CANARY ISLANDS GOVERNMENT MIGRATES TELECOMMUNICATIONS PLATFORM FROM VMWARE TO RED HAT

Gobierno de Canarias

SOFTWARE

Red Hat Enterprise Linux®

Red Hat Enterprise Virtualization

Red Hat® JBoss® Middleware

HARDWARE

HP BladeSystem

MIGRATION

The government of the Canary Islands upgraded its virtual platform to increase capacity—from seven virtual machines per physical server (1/7) to twenty-seven virtual machines per physical server (1/27).

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To meet growing demand for its services, the IT department for the government of the Canary Islands needed to expand and update its existing VMware virtualization environment. The new solution had to offer high performance, scalability, security, and operational efficiency. After an exhaustive research process, the IT department chose Red Hat® Enterprise Virtualization. In just four months, it successfully migrated 100 physical servers running approximately 1,000 virtual machines on VMware to Red Hat Enterprise Virtualization—all while keeping the department fully functional and without impacting users. This migration also improved the consolidation ratios of virtual machines per host, and resulted in budget savings of up to 70% compared to previous virtualization platforms.

Autonomous Community of the Canary Islands, Spain

NORTH AMERICA + GLOBAL

SOFTWARE INDUSTRY

CUSTOMER SINCE
2011

"*Red Hat Enterprise Virtualization is certified with leading hardware and software manufacturers and offers the best security guarantees for our critical environments. Red Hat Enterprise Virtualization has provided us with specific, advanced features to help us manage our virtualized infrastructure more efficiently. Key factors for our decision to migrate to Red Hat Enterprise Virtualization were its cost-effective price point and its excellent performance in the industry.*"

ROBERTO MORENO DÍAZ
GENERAL MANAGER OF TELECOMMUNICATIONS AND NEW TECHNOLOGIES, GOVERNMENT OF THE CANARY ISLANDS

CASE STUDY

The administrative structure of the Canary Islands is composed of multiple ministries, each with its own IT department and computing resources. The General Office of Telecommunications and New Technologies manages telecommunications, information technology, and data communication for the Canary Islands. It handles all horizontal applications for businesses in the region. It also manages vertical applications and eGovernment services, and provides support for electronic processing, corporate websites, and third-party applications.

The main challenge facing the government was upgrading its existing VMware-based virtualization infrastructure, which could not keep up with the organization's growing workloads.

During the initial virtualization process in 2007, most of the physical servers were not equipped for virtualization. Over time, demand from applications hosted on virtual machines soared, resulting in an increase from two clusters and 40 hosts in 2007 to six clusters and more than 160 hosts in 2011. The government faced booming organic growth that led to an increase in virtualization investments and to uncertainty over total costs.

ENSURING BUDGET STABILITY WITH OPEN SOURCE ENTERPRISE SOLUTIONS

When considering options for updating its virtualization platform, the government of the Canary Islands found it couldn't meet new budget requirements while achieving high performance, scalability, security, and flexibility with proprietary virtualization solutions.

The government established two key goals:

1. Promote convergence between horizontal and vertical growth by bringing physical machines up to maximum capacity, thereby reducing the number of hosts, increasing efficiency, and reducing costs.

2. Adopt a virtualization solution that reduces the cost of ownership as much as possible without jeopardizing the quality of the service or the future continuity of the solution.

After evaluating several options, the government found that the Red Hat solution offered more capacity at an affordable price, along with professional service and uptime guarantees. Red Hat's proposal outlined cost savings of up to 70% compared to proprietary solutions, and allowed for a modernization plan that was perfectly tailored to the needs of the Canary Islands.

Red Hat Enterprise Virtualization ensured the financial sustainability of the government's IT platform in the medium and long term. The technology met all of the government's requirements, and it included full guarantees for upgrades, quality, and service.

The government was also a satisfied Red Hat Enterprise Linux and Red Hat JBoss Middleware user, so choosing Red Hat Enterprise Virtualization helped it standardize its existing technology.

THE FLEXIBILITY AND ADAPTABILITY OF OPEN SOURCE ENTERPRISE SOLUTIONS

The government of the Canary Islands conducted a series of tests to ensure that Red Hat Enterprise Virtualization fulfilled specific requirements, including avoiding being tied to suppliers with unpredictable costs or to technologies that could not evolve or might disappear.

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Other key reasons included:

- Red Hat's technological roadmap and ability of customers to influence it

- The predictability of an annual subscription model

- Red Hat's focus on open source technology

- The strength of Red Hat as a company

THE MIGRATION, ADOPTION, AND OPTIMIZATION PROJECT

The government of the Canary Islands created a joint team to handle migration, including people from the government's 24/7 management center, its trusted local technology vendor, and Red Hat staff. This team focused on four key areas:

1. Efficiency: Manual intervention created a higher human resources cost, given the size of the platform. Therefore, all tasks had to be automated to the fullest possible extent.

2. Business continuity: Recovery procedures were tested across the platform to prepare for disaster recovery capacity and reduction of downtime.

3. Independence: The government wanted complete independence from outside parties. Having knowledge of–and full control over–the implemented solutions were key to maintaining independence and easily coping with any incident. They invested in knowledge transfer sessions and in creating operational procedure manuals.

4. Evolution and optimization. Red Hat and the government of the Canary Islands agreed to collaborate regularly, with several sessions planned on an annual basis to help with the adoption, optimization, and evolution of the solution.

Once the deployment of Red Hat Enterprise Virtualization was complete, the government went from consolidation ratios averaging seven virtual machines per physical server (7:1) to a ratio of 27 virtual machines per host (27:1), along with a 10% savings in disk space, increased reporting capabilities, and an overall simplification of the architecture.

Teamwork was a key factor in the migration process. Government staff clearly communicated their needs and considered alternative solutions, new technologies, and working methods to improve efficiency. Red Hat consultants provided thought leadership and best practices for automating and optimizing data center processes. Their trusted local technology vendor guaranteed professional service at a local level, ensuring the speed and efficiency of the project.

As a result, the government's complex virtual infrastructure consisting of nearly 100 physical servers and 1000 virtual machines running on both Windows and Red Hat Enterprise Linux platforms was successfully migrated in just four months. Red Hat Enterprise Virtualization was also integrated seamlessly with the existing infrastructure thanks to the preliminary compatibility tests performed. The government avoided the costs of purchasing new hardware, thus dramatically reducing costs and achieving better operational efficiency and an improved service to citizens.

FUTURE PLANS

Collaboration with Red Hat helped the government of the Canary Islands develop strategic plans for its platform to ensure its future development with controlled and predictable costs.

As service demands from citizens continue to grow, the next steps for the Canary Islands government are to virtualize more workloads in an organized and planned manner by further reducing the 100 physical servers the government's infrastructure currently uses.

More innovation from the Red Hat technological roadmap is expected to be incorporated as a part of the subscription model, and will not include any additional unforeseen costs.

Likewise, teamwork will be maintained to improve operational efficiency so the government has all options open for adopting cloud-based computing models and will not be limited to using closed technologies with unpredictable costs.
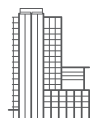
ABOUT RED HAT

Red Hat is the world's leading provider of open source solutions, using a community-powered approach to provide reliable and high-performing cloud, virtualization, storage, Linux, and middleware technologies. Red Hat also offers award-winning support, training, and consulting services. Red Hat is an S&P company with more than 70 offices spanning the globe, empowering its customers' businesses.

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