



SulAmérica's app-driven digital transformation

IBM Turbonomic automation optimizes application response times as dynamic demand fluctuates

How does an insurance company that was founded in 1895 and serves over seven million customers consistently deliver an excellent end-user experience while also accelerating its digital transformation?

SulAmérica, Brazil's largest independent insurer, has always been vigilant about finding opportunities to improve customer relations. For example, it gave customers an easier way to file a claim for vehicle theft by creating an app that uses GPS to report and track a stolen car. This is just one example of SulAmérica's strong track record as a trailblazing company embracing new technologies to transform its business. A key enabler



of its transformation has been its adoption of Kubernetes. SulAmérica has a multitude of mission-critical internal and consumer-facing applications that run on the platform. Its main objective is to optimize the way it interacts with its customers and guarantee that it can respond swiftly to the ever-changing dynamics of the insurance market.

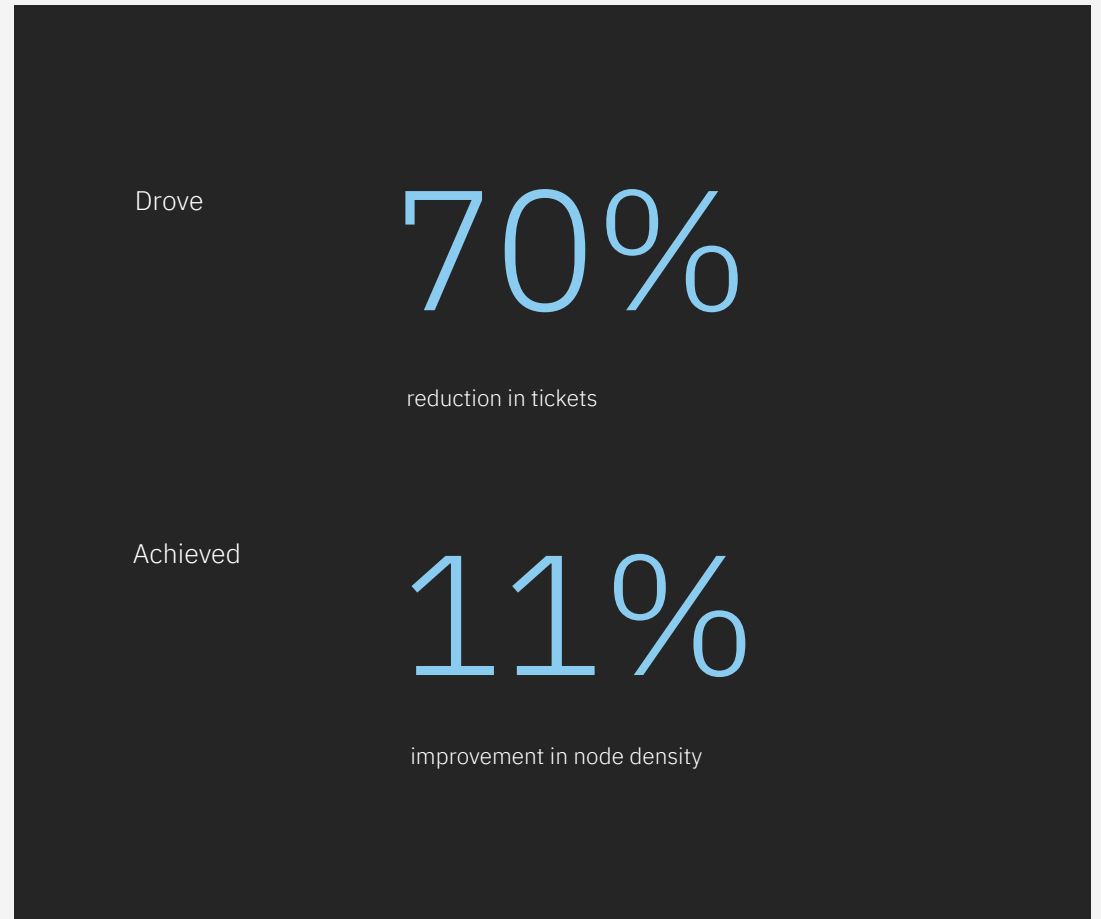
Operating Kubernetes at scale is a complex undertaking. The NOC & Web

team at SulAmérica is responsible for the performance of 57 mission-critical applications. These applications comprise approximately 7,000 containers (~3,000 pods) and run on a hybrid mix of Red Hat® OpenShift® (virtualized and bare metal), Google Kubernetes Engine (GKE) and Amazon Elastic Kubernetes Service (EKS).

Like many organizations, the team relied on monitoring: applying

OpenShift and other dashboards to manage the platform and their application performance management (APM) tool to monitor all their applications. When there were resource bottlenecks, the team chased utilization metrics to identify the problem. This manual approach meant they reacted to performance issues after they occurred. This slowed down the team and prevented them from devoting as much time as possible to the innovation that their investment in Kubernetes was intended to drive. Their existing approach could not scale with SulAmérica's business needs.

