

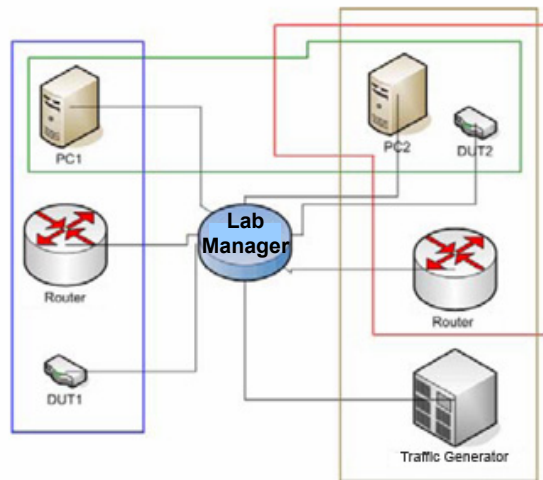
London, UK
T:+44 (0) 7887 732 228
Email:
emea@galetechnologies.com

Asia:

B-73, Sector 57
Noida – 201 301
Uttar Pradesh, India
T: +91 120 2588445 48
F: +91 120 2581921
Email:
sales@galetechnologies.com

- > Lab Manager software managing the switching infrastructure and providing automated reconfigurations, multi-user access, sharing of all resources, scheduling, and asset tracking

To the new automated infrastructure was also added one additional device under test (DUT), based on the results of Gale's Business Case simulation model. The simulation model demonstrated a dramatic increase in test throughput resulting from the addition of a second DUT into the test bed.



After: The test bed is dynamically configurable to allow simultaneous tests

Port level sharing, rather than device level, allowed the company to increase capacity of the lab more than twofold and save \$100,000's in capital investment.

Key Benefits

- > Lab Manager allows interconnection of devices at the port level, allowing multiple tests to be run simultaneously.
- > The new architecture effectively increases capacity of the lab with minimal additional cost and space.
- > Automatically-scheduled resources and test routines make sharing of expensive resources very practical.
- > Increased capacity implies more testing, which results in better time-to-market and other far-reaching benefits.
- > Utilization of the lab and the equipment increases, reducing waste and minimizing underutilization of expensive resources.

Quantitative Results

- > With Lab Manager and an additional device under test (DUT), the expected **increase in test capacity is 194%**.
- > A \$50k total investment resulted in \$500k+ of savings.

Learn More

- > The information provided in this document briefly describes some of the capabilities and benefits of Gale Technologies' Lab Manager. Please contact Gale via sales@galetechnologies.com for additional information, or visit us at www.galetechnologies.com.