Jalisco, one of the most populous and economically vibrant of Mexico’s states, is leading the country’s innovation agenda, including the modernization of government services to make them more cost-efficient and agile. To support its application modernization and automation project, the Government of the State of Jalisco deployed several Red Hat technologies, including Red Hat Virtualization, Red Hat Enterprise Linux, and Red Hat JBoss Middleware. With deployment assistance from Red Hat Consulting and knowledge gained from Red Hat Training, the state’s IT teams can now create and update innovative, digital services faster and better meet peak traffic demand—at lower cost.

"We’re faster, more reliable, and confident our releases will work. Red Hat technologies have helped us develop more and better applications in less time, making a profound impact.”

ENG. JOSE ALFONSO FONSECA GARCIA
MANAGING DIRECTOR, INNOVATION AND DIGITAL GOVERNMENT, SECRETARIAT OF PLANNING, ADMINISTRATION, AND FINANCE, GOVERNMENT OF THE STATE OF JALISCO
“With the Red Hat solution, we can gradually scale up and grow in line with demand for our services. This capability is quite extraordinary, because we can add other solutions that permit further improvement of our services and building innovative applications.”

MASTER MARIA ANGELINA ALARCON ROMERO
DIRECTOR, TECHNOLOGY INNOVATION, SECRETARIAT OF PLANNING, ADMINISTRATION, AND FINANCE, GOVERNMENT OF THE STATE OF JALISCO

MEETING CITIZEN DEMAND WITH MODERN, DIGITAL SERVICES

Jalisco, one of the most populous and economically vibrant of Mexico’s states, is known as Mexico’s capital of innovation. A pioneer of Mexico’s National Digital Strategy, Jalisco’s state government is working to transform the delivery of public services for its more than 7 million citizens.

“Citizens demand more and better services, much faster,” said Eng. Jose Alfonso Fonseca Garcia, managing director of innovation and digital government for the Secretariat of Planning, Administration, and Finance of the Government of the State of Jalisco. “Our actions must be citizen-centric. We want to create a modern government, closer to the people, to help them better manage their lives. But like all governments, we have a tight budget.”

To accomplish this transformation, the Government of the State of Jalisco needed to ensure its departments have access to the necessary IT resources. However, the state’s IT environment was dependent on outdated, costly, and risk-prone proprietary software. To provide high availability to departments developing applications for the public, the state needed to standardize on a reliable infrastructure. The Secretariat of Planning, Administration, and Finance created an app modernization and automation project to modernize its IT infrastructure platform, which had not been updated for 15 years.

“We wanted a robust, secure, and highly reliable ecosystem that would help us improve our applications,” said Master Maria Angelina Alarcon Romero, director of technology innovation for the Secretariat of Planning, Administration, and Finance of the Government of the State of Jalisco. “We wanted to address security issues, as well as the high cost of licenses. Our infrastructure was obsolete, yet still costing us money.”

SUPPORTING INNOVATION WITH ENTERPRISE OPEN SOURCE TECHNOLOGY

As a result of previous experience with the inflexibility and high costs of solutions from proprietary vendors—such as IBM and OpenEdge—the Government of the State of Jalisco sought an open source solution for modernizing and automating its apps.

“We’re in an age of collaboration and co-creation. To be an innovator, we need direct access to the technology. With proprietary solutions, we felt we were excluded,” said Fonseca Garcia.

To collaboratively deploy an open source solution, the state turned to Red Hat. “With Red Hat, we saw a spirit of collaboration, backed up by high-quality information and the means to try out new products,” said Fonseca Garcia.

The state deployed several Red Hat products to support its modernization projects, including:

- **Red Hat Enterprise Linux**, a robust Linux operating system supported by enterprise-grade security.
- **Red Hat Virtualization**, a unified solution for complete virtualization of its servers.
- **Red Hat JBoss BPM Suite**, a middleware solution that supports automation, as well as development, deployment, and management of applications through business process management (BPM).
- **Red Hat JBoss Enterprise Application Platform**, a solution that simplifies deployment and provides full support for Java™ applications in any environment.
• Red Hat JBoss Fuse, a flexible integration solution for applications, data, and devices across the project’s IT environment.

• Red Hat JBoss Data Grid, a management solution for massive transaction volumes that provides rapid performance and real-time access to accurate information.

• Red Hat Satellite, a management solution for the state’s Red Hat Enterprise Linux environment and other Red Hat products.