Resiliency was also becoming an issue. When one of their bare metal nodes failed due to an expired host certificate, the team knew they needed to make a change to how they managed resourcing. "The business relies on us to assure the performance of our applications so that our customers



have the best experience when they use our digital services," explains the Analyst Technology Leader of the NOC & Web team at SulAmérica. "As our business grew, the OpenShift platform

had to scale, and we knew there had to be a better way to manage the complexity." This is why they turned to the **IBM® Turbonomic®** hybrid cloud cost optimization solution.

Keeping response times low during peak demand

When the team automated Turbonomic's hybrid cloud cost optimization, it was the beginning of a new and simpler way to operate. It also paved the way for dramatic improvements to application performance. The team automated continuous pod placement in their production environment, as well as intelligent container rightsizing in their dev environment. By doing so they improved performance and efficiency. As a result of the automation, the team saw a 70% reduction in tickets and an 11% improvement in node density.

Today Turbonomic is assuring the performance of all 57 mission-



critical applications, while simplifying operations. The team understands that customer experience is essential to SulAmérica's business. When they think about performance assurance, they

feel ownership, not just for uptime, but application response time. As such, connecting Turbonomic to their APM was a natural next step; it allowed them to see exactly how

the automation was keeping response times low, even as demand across applications fluctuated.

In January and February of 2021, for example, Brazil was in the throes of the COVID-19 pandemic. SulAmérica's Saude App, which health insurance beneficiaries use to find doctors, get medical advice and book appointments, saw a significant spike in demand. But with Turbonomic dynamically adjusting the resources to meet that demand, application response times for these mission-critical services were kept low.

Another example occurred in April of the same year, during the Easter holiday. An application, which provides travel insurance for bookings with one of the largest low-cost airlines in the region, saw a significant spike in demand during the four-day event in Brazil. Again, Turbonomic kept response time low by dynamically and automatically adjusting resources to meet that demand. With Turbonomic, the NOC & Web team helps to ensure that customers have a seamless experience—no matter what—as they transact with SulAmérica.

SulAmérica has a hybrid cloud strategy, relying on multiple cloud providers alongside their on-prem estate based on what their applications require. Some applications are deployed on-prem because they have dependencies on the legacy environment, such as accessing data that is hosted there. Other applications are applying Google or AWS services in which case they are deployed to GKE or EKS. Wherever these mission-critical applications run, they must maintain low response times and the platforms they run on must be resilient.

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Analyst Technology Leader of NOC & Web, SulAmérica

Expanding automation across hybrid cloud

With the time they have gotten back by automating Turbonomic, the NOC & Web team at SulAmérica have been able to focus on strategic projects for the business, the largest being their “Global Load Service” project. With this initiative, they are architecting the platforms to help ensure application security and availability across their data centers and cloud providers. If they lose connectivity in the cloud or on-prem, the DR active-active implementation across their hybrid cloud will help ensure that their most mission-critical applications will never fail to service their customers. Turbonomic is a critical piece to



this hybrid cloud strategy as it will be continuously maintaining low application response times, whether the applications run on OpenShift, GKE, EKS, Nutanix Karbon or other Kubernetes distributions; or in their

traditional environments running on VMware or public cloud infrastructure as a service (IaaS).

As part of this new standard of control, the team will also be using

Turbonomic to dynamically manage resources across the application lifecycle. As applications move from dev to staging to production, they will take advantage of the intelligent actions to ensure that they get the resources they need to perform from the moment they're deployed to dev through to the high-stakes production environment that directly impacts the customer experience. In addition to the performance benefits, the team will be relying on Turbonomic's ability to automatically manage compliance—Turbonomic ingests Kubernetes node labels and will automatically move pods while accounting for those constraints. And, as the platform scales to support new applications

and new lines of business, they will use Turbonomic's planning capabilities as well.

SulAmérica's digital transformation is an ongoing journey of modernizing applications to best serve its customers. Not all applications are built the same—likewise, how they are rearchitected or replatformed can be different. But Turbonomic gives the team a unified view of cloud native and traditional applications to help ensure that all applications perform continuously through every phase of transformation.

The team understands the impact of application response time to the customer experience. They hope to

expand Turbonomic automation to the SRE teams, who are focused on meeting specific Service Level Objectives (SLOs). With Turbonomic, SulAmérica can fully apply the benefits of cloud native application elasticity by having the software dynamically manage resources based on those SLOs. "Our team's macro goal is to deliver an application- and SLO-driven hybrid cloud," says their Analyst Technology Leader of NOC & Web. "Applications will run wherever it best suits the business, and they will continuously perform and delight our customers. Turbonomic is not only helping us specifically operationalize our vision, but also giving us the time back to focus on what strategically impacts SulAmérica's business."



“We trust Turbonomic’s automation to give our applications exactly what they need to perform, running in the background and keeping response times low. The results have been transformative for our business and our customers. It’s also given our team time back to work on new projects for SulAmérica.”

Analyst Technology Leader of NOC & Web, SulAmérica

About SulAmérica

With 7,390 employees and more than seven million customers, [SulAmérica](#) (link resides outside of ibm.com) is a leading insurance company operating out of Rio de Janeiro, Brazil. It provides insurance across the dental, health, travel and automobile industries.

Solution component

- IBM® Turbonomic®

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