

IFREM MODERNIZES REAL ESTATE SERVICES WITH RED HAT



SOFTWARE

Red Hat® Enterprise Linux® Server

Red Hat Enterprise Linux Resilient Storage Add-on

Red Hat Enterprise Linux Smart Management Add-on

Red Hat Directory Server

Red Hat JBoss® Enterprise Application Platform

Red Hat Virtualization

Red Hat Satellite

SERVICES

Red Hat Consulting

Red Hat Training

The Instituto de la Función Registral del Estado de México (IFREM), the government entity responsible for real estate registry in the State of Mexico, relied on inefficient manual processes and IT infrastructure that delayed services and created security risks. To modernize its IT and processes, the institute migrated to flexible, stable infrastructure from Red Hat—including Red Hat Enterprise Linux Server and Red Hat Virtualization. With this new foundation, IFREM can launch innovative digital services and respond to users faster. Modernizing has also helped IFREM reduce costs and triple its transaction volume, increasing revenue.



GOVERNMENT

576 EMPLOYEES
19 REGISTRY OFFICES

“Online service delivery through our website and notary portal has been one of the key improvements. Being able to access information remotely helps customers save significant time and resources.”

TANIA LUGO
MANAGING DIRECTOR, IFREM

BENEFITS

- Improved user experience with 95% reduction in response time and launch of innovative digital services
- Reduced risk, errors, and downtime by automating processes and improving connection redundancy
- Increased revenue by tripling transaction volume and decreasing overall operating costs by 30%



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SLOW, COMPLEX PROCESSES AFFECT PUBLIC PERCEPTION

Mexico's most populous state, the State of Mexico, is home to more than 16 million people and covers 22,000 square kilometers. In this state, the Instituto de la Función Registral del Estado de México (IFREM) is responsible for the registry of real estate and property. IFREM validates and certifies legal processes related to real estate transactions, as well as registering all mortgages and property sales. More than 700 employees and approximately 800 notaries use its offerings to provide services to citizens who own, buy, or sell property—around one million people each year.

As part of a modernization initiative, IFREM reviewed its processes and found that most were completed manually, and all information related to public deeds was stored in physical files. It also discovered that customers found its services—such as obtaining real estate certification—to be extremely slow and complex, especially because completing transactions required an in-person office visit.

At the same time, IFREM was experiencing issues with its system for processing the public property registry, including frequent downtime and latency. These challenges further delayed response times and exposed unstable infrastructure to greater risk.

To solve these performance issues, IFREM decided to undergo a digital transformation by modernizing to a stable, reliable IT infrastructure with automated processes, an up-to-date and protected database, and better redundancy for critical connections. This new system would help IFREM respond to users faster, deliver reliable applications, eliminate registry paperwork, and operate more transparently.

SUPPORTED OPEN SOURCE INFRASTRUCTURE

After evaluating several technologies and vendors, IFREM decided to use open source solutions from Red Hat to support its digital transformation. The institute based this decision on Red Hat's collaborative approach to working with customers, as well as lower operation and maintenance costs and better return on investment (ROI) than competing vendors' solutions.

Red Hat technology offers highly flexible integration to help the organization adapt existing business processes to meet new requirements. Red Hat also offered better reliability and support for IFREM's critical applications and systems compared to community open source software.

The organization worked closely with Red Hat Consulting to deploy several open source software solutions from Red Hat, including:

- **Red Hat Enterprise Linux Server**, a versatile operating system for hosting guests in dense virtualized environments on Red Hat Virtualization.
- **Red Hat Enterprise Linux Resilient Storage Add-on** to support storing application logs and data in a shared infrastructure available across multiple sites.
- **Red Hat Enterprise Linux Smart Management Add-on** to simplify system provisioning by working with Red Hat Satellite to manage infrastructure virtualization.
- **Red Hat Directory Server**, an operating system-independent, network-based registry that lets administrators centrally store user identity and application information.
- **Red Hat JBoss Enterprise Application Platform**, used to support improved response time and availability for IFREM's public website for property registration, titles, and taxes.
- **Red Hat JBoss Operations Network** to provide relevant application performance and behavior metrics for more effective planning.

- **Red Hat Virtualization** is a centralized management solution for virtualized Linux environments that easily integrates with other technology, automates high availability for clustered virtual servers, and creates abstraction for increased security.
- **Red Hat Satellite**, a system management solution that makes Red Hat infrastructure easier to deploy, scale, and manage to ensure systems are running efficiently, securely, and in compliance with various standards.

