

LTG optimizes IT system performance with SAP-certified Red Hat platforms



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Lithuania's state-owned national railway operator Lietuvos Geležinkeliai (LTG) wanted to establish a standard IT environment to reduce complexity, support automation, and host a new railway management system. This environment needed to run both on-premise and multicloud workloads consistently and securely. With help from local partner Novian Technologies, LTG deployed Red Hat Enterprise Linux as the foundation of its new SAP S/4HANA® enterprise resource planning (ERP) system. Combined with automation of routine tasks using Red Hat Ansible Automation Platform, this new IT infrastructure helps LTG maintain back-end system and service performance across environments with less management time and effort.



"We rely on specialists to manage our datacenters and other system environments, no matter which cloud vendor we're working with. Red Hat has partnerships with most of the major providers, so we know we'll be able to maintain stable, consistent operations."

Marius Staponas

Head of IT, Lietuvos Geležinkeliai (LTG)

Transportation

7,000 employees

Benefits

- Simplified ERP management with a unified multicloud platform
- Reduced complexity and risk by automating routine processes
- Developed a well-trained team to complement
 Red Hat support

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Taming IT complexity to efficiently maintain national rail network

Lithuania's state-owned national railway operator, Lietuvos Geležinkeliai (LTG), transported 4.13 million passengers and 51.1 million tons of freight in 2021. Beyond transport, LTG Group is also responsible for maintaining Lithuania's rail network and related infrastructure. It is comprised of three main subsidiaries: LTG Link for passenger services, LTG Cargo for freight transportation, and LTG Infra, responsible for the maintenance and development of tracks, stations, and other infrastructure.

LTG recently began a major modernization initiative to transform all aspects of its business with digital technologies and approaches. Its IT department identified two strategic focus areas: standardizing and consolidating multiple Linux systems and establishing a robust foundation for its new SAP S/4HANA enterprise resource planning (ERP) system for railway management.

"LTG lacked a common IT architecture," said Marius Staponas, Head of IT, Lietuvos Geležinkeliai. "And without any integration, each new system operated as an isolated unit and added to the complexity that made management and security processes difficult. We needed common, standard infrastructure to support our business with more efficient, automated processes."

Standardizing management systems on SAP-certified platforms from Red Hat

Several teams at LTG were already successfully using Red Hat technology to support their operations and were impressed by the solutions' analysis and central management capabilities. Their testimonials made choosing new infrastructure solutions for LTG's SAP environment a quick process.

"What could have been a complex decision-making process became very simple," said Staponas.

"We already had recommendations from people who were big fans of Red Hat from existing projects, even some of our software vendors, so it was a natural choice."

Working with Red Hat and local partner Novian Technologies, LTG adopted Red Hat Enterprise Linux and Ansible Automation Platform to support critical systems such as traffic, electricity, and its in-house mobile network in a private cloud environment in its datacenter. Red Hat's Linux operating system pairs a consistent, security-focused foundation for enterprise workloads and systems with support for innovation using the latest developer tools and certified partner solutions. Closely integrated with this environment, Ansible Automation Platform provides reusable, agentless technology to simplify complex hybrid deployments and automate repetitive management tasks.

With plans to transfer less-critical systems and workloads to public cloud environments, LTG also adopted Red Hat Enterprise Linux for SAP Solutions, deployed on Amazon Web Services (AWS) through cloud provider Crayon. Certified for integration with SAP S/4HANA, LTG's ERP system, this solution provides the security, scalability, and reliability to support the requirements of SAP workloads. It adds Red Hat Enterprise Linux High Availability Add-On, Red Hat Insights for proactive monitoring and robust analytics, and Update Services for SAP Solutions to provide up to four years of support for select minor version releases of Red Hat Enterprise Linux. Most business units within LTG, such as LTG Cargo, are now using this solution, with current or planned cloud deployments.

"It was important for us to have the option to switch between cloud providers while keeping critical applications on premise," said Staponas. "The flexibility Red Hat gives us in the area will be important as more business units move to SAP."



