NS International Creates Business Value in Complex and Hybrid IT Environments with StackState's AIOps Platform

About NS International

The rail operator NS International provides sales and service of international inter-city and high-speed train connections to Belgium, France, Germany, and Switzerland. Based in the Netherlands, it is part of the Dutch Railways, also known as the Nederlandse Spoorwegen (NS). The organization operates on the busiest railway network in the world and transports about 1.2 million people every day, with annual revenue of five billion euro.

Customer
NS International

Industry
Transportation

Location
Europe

Double the number of travelers

- In 2012, NS International suffered a reputation loss after onboarding a new highspeed train that, ultimately, never went into long-term operation;
- The organization needed to change its "mindset." It set an ambitious goal: to double the number of its international travelers by 2030;
- To achieve both, the company began focusing on the customer journey, dividing it into different phases.
- NS set up multiple, business-oriented growth teams in a T-shaped profile to optimize each phase of the customer journey from that team's specific perspective. Data analysis and data science became crucial for measuring the indicators and outcomes of experiments and regular business.
- Client interaction now falls under the purview of these growth teams and, supported by seven different DevOps teams, NS International is rapidly experimenting and scaling new solutions to deliver the best customer experience.

Complex hybrid IT landscape

NS International's IT organization is tasked with providing an integrated sales solution, traveling information, data and personalization, logistics and more for all international customers. From a sales perspective, NS International handles more than one million monthly online visitors. It sells two million online tickets annually and approximately four hundred thousand offline tickets for more than 3,500 destinations across Europe. Its hybrid on-premise and cloud IT landscape are currently monitored by:

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- Logz.io
- Elastic
- Nagios
- AWS Cloud Watch
- Google Analytics (business metrics)

Reducing time to market

In this complex environment, the growth teams were mainly challenged in shortening the time to market of new initiatives. Platform operations needed to be super-efficient so the majority of the IT resourcing could focus on development inside the DevOps teams instead. To support the rapid experimentation of new initiatives, the DevOps and business-oriented growth teams needed to perfectly align.

The following questions had to be answered:

- How to create shared understanding of the entire IT stack across teams and tools?
- How to create a rapid feedback loop from the business team to the DevOps team?
- How to get more control over critical business processes?
- How to decrease "mean time to discover" and "mean time to repair" for major incidents?
- How to predict the business impact caused by IT: towards pro-active monitoring?

"StackState acts as a lens where our data is focused into a single cross-domain perspective and analysis. This ensures higher productivity and rapid experimenting across our Business- and DevOps teams, while maintaining stability and business performance."

Pascal Reijnders, Head of IT at NS International

SOLUTION

Rapid experimenting

- While maintaining current monitoring solutions, NS International consolidated all their monitoring data into StackState's AIOps platform. With this data, StackState AIOps generates full stack visibility and shared understanding across teams and tools.
- As a result, NS international is able to understand how their DevOps and business-oriented growth teams are related, including their up- and downstream dependencies.
- Google Analytics is integrated into StackState AIOps platform as a top-level business metric. This ensures that the DevOps teams understand the impact they have on important (business) metrics, for example, the impact on tickets sold per hour.
- StackState deployed their own tracing agent on top their AIOps platform, to get end-to-end insight and performance analysis, generating the broadest context possible to make faster (business) decisions.
- The deployment enables rapid experimenting of new initiatives while maintaining stability and business performance throughout the organization, with fast feedback loops across teams.
- As a result, they minimized downtime and increased revenue.

BUSINESS IMPACT

Increased revenue

- StackState delivers cross-domain actionable insights to the DevOps and growth teams, improving team efficiency and productivity.
- NS International is currently accelerating its root-cause analysis with StackState AIOps, which results in a significantly lower "mean time to discover" and "mean time to remediate."
- Insight into the impact on business metrics like ticket sales will be available later in 2019.

What's next?

The data from the different sources are used to feed and optimize the StackState AI prediction algorithms. Together with StackState, NS International works towards predictive insights to anticipate and prevent IT outages and speed up its transformation.

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