

ARGENTINA'S MIGRATION DEPARTMENT UNIFIES NATIONAL SECURITY DATA WITH RED HAT



SOFTWARE AND SERVICES

Red Hat® CloudForms®

Red Hat Satellite

Red Hat Ansible® Tower

Red Hat Virtualization

Red Hat OpenShift®

Container Platform

Red Hat JBoss® Fuse

Red Hat Enterprise Linux®

Dirección Nacional de Migraciones de la República Argentina (Argentina's National Migration Department) sought to unify data from national and international sources—such as INTERPOL and other countries' governments—to better predict criminal threats from anyone traveling to or from Argentina and help migrant residents succeed. Working with Red Hat, the department created a private cloud migration analysis platform based on enterprise open source software. With this new platform, the department gained a consolidated view of a person's data, including information on attempted entry and potential criminal alerts. The National Migration Department can now more effectively use artificial intelligence (AI) insight to analyze potential threats and coordinate with security organizations.



NATIONAL SECURITY

350,000 EMPLOYEES
3,600 IMMIGRATION
OFFICES

"A country's security is priceless. Information helps us fight transnational crime and improve coordination with other bodies, even those in other countries."

OSMAR ALZA
DIRECTOR OF IMMIGRATION INFORMATION,
DIRECCIÓN NACIONAL DE MIGRACIONES
DE LA REPÚBLICA ARGENTINA

BENEFITS

- United disparate sources of migration data into a unified, easy-to-use interface for a comprehensive view of migrant information
- Securely integrated with other national security and intelligence groups, as well as international organizations, to ensure data accuracy
- Improved IT agility and costs by migrating from proprietary to open source technology



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“Analysts resolve cases quicker, with much better results. For example, Red Hat Virtualization has eliminated latency for network traffic, and reusing code dramatically reduces our development time. Reports that used to take 48-72 hours can now be produced in a day.”

JUAN CARLOS BIACCHI
GENERAL MANAGER,
INFORMATION SYSTEMS AND
TECHNOLOGY, DIRECCIÓN NACIONAL
DE MIGRACIONES DE LA REPÚBLICA
ARGENTINA

PROTECTING ARGENTINA'S SECURITY WITH DATA INTELLIGENCE

Dirección Nacional de Migraciones de la República Argentina (National Migration Department) controls entry and exit to the country, manages residence permits and migrant placement, and coordinates local and international data sources to help prevent criminal activity in the country and along its large border. In 2017, the country recorded 73 million border entries and exits and issued more than 250,000 residence permits—the highest number in South America.

“We provide services to everyone coming into the country, including foreign nationals and Argentinians who are returning home,” said Dr. Horacio José García, national director of migration at the National Migration Department. “We also channel migrants to areas where Argentina needs development.”

The department works closely with national and international security groups—such as the Federal Intelligence Agency, Argentina’s national security forces, and INTERPOL—to provide data on potential threats to national security. To operate effectively, the National Migration Department must quickly process and transfer large volumes of data.

“The effectiveness of each border check depends on handling data quickly and appropriately with many different sources and suppliers,” said Osmar Alza, Director of Immigration Information at the National Migration Department. “We have to be able to tell right away whether visitors or passengers have legal restrictions or criminal records.”

However, a large border and high levels of transit between many neighboring countries means records may inaccurately reflect a person’s stay, making it difficult to gain comprehensive visibility. The internet also generates massive volumes of unstructured data, and manual records made analysis reactive rather than proactive.

In 2016, Argentina’s new president mandated restructuring of the department and its resources to more effectively protect national security and better direct incoming talent using integrated analytic capabilities. To support these key missions, the department sought to create a single, user-friendly, real-time database for rapid analysis, effectively integrated with external data sources—including social media and other internet data sources.

CREATING A COMPREHENSIVE, UNIFIED DATABASE

As part of its digital transformation, the National Migration Department wanted to build a unified, private cloud data environment using open source technology. “The decision to migrate to open systems was not easy, because we have a history of proprietary systems and had adapted to them. But when we were looking at the the level of development we’d need to do, we began to think about what we’d need to support a collaborative, integrated development base,” said Alza.

The department decided to use enterprise open source platform, management, and automation software from Red Hat as the foundation of its Migration Analysis System (SAM). Working closely with Red Hat, the department deployed the following technology to create and support SAM:

- **Red Hat Enterprise Linux**, a foundation that helps standardize and virtualize servers, as well as providing interoperability with the department’s other applications.
- **Red Hat OpenShift Container Platform**, an enterprise platform based on Kubernetes and leading container technology for quickly building, deploying, and adapting container-based applications in private cloud environments.
- **Red Hat CloudForms**, a multicloud management platform for policy controlled IT self-service, including monitoring and change detection, that is integrated with Red Hat Ansible Automation for easy configuration.