Supporting critical operational systems with less management time and effort

Simplified ERP management with a unified multicloud platform

With a standard infrastructure foundation for consistent operations across its multicloud environment, LTG can now offload most management and security responsibilities to its cloud providers. The proactive monitoring and remediation provided by Red Hat Insights simplifies management of the organization's SAP environment and helps LTG protect its Linux environment from potential threats. This approach frees LTG's teams to focus on maintaining processes for critical, on-premise systems. They can also support evolving business needs and growth with new solutions, such as a new railway system management.

"We are not an IT company, so we rely on specialists to manage our datacenters and other system environments, no matter which cloud vendor we're working with," said Staponas. "And Red Hat has partnerships with most of the major providers, so we know we'll be able to maintain stable, consistent operations if we add or switch vendors."

Standardizing on supported enterprise technology has already improved system stability. For example, LTG's traffic management system has not experienced any major incidents since moving to the Red Hat environment, preventing any related impact to freight or passenger train schedules.

Reduced complexity and risk by automating routine processes

LTG's End-User Technology (EUT) and Cloud teams now use Ansible Automation Platform to automate a variety of processes, including provisioning, Linux patching, traffic management system configuration, and server configurations and deployments.

Compatibility between Ansible Automation Platform and the EUT team's Microsoft technology—including Active Directory, Teams, Graph, and more—also helps the team delegate repetitive tasks and manage schedules in its Windows-based environment. For example, using templated Ansible automation scripts, the EUT team can delegate tasks to first (T1) or second (T2) tier teams without requiring changes to privilege permissions that could create security risks. In addition, users can enter several lines of text through a Templates Survey to automate any of a dozen actions—without input errors.

"Ansible Automation Platform is saving us time by enabling staff to manage massive, complex workloads with just a couple of steps," said Staponas. "This simplicity has helped motivate our team to confidently do great work and explore new possibilities."

Gained certified, in-house Linux and cloud skills

To effectively support the Red Hat platforms now running LTG's critical operational processes, the organization engaged Red Hat Training and Certification to help its engineers learn and apply best practices. Completed virtually due to COVID-19 pandemic restrictions, the training gave LTG staff on-demand access to courses that helped them build relevant skills. Another key benefit was improvements to employee retention by giving staff opportunities to gain sought-after experience with the latest enterprise open source solutions.

"It's about confidence. We knew having a well-trained, capable workforce, including Red Hat certified engineers, was essential to our ongoing success with these new tools and environments," said Staponas. "The training Red Hat provided meant our staff could build their skills and immediately apply that knowledge to improving our operational systems."

About Novian Technologies

Novian Technologies is a critical IT infrastructure services company, providing consultation services for the establishment and implementation of digital transformation strategy, high-availability solutions, high-performance computing and cloud computing solutions, design, implementation and management of solutions, maintenance of critical infrastructure, and resilience services. novian.io

About Crayon

Crayon is a customer-centric innovation and IT services company. We provide guidance on the best solutions for our clients' business needs and budget with software, cloud, AI and big data. With a global team of accredited experts, we assist our clients with services to plan, rightsize, optimize, manage, and innovate their IT estates throughout the entire lifecycle. crayon.com/us/about-us/

Setting a new standard for IT operations

After successfully migrating its traffic management system to Red Hat, LTG now plans to move LTG Infra and its electrical management system to the new environment in 2023, followed by LTG Link and the rest of its operations in the near future.

"All of the feedback we have received so far on the new platforms has been very positive," said Staponas. "By establishing the right standards on trusted, well-known technology, procurement is much easier because suppliers understand our environment. Using Red Hat systems demonstrates that our sourcing and management processes are strong. The outcomes we've achieved now give us momentum to continue finding new ways to improve."

About LTG

LTG is Lithuania's state-owned national rail operator. The business comprises three main subsidiaries: LTG Link, which provides passenger services, LTG Cargo, which handles freight, and LTG Infra, which is responsible for the maintenance and development of tracks, stations, and other infrastructure. LTG handles most of Lithuania's rail operations and is one of the country's major national employers.



About Red Hat Innovators in the Open

Innovation is the core of open source. Red Hat customers use open source technologies to change not only their own organizations, but also entire industries and markets. Red Hat Innovators in the Open proudly showcases how our customers use enterprise open source solutions to solve their toughest business challenges. Want to share your story? Learn more.



About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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