ATERLO VALIDATES QOE MEASUREMENT APPLIANCE "PRESEEM"

Aterlo is a networking software company focused on building networking solutions for internet service providers. Aterlo carried out a CENGN project to validate that their new product Preseem can accommodate incoming network traffic speeds above 10Mbps.

A TYPICAL PROBLEM

It's been a long day. You come home looking forward to watching a new episode of your favourite TV show online.

Just as you're getting settled in, you turn on Netflix only to realize that it's not working as expected. The streaming service is so slow, it's not even watchable and the Netflix error screen appears over your TV.

"What's causing this problem?" you're probably asking yourself.

After walking around the house to see what's going on, it turns out everybody else had the same idea. They wanted to go online as well… causing everybody to suffer from lagging internet speeds.

This is a typical problem that most people can relate to, especially if you live in a rural area outside a major city.

The companies that help provide internet access to your home; Wireless Internet Service Providers (WISPs) also have trouble with this problem. Without proper performance metrics, many WISPs have a difficult time understanding and analyzing the quality of experience (QoE) that they're offering. This leaves them taking educated guesses about how to provide better services to you.

Because of this, WISPs often have to deal with high amounts of customer service complaints and high subscriber churn rates affecting their revenues. Seeing this problem, a small company named Aterlo is providing a better, more measured answer to WISPs and their subscribers.

ATERLO

Operating out of the Accelerator Centre in Waterloo, Ontario, Aterlo looks to help Wireless Internet Service Providers (WISPs) measure and improve the quality of experience they deliver through their network down to individual subscribers. After working numerous hours on developing an answer, Aterlo created a new networking solution they call "Preseem."

PRESEEM PERFECT

Focusing on improving the services of small and medium-sized WISPs, Preseem measures, analyzes, and optimizes their subscriber's quality of experience (QoE). Offered through hardware or virtual machines, Preseem collects millions of real-time metrics directly from subscriber traffic and networking elements. The solution then analyzes all the raw data into meaningful and actionable insights to help network operators identify parts of their network that are providing poor QoE to their subscribers.

With this information, network operators can proactively identify and act on network issues such as congestion, misconfiguration, and wireless interferences allowing them to provide better quality service. The solution also optimizes the QoE being delivered to end-users by using modern active queue management techniques that ensure bulk traffic flows like Netflix or Streaming video don't negatively impact smaller flows like online gaming or VoIP calls.

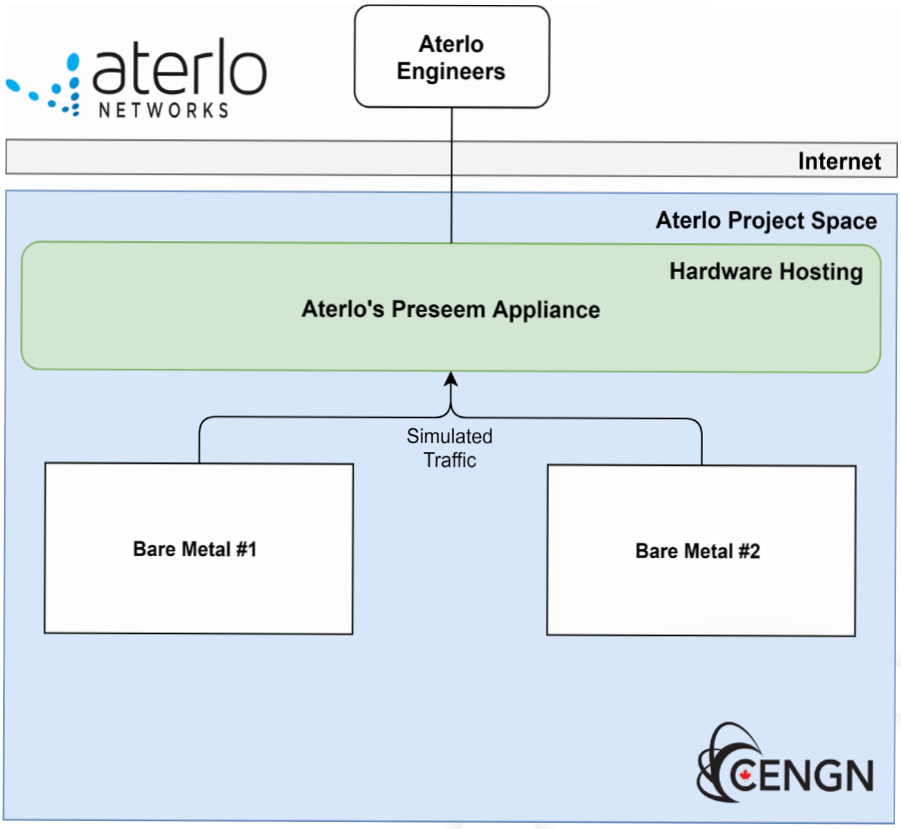
With its QoE Optimized traffic management feature, Preseem fixes the typical 'my-internet-feels-slow' complaints about WISPs. WISPs using Preseem to provide better service have seen customer support calls drop 25% to 50% and their subscriber churn rates drop an average of 28%. With these results, WISPs can decrease support costs while also growing revenues through new customers on the strength of word-of-mouth marketing.

VALIDATING, SCALE TESTING, AND MORE

To inspect incoming subscriber traffic and networking elements, Aterlo's solution needs to work fast. Recognizing this, Aterlo used a CENGN project to deliver on three objectives that will ensure Preseem's high performance:

- Validate that their Preseem appliance would inspect different types of incoming traffic with a speed of over 10 Gbps
- Scale test Preseem, inspecting incoming traffic speeds of at least 15 Gbps
- Identify any shortcomings and areas of improvement for Preseem

Two bare-metal resources were used for simulating subscriber traffic inspected by Aterlo's Preseem appliance. Both bare metals and the Preseem Appliance were hosted on Aterlo's secure and private project space hosted on the CENGN infrastructure.



Aterlo's Project Space on CENGN's Cloud

TESTING RESULTS

After completing the project, Aterlo validated that the Preseem appliance could inspect some of the different types of incoming traffic over 10 Gbps. Preseem could inspect 20 Gbps worth of incoming information on those select few types of traffic.

Since only some of the different types of traffic could be inspected at that speed, Aterlo was able to identify the changes needed to improve. They were also able to prove that Preseem was able to operate at high rates for 12 hours without any interruption or resource leakage. Now that the project is complete, Aterlo is able to act on some minor changes in Preseem's performance and will be ready for market soon. With a solution that measures, analyzes, and optimizes the correct metrics, WISPs will be able to provide their subscribers with a better quality of internet experience, decreasing customer service complaints and subscriber churn rates while increasing WISP's profits in turn. Both the wireless internet service providers and subscribers will be happy about a better quality of online experience.

THE CENGN ADVANTAGE

Other than leveraging CENGN's free testbed service, Aterlo took advantage of CENGN's expertise on scale testing through traffic generators, as well as creating a commercial like a test environment and an action-oriented test plan.

CONCLUSION

Now that the project is complete, Aterlo can act on some minor changes in Preseem's performance and will be ready for market soon. With a solution that measures, analyzes, and optimizes the correct metrics, WISPs will be able to provide their subscribers with a better quality of internet experience, decreasing customer service complaints and subscriber churn rates while increasing WISP's profits in turn. Both the wireless internet service providers and subscribers will be happy about a better quality of online experience.

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