

DQE Communications

**Customer Name:**

DQE Communications

Industry:

Network Solutions Provider

Location:

Pittsburgh, PA, USA

Business Challenges:

- Network Latency
- Network Congestion & Outages
- Bandwidth Limits
- Connectivity Problems

CUSTOMER OVERVIEW

Headquartered in Pittsburgh, PA., DQE Communications is one of the leading providers of high-speed, fiber-optic data networking for businesses throughout the western Pennsylvania region. The company's network of fiber-optic cables span thousands of miles throughout Allegheny, Armstrong, Beaver, Blair, Butler, Greene, Indiana, Mercer, Somerset, Washington and Westmoreland counties.

CHALLENGE

The implementation of Noction IRP was driven by one of DQE's clients, who provides specialized education services to 42 suburban public school districts and five career and technical centers in southwestern Pennsylvania.

DQE Communications provides three services to this customer, ensuring connectivity between the school districts, Internet2, and commodity Internet. DQE needed a solution that could continuously analyze traffic on all DQE upstream peers and proactively redirect traffic around outages and bandwidth congestion.

SOLUTION

With the full assistance of Noction's Technical Support Team, DQE has installed, tested and deployed to its production network the IRP route optimizer. "I was pleased by the support team and Noction's flexibility throughout the evaluation process. Our testing period went well beyond the typical 30 day evaluation periods in the industry, and Noction never applied any pressure to rush the DQE timetable or pressured the sale before our testing was finished," mentioned Steve Puluka, IP engineer at DQE. "Noction's support team is among the most proactive and responsive that I have dealt with over the years. All queries were answered promptly, and our testing and deploy windows were easily scheduled, with live support as needed. Their monitoring systems picked up all service affecting activity on our part during our usage and provided notification of any issues as they occurred. Noction also provided patching and upgrades, which were always administered during our preferred scheduled windows."

Since deployment, Noction IRP analyzes the usage of prefixes by DQE network customers with data from all of DQE upstream peers and then injects route improvements into DQE BGP peers. These improvements are based on testing probes that IRP uses to measure

the performance of DQE peers for specific route prefixes.

The process runs continuously in the background, automatically injecting the improved performance routes and steering traffic to the best performing peers for the most used prefixes.

RESULTS

The IRP route monitoring process improves DQE’s network performance in a number of scenarios, most of which occur automatically by the nature of the way IRP continuously monitors critical performance metrics.

- Minimizes Latency & Packet Loss
- Bypasses Congestion & Outages
- Manages Network Bandwidth Limits
- Monitors Key Route Destinations and Connectivity Problems

By running for more than 3 months in the DQE network, IRP has optimized over **480 TB** of traffic by announcing over **700,000** route improvements. The platform reduced latency by an average of **29%** and dropped packet loss by an average of **84%** for the analyzed prefixes.

“DQE is known for creating custom network solutions tailored for individual business demands, while utilizing effective and efficient network administration practices. Noction IRP is helping DQE optimize our commodity Internet upstreams, while at the same time, provide a custom route optimization solution for the Internet2 private partial peer for our client”, said Steve Puluka, IP Engineer at DQE.

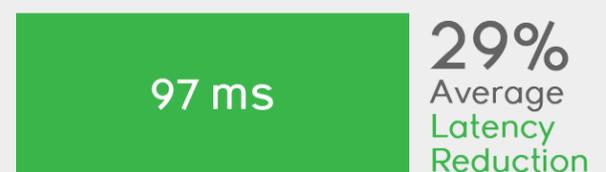
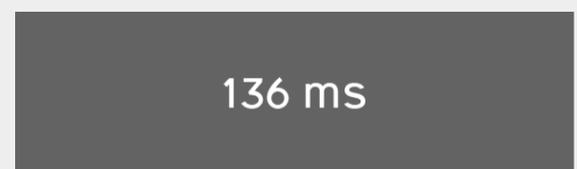
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Steve Puluka
IP Engineer at DQE

Performance Results



Latency Reduction



Packet Loss Reduction

