

XM improves SQL Server resource use, maintenance with Red Hat platform solutions



Compañía de Expertos en Mercados SA (XM) operates Colombia's National Interconnected System (SIN) electricity group and wholesale energy market. To improve its application modernization efforts, XM adopted a new reference architecture that includes Microsoft SQL Server running on Red Hat Enterprise Linux and supported by Red Hat application and integration solutions, XM has significantly improved transaction response times while reducing server resource use and maintenance time.

Software

Red Hat® Enterprise Linux®
 Red Hat JBoss® Enterprise Application Platform
 Red Hat Fuse

Partner

Microsoft



Energy

241 employees

Benefits

- Achieved 3 times faster transaction response
- Reduced resource use by 30% per server
- Reduced administrator support and maintenance time by 60%

“We’ve seen that running our Microsoft server solution on Linux is an excellent choice, both on-premise and in the cloud.”

Leonel Alfonso Barrios Baños
 Digital Services Analyst, XM



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Optimizing IT performance to support energy business

Compañía de Expertos en Mercados SA (XM) is a Colombian company in charge of operating the country’s National Interconnected System (SIN) electricity group and wholesale energy market, as well as administering international electricity transactions with Ecuador. In 2010, XM and the Colombian Stock Exchange launched Derivex, a new system for trading energy derivatives, or contracts based on underlying energy assets such as natural gas, crude oil, or electricity.

To support its electrical energy business in Colombia, XM sought a way to better manage new market trends, such as renewable energy and distributed generation, as well as related marketing management for tasks like demand generation and market integration. XM decided to migrate its core energy platform through a renovation process that includes a new application architecture and infrastructure solution.

However, the operating system and platforms supporting XM’s database management system monopolized resources and lacked visibility, leading to complaints of slow performance and delays.

“We faced issues with the previous solution, caused by a lack of optimized databases and continuous patching of SQL Server,” said Miguel Cañas, Architecture Team Leader at XM. “We needed to develop and test applications faster and wanted to enhance server performance with automation.”

Adopting an enterprise Linux solution from a proven vendor

XM sought a proven, cost-effective operating system with a transparent roadmap and experienced support. Based on [energy sector case studies](#) and compatibility with its market management system, XM decided to adopt Red Hat JBoss Enterprise Application Platform (EAP) and Red Hat Fuse to support a new Microsoft SQL Server deployment on Red Hat Enterprise Linux.

Part of Red Hat Runtimes, Red Hat JBoss EAP is an open source Java™ Enterprise Edition (Java EE) application server used to deploy Java applications across IT environments, bridging front-end users and back-end databases. Red Hat Fuse is a universal integration platform that supports independent development of connected solutions across a variety of environments.

XM’s architecture team then learned about the benefits of the Linux operating system during several Red Hat events and decided to begin a pilot running SQL Server Enterprise on Red Hat Enterprise Linux, focused on analytics and reporting processes.

“Our technical team was excited to learn from Microsoft that Red Hat Enterprise Linux was compatible with SQL Server,” said Cañas. “Our main concern was how our databases would respond to the tests, because although they weren’t very large, some of them had grown organically and were not optimized as they grew. We’d also had some difficult migrations in the past.”

After a successful pilot, XM now uses its SQL Server database engine, running on Red Hat Enterprise Linux, on-premises and in its Microsoft Azure public cloud, to support development of database applications and microservices.

About Microsoft

Microsoft (Nasdaq "MSFT" @microsoft) enables digital transformation for the era of an intelligent cloud and an intelligent edge. Its mission is to empower every person and every organization on the planet to achieve more.

Optimizing resource use for faster, more efficient work

Achieved 3 times faster transaction times

With SQL Server running on Red Hat Enterprise Linux, XM's teams dramatically improved performance for its databases and systems. The company has achieved three times faster transaction response times. Additionally, XM has improved service availability.

"With SQL Server on Linux, we achieved workload performance that was significantly better than our previous operating system," said Leonel Alfonso Barrios Baños, Digital Services Analyst at XM. "A small, two-core unit performed the same work as a large, 18-core unit running on the other solution."

Reduced resource use

Migrating to Red Hat's enterprise open source operating system also helped XM optimize its resource use. Its compute resource use is now below 30% for each server. The service provider has also simplified and streamlined its operations to reduce staff resource needs.

"We've achieved a significant 60% cut in the number of support and maintenance hours performed by administrators," said Cañas.

Improved reliability

Supporting its database engine with stable, reliable enterprise open source technology has helped XM ensure consistent service availability.

Enterprise open source technology solutions from Red Hat, such as Red Hat Enterprise Linux, undergo rigorous testing and security-focused development review to optimize community-developed code for critical business and IT capabilities. Red Hat product subscriptions include robust, expert product support, such as ongoing patches, bug fixes, and other security and performance updates.

"We are highly satisfied with the stability results we've achieved," said Vázquez. "We no longer need to constantly apply patches to keep our systems operational and keep our operating system from breaking down."

Finding opportunities to further improve IT performance

After its successful initial adoption, XM is considering expanding its use of SQL Server running on Red Hat Enterprise Linux in the cloud to support all of its databases. The service provider is considering adopting serverless applications to achieve greater scalability and flexibility at lower cost than traditional, server-based models.

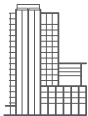
XM is now using its Red Hat infrastructure to support three new application renewal projects.

"We've seen that running our Microsoft server solution on Linux is an excellent choice, both on premise and in the cloud," said Barrios .

About XM

XM Compañía Expertos en Mercados S.A. E.S.P. is an affiliate and full subsidiary of ISA, a Colombian state-owned electric energy transmission company. XM specializes in real-time system operations, including planning, design, optimization, setup, operation, and administration of transactional systems and technological platforms, which involve the exchange of information with added value and exchange in markets for related goods and services. XM offers services in three areas: energy, finance, and transportation. In the electric sector, the company operates Colombia's National Interconnected System (SIN) and manages the domestic wholesale energy market. Through its subsidiaries, XM also takes part in the traffic control center of intelligent mobility system Medellín and operation of the administrator for the local stock exchange energy derivative market.

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 integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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