

PLATFORM LAB

CIO Update

Why You Need to Outsource Your Test Lab

January 13, 2009 by [David Strom](#)

Corporate IT shops that need to roll out new network, infrastructure and Internet applications or who have to make expensive equipment upgrades are increasingly turning towards independent test labs as part of their decision process.

The labs can help identify weak points, application bottlenecks, design flaws, and show-stopping bugs in a non-production environment, and are also useful "bake-offs" to pit potential candidates against each other in controlled scenarios that can mimic their eventual use. There are several outsourced labs that are available from a number of small to large-scale providers.

Why go with an outsourced lab? The two biggest reasons are expertise and resources. "Some IT shops do have the testing expertise, but they don't always have the time to set up a test given the press of daily operations," said Joel Snyder, senior partner of Opus One in Tucson, Ariz. "It is often better to bring someone in who does testing as part of their daily job."

"The Ohio Secretary of State came to us because they expected a great deal of load on their Web site on election night and wanted to validate that they wouldn't experience any problems," said Steve Gruetter, the director of Platform Labs in Columbus, Ohio. "They had made a complete revision of their infrastructure since the 2004 election and had not done any type of load/stress testing. We lined up a consultant who helped them design a test with our hardware, software and bandwidth and found that they could handle nearly three times the load of 2004 with about the same amount of bandwidth, and they did fine on the night of the election."

Outsourced Independent Test Labs

Lab	Location, URL	Specialization
Opus One	Tucson, AZ opus1.com	Network security applications
Platform Lab	Columbus, OH platformlab.org	Infrastructure and Web applications
Extreme Labs	Indianapolis, IN extremelabs.com	Servers, networked applications
Applabs	Lindon, UT* applabs.com	Storage networks, eCommerce, 1000 PCs
West Coast Labs	Irvine, CA* westcoastlabs.org	Network security and communications applications
Neohapsis	Chicago, IL neohapsis.com	Network infrastructure, embedded systems, security products
Principled Technologies	Durham, NC principledtechnologies.com	Virtualization, thin clients
Network Test	Thousand Oaks, CA networktest.com	Network infrastructure performance and usability measurement

* Other offices outside of the US as well.

Greg Shipley, the CTO of Neohapsis in Chicago said, "There are still specialized skills, test plans, environment preparation, environment validation, and a slew of other components necessary to do world-class testing that are not usually found in abundance in corporate IT departments."

"Organizations will often come at product evaluations differently," said Shipley. "Some want help assessing features and functionality, others are looking for help with performance testing, others are looking at the security of the product itself."

PLATFORM LAB

Some want little more than helping define their evaluation criteria, where others want help with all of the above."

The specialized test gear is more than a bunch of PCs on a gigabit switch. "We have all sorts of test equipment here," said David Newman, director of Network Test in Thousand Oaks, Calif. "Most enterprises don't have specialized test instruments such as the Spirent Test Center that can emulate millions of routes and generate billions of packets. They could rent the tools but they probably don't have the expertise to use them."

Testing can also avoid potential show-stopping issues with a roll out. "We did a test for global logistics company and found incredible poor performance of a IBM ISS security appliance," said Snyder. "It turns out that they were sending traffic over a well known port that ISS expected to see something else and didn't know how to decode the traffic. We fixed the configuration of the ISS box and saved our client a lot of grief had they put this into production without doing any testing."

Here are a few tips to consider when shopping for a test lab:

- If technical criteria matter for your purchase, make sure you understand what they are before you put together your test plan. "When the time comes to deploy a product, you have to prove that you didn't make a big mistake. Even so, most people don't usually buy products solely on technical criteria," said Snyder.
- Understand what testing for performance really means, and what are the boundaries of acceptable and unacceptable performance before you set up your test plan. "Have clear goals going into tests. Don't change objectives during the project, said Newman.
- Know what the facility specializes in, and what the actual lab testers' expertise is before you hire them. This is just common sense, but each test lab has a different specialization as well as size and facilities. They range in size from the one-person Network Test to the multi-office global companies of Applabs and West Coast Labs.

Some, like Network Test, do more performance-related tests, while Opus One specializes in firewall and virtual private network devices. ExtremeLabs has deep expertise in network and Internet applications.

"One of the most difficult tests we had to do was to simulate 200,000 DNS requests a second, all with different source IP and MAC addresses," said Tom Henderson the managing director of ExtremeLabs in Indianapolis. They also work in virtualization consolidation scenarios, where a company wants to migrate their physical servers to virtual ones and understand what the resulting configuration, load, and performance will be.

Platform Lab in Columbus doesn't actually conduct the testing. It is a state-funded facility and will connect clients with the appropriate consultants to perform the tests. "We just setup the hardware, software, and bandwidth to their specs. While we don't do the tests ourselves, we have relationships with 125 consulting firms," said Gruetter. And Applabs does a lot of work in storage area networks testing and stress testing eCommerce Web sites.

PLATFORM LAB

A few more things to consider when hiring a test lab:

Know what equipment, bandwidth, and test gear you need. If you want a large collection of actual PCs (versus virtual machine instances) to do your tests, the best place to start is with Applabs facility in Utah. They have 1,000 individual PCs that can run automation software for their tests. The other labs use virtual machines or synthetic test tools to simulate client and server loads.

"We are the only game in town," said Doc Parghi, the senior VP for North America for Applabs. "The Utah test lab is a small part of our business and we have many other services, too. We have a significant presence in the UK and the majority of your staff is in India where we do automation and regression testing."

Wherever you go, you should find out what test gear the lab has and whether it will be appropriate or not for your needs.

What kind of vendor support is expected during the actual test? "I often see that vendors don't always send their A-list engineers though we are doing tests that may result in a purchase of tens of millions of dollars of their gear," said Newman. "You just can't send a junior field sales engineer who may not understand the business need or how to best deal with the flaws that we uncover during the tests, or the complexity of the application that we are testing."

What kind of audience will be reading the resulting reports? You also need to define whether a C-level executive will be reading the results, or will you need your own IT engineers to review the reports. "Sometimes our clients want recommendations, other times they are satisfied with just the raw results," said Newman.

A good strategy is to examine some writing samples before hiring, and most of the lab Web sites have links to download these or can send them on request. Applabs also can call on its own analysts that they can bring into a test evaluation too.

Finally, how much is this going to cost? Each lab prices their services differently, and getting an estimate might take some work. For example, the Columbus Platform Lab charges à la carte for bandwidth, machine usage and other items, such as renting any test equipment. They charge clients based on a formula of \$12/MB per day of testing. And since they have access to some very large Internet pipes—up to gigabit Ethernet speeds—that can get expensive if a client wants a lot of bandwidth for their tests.

Network Test wouldn't quote any prices, but they include all test gear, bandwidth, and equipment as part of their fee. ExtremeLabs charges \$3,500 a day with a four-day minimum. Opus One charges \$2,000 a day.

Related Articles

- [5 Ways to Keep Innovation Alive In a Recession](#)
- [1 in 4 IT Jobs Done Overseas by 2010](#)
- [Social Networks Are Risky Business](#)
- [QoE: The New Next-Gen IT Trend](#)
- [Execs See Technology As Important – But Not IT](#)