



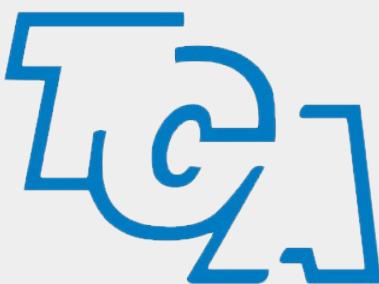
CASE STUDY

TCA improves Network Performance with Noction IRP

A Brazilian ISP journey
to Automated, Fast, and
Error-Free BGP management.

CUSTOMER OVERVIEW

Headquartered in Taquara / RS (Vale do Paranhana), TCA is a leading provider of advanced network communications and technology solutions in the south of Brazil. The company was founded in 1989 and started off as a reseller of computer products and parts. In 1995 TCA pioneered as one of the first Brazilian Internet Service Providers, with a mission to deliver compelling, flexible, and reliable services plus amazing local support to the residential and business communities it serves.

**Customer Name:**

TCA

Industry:

Internet Service Provider

Location:

Taquara / RS (Vale do Paranhana), Brazil

Business Challenges:

- Reduction of engineering time spent on manual BGP manipulation
- Becoming proactive in solving routing issues
- Reduction of Network Latency and Packet Loss
- Shortage of reliable metrics when making important routing decisions

BUSINESS CHALLENGES

Although classed as an emerging economy, Brazil is among the top ten countries worldwide when ranked by the total number of internet users. This is not particularly surprising considering that the country is the world's fifth-most populous nation. Due to various factors such as the reduction in prices for broadband subscriptions and the expansion of telecommunications infrastructure, internet connections have expanded significantly in Brazil in recent years.

Like many Internet Service Providers operating in Brazil, TCA relied on traditional BGP routing mechanisms for its network. And like many, TCA grew weary of the manual BGP manipulation complexities as the company engineers were reactively creating and applying routing policies, and manually rerouting traffic. However, with the multiple changes in place, comes complexity and a breeding ground for problems. "Our engineers were struggling running multiple probes per hour to determine better traffic paths and analyzing historical performance to make routing decisions based on that" mentioned Guilherme Linden, TCA Network Administrator.

To deliver the real-time performance expected from TCA users, the company network required low-latency and highly reliable network communication. The deployment of a network optimization solution such as Noction IRP, based on the intelligent monitoring and automated response was needed to eradicate manual network troubleshooting and brute force time spending.

ALTERNATIVES CONSIDERED

Initially, TCA considered hiring extra heads to execute the BGP management manually but was aware that this would have incurred high incremental costs for recruitment, training, and resourcing the additional staff, and would have perpetuated network configuration errors.

SOLUTION

Soon after TCA engineers began their research on the BGP automation solutions, one of the engineers read an article about Noction and reached out to learn more. The team at TCA liked what they heard and signed up for a free trial with Noction.

Following the initial meetings with Noction engineers, TCA representatives decided that the best way forward was to evaluate the Intelligent Routing Platform via a Proof of Concept (PoC). This was seen to have two advantages:

- Swift generation of confidence in IRP.
- A better eventual IRP deployment.

The IRP PoC was deployed over three stages, as follows:



Stage One

Initial meeting discussing TCA network optimization and BGP management objectives was held as well as the profound product capabilities demonstration.

Stage Two

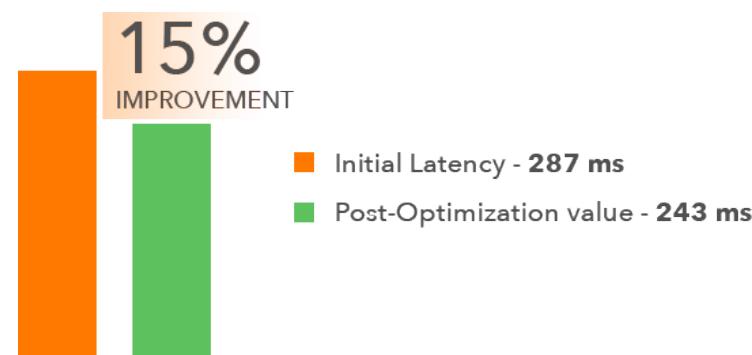
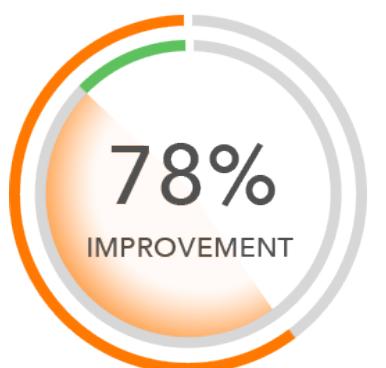
During this stage, all the prerequisite information was collected. The Intelligent Routing Platform was installed and started operating in a non-intrusive mode where the system was only reflecting the network improvements and events in the platform reports and graphs and not advertising any improvements to the TCA network.

Stage Three

Once the system fine-tuning was completed, and the manual route propagation tests were performed to ensure that the edge routers' behavior was correct, the system was switched to Intrusive mode. While running in this mode, IRP started to inject all the computed improvements into the TCA edge routers routing tables, allowing the traffic to flow through the best performing route.

OBTAINED RESULTS

Following the successful PoC and thorough testing, TCA concluded that integrating the Intelligent Routing Platform in their network significantly reduced latency and packet loss. TCA engineers witnessed an average reduction of **78%** in network loss and **15%** in packet latency for their traffic during the very first month.



In the words of Cassiano Brenner TCA Information and Communication Technology Manager: "After a thorough evaluation of the obtained results during the PoC, it became obvious that the platform was the perfect fit for our network."

And while TCA was able to reduce latency and packet loss, network performance has not been the only benefit with Noction IRP. In addition to improving network performance, IRP offered greater control and visibility of the BGP route changes in the TCA network. "IRP analytics offered us detailed providers performance statistics which has already been used as great leverage when negotiating better deals with the carriers." Guilherme Linden, TCA Network Administrator.

The ongoing network management became more efficient with IRP. The platform implementation allowed automated BGP management and eradicated the manual network configuration errors. This, in turn, freed the network engineers to spend more time handling network development tasks instead of the mundane, repetitive ones.

"IRP significantly reduced the engineering time spent on manual BGP manipulation and enhanced the service quality provided to our users by being proactive and having reliable metrics"

Cassiano Brenner
TCA Information and
Communication Technology
Manager