As part of this migration, IFREM also replaced its Oracle database with PostgreSQL, an open source database solution.

During the deployment, Red Hat certified engineers provided support for application development, deployment, and operations. In addition, IFREM engaged Red Hat Training to provide technology and best practice guidance to its IT staff.

“To understand our needs, Red Hat experts visited our facilities and observed our day-to-day work, identifying areas for improvement,” said Ivan Arellano, CIO of IFREM.

Working with Red Hat, IFREM successfully consolidated and migrated its legacy systems and isolated applications to a stable infrastructure that better supports its 659 services, with its main portal based on a Java™ application deployed in JBoss Enterprise Application Platform and JBoss Operations Network.

BETTER I.T. PERFORMANCE – AND COSTS

ENHANCED CUSTOMER EXPERIENCE

IFREM’s new Red Hat environment has increased system availability and performance to better support existing services and quickly launch new, innovative digital services that let users access information and request services through its website and applications.

For example, the institute has developed a new online payments application for nearly 150 different services, as well as a secure online notary portal. This portal, protected by password and digital signature access controls, provides legal and registration information to parties involved in real estate transactions. Using its modern Red Hat IT environment, IFREM has also created a free mobile alert service to send automatic notifications to property owners via email or text message, rather than requiring a time-consuming, in-person office visit.

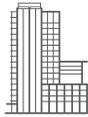
“Online service delivery through our website and notary portal has been one of the key improvements,” said Tania Lugo, managing director at IFREM. “Being able to access information remotely helps customers save significant time and resources, since the size of the State of Mexico causes delays to in-person service times.”

As part of these customer experience improvements, IFREM used its Red Hat software to automate processes, eliminating the need for interaction with a public officer or agent and providing predictable response times to users.

“The new system has reduced response times by 95%, and some processes have been shortened from two years to just a few days,” said Arellano. “We can also monitor the current step in the process, and offer better responses to different possible eventualities.”

BETTER RELIABILITY AND SECURITY

IFREM has begun replacing its paper records with a digital registry to simplify access to scanned books and paperwork and protect critical data.



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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In addition, the institute uses its new Red Hat environment to better verify credentials for data access through new methods, including biometrics, QR codes, and SMS alerts. Security has also been improved by implementing role-based access to specific functions and privileges.

In the past, system shutdowns led to frequent service interruptions. Now, the institute has created a disaster recovery plan that ensures continuity for critical operations.

Additionally, Red Hat's expert support helps ensure any issues are resolved quickly, compared to the self-service support required for community open source software. IFREM's staff meets regularly with the Red Hat team to review operations and discuss any issues or plans for new project or initiatives that could use Red Hat software.

REVENUE AND COST IMPROVEMENTS

IFREM has reduced its overall operating costs by 30%, including a 40% reduction in IT operating costs. Compared to proprietary options, Red Hat software requires less up-front expenditure by eliminating licensing fees and providing support for the use of cost-effective, industry standard hardware.

With deployment assistance from Red Hat Consulting and knowledge gained from Red Hat Training, IFREM's IT teams can now create and update innovative, digital services at lower cost and use resources more efficiently.

These cost reductions have helped IFREM focus more financial resources on developing and scaling services. With support from its stable, flexible Red Hat software infrastructure, IFREM has dramatically increased its transaction volume to meet growth in the state's property development. In 2013, 120,000 transactions were reported. In 2016, this figure tripled to 441,000 transactions.

These improvements have in turn generated greater revenue to help IFREM become a profitable government entity.

BUILDING CONFIDENCE THROUGH INNOVATIVE SERVICES

With more reliable IT infrastructure, IFREM has seen customers, internal business users, and other government institutions increase their confidence in its systems. The institute's business teams are more willing to create digitally enabled services, while end users have begun requesting more digital services and features.

Red Hat has become a strategic technology partner and trusted advisor for IFREM's digital transformation. The institute plans to continue working with Red Hat to finish digitizing all of its services and expand to more government institutions within the State of Mexico and other states.

As part of these ongoing efforts, the institute is currently formalizing a Red Hat Certification plan for its IT teams. IFREM also plans to research how to use its Red Hat environment to meet new challenges, such as adopting private cloud computing environments and providing mobile applications.

ABOUT IFREM

Instituto de la Función Registral del Estado de México (IFREM) is the government body in the State of Mexico responsible for keeping the registry of real estate and registering and certifying property transactions.

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