

Bandwidth Success Story

Customer Overview

Bandwidth is among the US largest and fastest-growing communication technology companies. The company operates two divisions – business solutions and consumer (Republic Wireless) that share a mission of transforming the communications industry. Across the divisions, Bandwidth provides a full range of communications services, including voice origination, termination and toll free; a full suite of 9-1-1 services; SMS solutions; SIP Trunking; hosted VoIP for SMBs; and a consumer wireless business. Founded in 1999, and a certified CLEC in 49 states, Bandwidth is a profitable company headquartered in Raleigh, NC with a large remote office in Denver, CO and field offices in eight other cities.

Problem

Bandwidth has always been providing a 99% Internet service SLA internally. From the IT Operations perspective, when the network suffered an outage, the company had Disaster Recovery and Business Continuity (DR/BC) plans that could automatically resolve the issue within a minute or less by flipping between the 2 connected ISP's. The engineers would be alerted, but did not need to be present to resolve the outage. Where the team was failing was when the 2 ISP's BGP routes were degraded. This prevented the outage DR/BC solution to initiate, thus causing disruption to the whole IT department. Therefore, the company started looking for solutions that could intelligently analyze BGP outbound routes and make adjustments in real-time. Although the technical support team was available 24/7, the engineering workforce is a scarce resource and the company was looking for a solution that could automate many of the routine optimizations that engineers need to do in order to keep the network operating on its premises.

“We initially started looking at hardware solutions from the various hardware manufacturers, but came to the conclusion that “intelligent routing” meant different things to different companies,” said Paul Chunn – Vice President at Bandwidth. “We had never heard of Noction until we started actively searching for BGP Intelligent Routing solutions. It was a long process of vetting out Noction as a company and its product. Both passed all tests during this process with flying colors.”

Summary


Customer name:

Bandwidth

Industry:

Network Services, Cloud Services

Location:

Raleigh, North Carolina, US

Business Challenges:

- Proactively react to outages even when the BGP sessions are degraded
- Automate manual BGP configuration mechanisms
- Manage and automatically resolve ISP degradation
- Extend IT's High Availability Internet solution and Strengthen company's 99.99% SLA
- Scale the network team's support and services
- Improve visibility into BGP data traffic and ISP performance

Solution

Ultimately, Bandwidth settled on Noction as a solution for BGP real-time optimization. The early lab results were remarkable as Noction IRP was intelligently moving traffic between the 2 ISP's in real-time and in a very transparent manner. It proactively handled degradations as they happened, before customers would become affected. "Quite frankly, we were amazed and blown away by how effective it was in the lab," further mentioned Paul. "While the platform was operating in a "non-intrusive" mode we were finding out not only about our traffic, but how Noction viewed our ISPs' BGP routes and why it made the choices it made. When we flipped the switch to "intrusive" mode, it was amazing to watch how seamlessly it handled BGP degradation of our ISPs and how often those situations occur. This is the equivalent to hiring a 24/7 Network Engineering team solely focused on BGP routing, making adjustments on the fly."



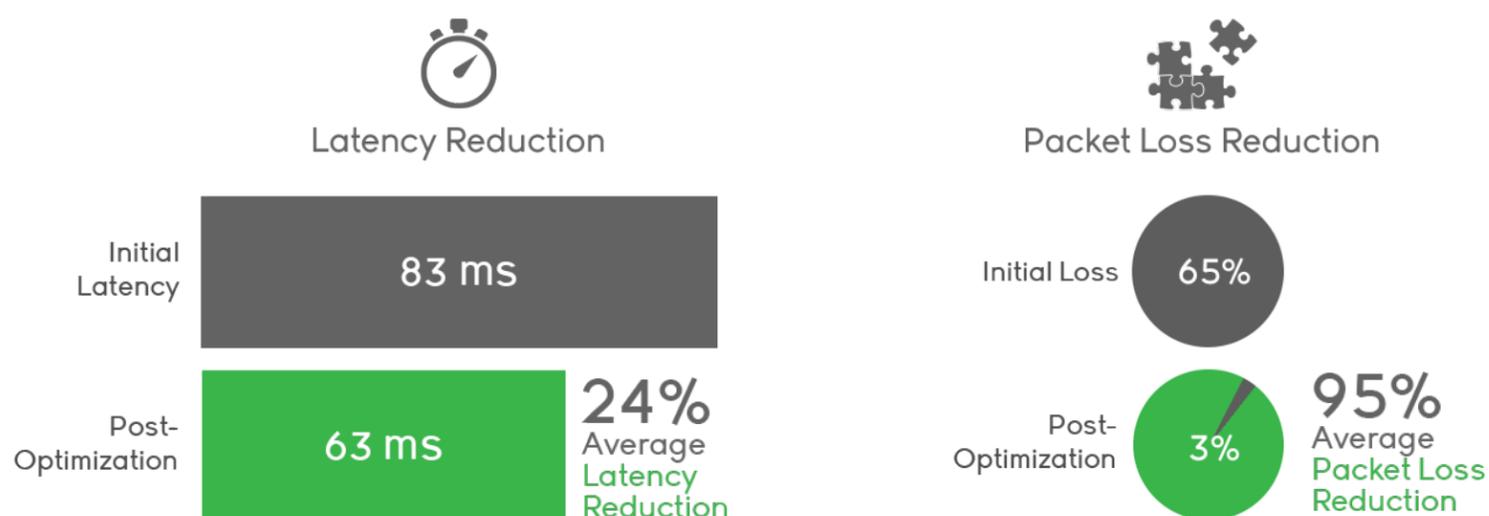
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VP, Corporate Technology Services

Results

By running for half a year in Bandwidth's network, IRP optimized over 4 TB of traffic by announcing over 100,000 route improvements to the company's edge routers. The platform reduced latency by an average of **24%** and dropped packet loss by an average of **95%** for the analyzed prefixes.



"Noction gave us the three requirements that we seek with all solutions - optimization, scalability and extended SLA. The Intelligent Routing Platform provides better ISP degradation management and resolution by automatically choosing the best path for all BGP routes in real-time. Therefore we are able to offer better experience to our customers and bolster our 99.99% SLA. It also allows us to scale our network team by having engineers focused on objectives of a higher business priority rather than solving routine BGP issues. Last but not least, IRP deepened our visibility into the BGP routing and ISP performance which is paramount for our operations." stated Paul Chunn.