Company:

Broadband Service Provider

Pacific Northwest-based provider serving 20+ markets across 11 Latin American countries

Key Issues:

The company needed better scalability to meet the demands of growing data and devices.

- Existing infrastructure was sprawling and costly
- Operations needed to be streamlined
- Network needed to be able to expand and be resilient

Solutions:

IxNetwork VE, IxLoad VE

Results:

- Able to reduce deployment cycle by four months
- Improved utilization and efficiency of existing Ixia tools

BROADBAND PROVIDER MIGRATES TO CLOUD FASTER WITH IMPROVED VIRTUAL INSIGHTS

As more devices and more data come online, broadband providers are seeking new ways to accommodate more throughput without increasing OPEX costs. For one large provider in the Pacific Northwest, the solution was to virtualize its infrastructure.

Delivering advanced mobile services, next-generation TV, high-speed Internet, and smart solutions for people and businesses in 20 markets across 11 Latin American countries, this business had to maintain infrastructure in multiple locations in many countries.

The number of IP endpoints was escalating, making handling the volume and array of devices more taxing on the network. Each time a new network service was added, it needed another appliance. Physical space, power to run the hardware, and increasing capital investments were costly problems. The infrastructure was also becoming more complex to maintain. Changes or upgrades to the network were not easy. Virtual deployments made sense.

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> — Network Architect

In seeking a solution, the company wanted to be more efficient, resilient and dynamic with its network infrastructure and service offerings. And, it needed to be more elastic to meet constant and shifting demands. Virtualization was the obvious answer as long as the transition did not slow down service rollouts or compromise the quality of experience (QoE) for customers. "We were eager to deploy our virtualized infrastructure, but we needed to be sure that the only impact on customers would be positive," said a company network architect.

The service provider turned to Ixia® because it could not get the testing accuracy it wanted with its existing test resources. When validating the network configurations with replicated application and subscriber communication traffic, it seemed that all was well in the lab. But, when it went to production, the performance dropped dramatically. Taking time to isolate and identify the issue was holding back its ability to move to deployment. Their existing tools did not provide sufficient resolution to troubleshoot the issue.

Once it was able to test with IxNetwork™ Virtual Edition and IxLoad® Virtual Edition, the service provider got the necessary accuracy and visibility to help work through issues and move on to deployment.

"IxNetwork helped us zero in on a misconfiguration in the network that we could not see before," said the provider's network architect. "We had been trying for months to find the problem. With IxNetwork, the automated testing helped us quickly see what was wrong." The main reason: the ability to replicate realistic loading conditions in the virtual environment.

Using IxNetwork the service provider could test functionality and how appliances and virtual machines were working on the network. It was able to test capacity, scalability, and convergence with a traffic generator, which simulated the type of traffic it would typically see—at scale. Additionally, IxNetwork helped emulate how Layer 2-3 devices would perform on the network. Ixia's test tools can emulate tens of thousands of user configurations and load conditions. This helped rapidly spot where bottlenecks were occurring. And, in the process, made the applications stronger.

Using IxLoad, the provider's development team tested voice and video application performance and quality of service. By simulating network transactions under varying conditions, it

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could evaluate performance and customer experience. IxLoad's dynamic sense of realism helped test scenarios such as Facebook Messenger conversations or other dynamic application exchanges. And, IxLoad let the business recreate its full production network, testing all aspects of a virtual evolved packet core (vEPC) network—that connected millions of subscribers and multiple data centers.

With Ixia's end-to-end testing tools, the service provider was able to move quickly from lab to production. The performance validation of network, applications, and security validated the end-to-end performance of the new services even earlier than scheduled. As a result, the team deployed four months earlier than projected—resulting in more than $45 million in additional revenue. As an added bonus, the provider saved $20 million in data center infrastructure costs with optimal resource allocation of compute and memory per physical server, based on scale and performance requirements of individual services.

With its new infrastructure in place, the broadband service provider can now rapidly support new deployments and shifting customer needs—including changes to traffic and usage patterns. The virtual deployment saves with lower CAPEX per user, and lower OPEX per new service without sacrificing quality of customer experience.

ABOUT IXIA
Ixia provides testing, visibility, and security solutions, strengthening applications across physical and virtual networks for enterprises, governments, service providers, and network equipment manufacturers.

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