The implementation was supported by Red Hat Consulting. “We worked hand-in-hand. Red Hat Consulting helped us find the right solutions while never losing track of the main project goals. Their experience guided us through the project and ensured its success,” said Alarcon Romero.

In addition, the Government of the State of Jalisco engaged Red Hat Training to ensure its IT staff gained knowledge on the new Red Hat environment. “Red Hat Training helps our staff specialize in the solutions and take full advantage of our Red Hat products. Training was a vital part of helping our people master the tools and quickly provide solutions,” said Fonseca Garcia.

As a result of its successful modernization, the Government of the State of Jalisco was named winner of the 2017 Red Hat Innovation Award for application optimization.

DIGITIZING GOVERNMENT TO IMPROVE I.T. PERFORMANCE AND COSTS

Faster, more accessible public-facing services

With the successful completion of its app modernization and automation project using Red Hat solutions, the Government of the State of Jalisco has improved online payment services for its citizens, such as tax-related services, digital signature collection, vehicle licensing, and traffic fines. For example, citizens can now pay road taxes or traffic fines, order birth certificates, or electronically sign receipts from one online location.

“Adopting Red Hat has allowed us to provide a wide range of services to all our users, from mobility, public safety, and revenue collection to environmental issues,” said Fonseca Garcia.

The state has also increased the number of citizens served daily by 900%, from 3,000 to 30,000, while decreasing the number of trips citizens must make to government offices. In addition, a clearer record of correspondence makes audits easier.

“Citizens can access more reliable services in a timely manner. For example, the new system lets us send notice of a traffic infringement within three days rather than 120 days, and has helped us process over 1.2 million traffic infringement photos,” said Fonseca Garcia. “The whole impression is of a more efficient and effective government.”

Greater efficiency and scalability

Using Red Hat’s software solutions helps the state’s IT teams continue to innovate and update its online services and applications.

“We’re able to build more and better applications, much faster,” said Fonseca Garcia. “Our developers and internal users no longer have to worry about infrastructure. Red Hat’s software improves the reliability and availability of development tools and resources. We’re faster, more reliable, and confident our releases will work. Red Hat technologies have made a profound impact.”
In addition, the government can scale to add new services as needed to meet citizens’ demands. “With the Red Hat solution, we can gradually scale up and grow in line with demand for our services,” said Romero. “This capability is quite extraordinary, because we can add other solutions that permit further improvement of our services and building innovative applications.”

Rapid scalability of resources is especially critical during times of peak traffic demand. For example, during the first quarter of the year—the most critical operational months for online tax collection and citizen services—the state has processed 1,427,116 online finance operations. With an IT infrastructure based on Red Hat technologies, scaling to meet this massive, short-term demand is simple. “During tax collection months, we have up to 30,000 users on the system at the same time. We’d built an infrastructure to support that, even though it stood quiet for nine months of the year,” said Fonseca Garcia. “Today, we’re a lot more balanced and can scale up and down as needed for brief high demand and regular operations.”

**Improved IT costs and revenue**

By digitizing 60% of its services, the Government of the State of Jalisco has experienced a significant boost in revenue through more effective tax collection.

In addition, the state’s innovation and digital government department has cut costs by consolidating 10 servers down to six—with no negative impact on performance—using Red Hat Virtualization. As a result, infrastructure operational costs have been reduced by 60% and hardware costs have been reduced by 100%.

**MEETING CHANGING DEMAND WITH A FOUNDATION FOR GROWTH**

Working with Red Hat’s products and services has helped the Government of the State of Jalisco support its modernization agenda through innovative solutions and support for collaboration. “The impact of the Red Hat solutions has been amazing. They offer great improvements for government processes and public services, and we look forward to building more digital services,” said Alarcon Romero. “We plan to achieve 90% to 95% digital services by the end of this administration.”

With help from Red Hat, the state can continue to evolve its services to meet changing public demand and improve its citizens’ perceptions of government. “Citizens feel we are doing a better job as a provider of public services, and as a result they have more confidence in their government,” said Fonseca Garcia. “They are proud to be part of Jalisco.”

**ABOUT THE STATE OF JALISCO, MEXICO**

Jalisco, one of the most important economic actors in Mexico, is located in the western part of the country and possesses a territory of 78,588 square kilometers—a size similar to that of Czech Republic. With over 7 million inhabitants, Jalisco is the fourth most populous state in Mexico. About 60% of the population lives within the Greater Guadalajara Area, making it the country’s second-largest city after Mexico City.