- **Red Hat Ansible Tower**, an agentless IT automation platform that automates cloud provisioning, configuration management, application deployment, and intra-service orchestration.
- **Red Hat Virtualization**, a centralized, integrated infrastructure management solution for virtualized Linux servers, built with Red Hat Enterprise Linux and Kernel-based Virtual Machine (KVM).
- **Red Hat JBoss Fuse**, an integration platform that helps the department structure, connect, and manage information from a variety of sources.
- **Red Hat Satellite**, a system management solution that ensures Red Hat infrastructure is running efficiently, securely, and in compliance with various standards.

Red Hat provided best practices and troubleshooting assistance during and after implementation. “Red Hat has, of course, played a leading role in developing the solution with our technical team, but they have also been involved with our users,” said Juan Carlos Biacchi, general manager of information systems and technology at the National Migration Department. “We can benefit from their experience to maximize our results.”

SAM has debuted at the department to user acclaim for its unified, easy-to-use data interface, and the project’s success led to the department’s recognition as a winner of the 2018 Red Hat Innovation Awards.

OPTIMIZING DATA ACCESS FOR NATIVE AND INTERNATIONAL USERS

STREAMLINED DATA ACCESS AND DEVELOPMENT

With SAM, the National Migration Department helps users access more than 2 billion data assets through a comprehensive, simple interface. Red Hat Enterprise Linux and Satellite support reusable microservices and components, speeding deployment and management of code and services. Red Hat Virtualization ensures IT teams have access to resources, such as pooled servers, to further improve management and performance. JBoss Fuse provides centralized, unified access to a complete view of a person—including data on similar cases—for smarter, more efficient work.

“Analysts resolve cases quicker, with much better results,” said Biacchi. “Red Hat Virtualization has eliminated network latency, and reusing code dramatically reduces our development time. Reports that used to take 48-72 hours can now be produced in a day.”

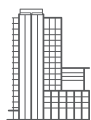
In addition, the department can efficiently develop for new use cases, such as biometric gates at airports, that ultimately help staff better protect national security with proactive data analysis. CloudForms supports parallel private cloud environments for development and testing, helping the department create these new features and receive feedback faster.

“We can now use different variables, parameters, and scenarios to better help security and intelligence teams decide whether or not to act,” said Diego Enríquez, general manager of information, analysis, and migration control at the National Migration Department. “We can also better channel foreign national talent to the best place based on their skills and needs, helping Argentina meet its goal of establishing itself globally.”

SECURE INTEGRATION OF SENSITIVE DATA

Data integration is critical to the National Migration Department’s mission of effective threat prediction. JBoss Fuse supports flexible integration with internal and third-party data sources and application programming interfaces (APIs), while CloudForms provides access control capabilities. Ansible Tower automates and simplifies these connections.

CUSTOMER CASE STUDY Argentina's migration department unifies national security data with Red Hat



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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"We can use our existing knowledge base to generate new reports and control access, empowering external users to complete document queries," said Biacchi. "We've also improved the quality of registration and sharing biometric information with other parties by using technology that is familiar to our staff and other groups."

The department has now integrated its Migration Aptitude and Admissions system databases with its passenger flight database, Argentina's national criminal records system, INTERPOL's database, and other countries' criminal databases. It now maintains a repository of around 160 million items, from legal restrictions to terrorist threats and criminal theft.

"A country's security is priceless. Imagine the potential cost of failing to detect a terrorist who subsequently enters the country," said Alza. "Information helps us fight transnational crime and improve coordination with other bodies, even those in other countries."

COST-EFFECTIVE FLEXIBILITY

By shifting from proprietary to open source software, the National Migration Department has improved predictive data analysis costs, including integration and management costs. The department can control costs while still providing essential services by using only the resources necessary and only responding to potential threats.

"Our platform gives full transparency to users into events and sources of information," said Alza. "Keeping the knowledge base in its original format eliminates translation costs and helps us cost-effectively collaborate."

FINDING NEW WAYS TO SUPPORT NATIONAL SAFETY AND GROWTH

Creating SAM with Red Hat software has helped the National Migration Department change how its data is used, making it more accessible and accurate. "Accurate information helps us prevent undesirable situations and be more efficient. The benefits we've achieved made it easy to convince authorities that this project has been a good investment," said Biacchi.

The department is now researching new ways to innovate, from moving to a hybrid cloud environment to creating a more detailed passenger record system.

"It's good for us to be in control. It means that everyone who is coming to Argentina is coming to do something positive. But how do we channel this flow of migrants?" said García. "We want to remain safe and show Argentina as a committed member of the international community."

ABOUT DIRECCIÓN NACIONAL DE MIGRACIONES DE LA REPÚBLICA ARGENTINA

The National Migration Office (DNM) is the government agency responsible for registering entries and exits of people, policing migration, and deciding on admissions to Argentine territory. It contributes to the country's safety and ensures regular, orderly, and secure migration processes, as supported by the United Nations Global Compact. In addition, DNM handles migration information requests made by agencies from different jurisdictions and countries. The National Migration Office intends to be an agile, modern, efficient, and transparent agency committed to the full integration of people and respect migrants' human rights in fair balance with national security.