CASE STUDY

Intel® Xeon® Processor E7-8870
Intel® Xeon® Processor E5-5500

Healthcare
RISC Migration

More potential, less cost

Madrid Health Service migrates from RISC to Intel® Xeon® processor-based servers to support critical applications

The Madrid Health Service (SERMAS) is a division of Madrid Regional Government, created in 2005. It is responsible for managing regional policies regarding public health, drug abuse and other addictive disorders within the region. It also provides healthcare services to the region's 6.3 million residents.

SaludMadrid

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Ángel Luis Sánchez García
Head of Architecture and Standardization Services
Madrid Healthcare Services

CHALLENGES

- **Reduce costs.** In a complicated economic situation, SERMAS wanted to reduce its spending while improving the quality of service it offered.
- **Increase flexibility.** It needed an infrastructure capable of supporting applications from different vendors and able to grow without compromising service availability.

SOLUTION

- **x86 architecture.** For their reliability and robustness, SERMAS chose Fujitsu PRIMERGY* servers with Intel® Xeon® processors E7-8870 and E5-5500 to replace its RISC architecture.
- **New operating system.** Their existing operating system was changed to Red Hat Enterprise Linux* 5.5

TECHNOLOGY RESULTS

- **Improve performance.** In their internal tests SERMAS has been able to multiply its platform's performance by five[1]
- **Reduce costs.** The solution has driven a one-year return on investment that lowers the cost of hardware maintenance
- **Optimize space.** The new servers take up much less data center space than the old platform and provide cost savings too

BUSINESS VALUE

- **Cost efficiency.** New services can be developed with minimal investment – essential in a tough economic environment
- **Growth platform.** SERMAS can now support both short-term requirements and long-term expansion of services
- **Safe data.** Sensitive healthcare information and patient data are protected with advanced security features
- **Enhanced service.** Greater application reliability and availability enables physicians to offer more timely, richer service to patients

A mission-critical need

Since its founding in 2005, SERMAS has become one of the most respected and highly valued divisions of Spain's National Healthcare system. It regularly achieves outstanding results and is rated very positively in qualitative assessments by clinicians and patients alike.

The organization is committed to ensuring it stays at the forefront of its field. This means keeping a close eye on the resources that support the services it offers, making changes and improvements whenever necessary.

One of its most essential resources is the IT environment. Physicians and other staff use a range of applications and databases to access the information they need to give their 6.3 million patients the best treatment. It is SERMAS's responsibility to keep these mission-critical tools available to its 75,000 healthcare professionals across multiple channels.

SERMAS ran its IT environment on a RISC-based platform. However, as part of its strategy of ongoing improvement, it was interested to know whether any alternative platform was better adapted to its needs.

Leading Spanish healthcare provider cuts costs and creates a more flexible service platform with Intel® technology

It was imperative that the server platform offer strong performance and reliability, and SERMAS was also interested in any cost savings.

"SERMAS needs to be able to offer new projects and services to Madrid's residents," explains Ángel Luis Sánchez García, head of architecture and standardization services for Madrid Healthcare Services. "This means we need to carry out renovation work and improvements when our existing tools become obsolete or run out of capacity."

A simple migration

The organization took into account a number of criteria when seeking an alternative to its existing platform. These included:

- Cost of acquisition
- Maintenance costs for sustainable systems
- Energy savings to support a green datacenter
- System processing capacity
- Scalability of resources
- System availability
- Compatibility of the infrastructure with other technologies or systems
- Certification of software on a corporate basis

A particularly important requirement for the new platform is its compatibility with a wide variety of manufacturers and solutions. "We need to minimize our use of proprietary systems as much as possible since they could limit our options in the future and hinder evolution of our services," explains Sánchez García. It was also important that the new platform have the flexibility to be compatible with over 200 applications used across the organization, 80 of which are listed as mission critical.

Eventually, SERMAS decided to migrate to an x86-based platform based on FUJITSU PRIMERGY* servers powered by Intel Xeon processors E7-8870 and E5-5500 and running Red Hat Enterprise Linux. Sánchez García says: "Our internal tests showed that the Intel® processors had great power and reliability as well as offering huge operational cost savings. We also consulted references from other mission-critical environments, which were very positive." The fact that the applications were certified by their manufacturers for a variety of platforms was also an important enabler for the successful migration.

Visible results

In its internal tests, SERMAS found that the new platform increased its IT environment's performance fivefold, even for the most demanding tasks, while its smaller physical size enabled 80 percent savings in datacenter space and costs. In contrast, the increased capacity meant the new platform was ready to adapt comfortably to short-term requirements and to support long-term growth.

"Thanks to the standardization of the new platform, the migration did not have any special requirements for certification," Sánchez García adds. "We could update our software to the latest versions, taking advantage of their latest functionality and improvements. Application performance has improved noticeably which, in turn, helps improve user satisfaction."

He concludes: "The new platform gives us growth capacity, which is essential. Looking at data on the consumption of resources allows us to create new services without risking the availability and continuity of those we already offer. This can be achieved with minimal investment as well, which in the current situation of spending rationalization is a priority." Indeed, the new platform has driven a strong return on investment in its first year, lowering the cost of hardware maintenance.

Lessons learned

Making big changes can be daunting, particularly when they may impact essential organizational processes or applications. However, with the right ground work and close consideration, big changes can bring big benefits. By carefully assessing its own IT needs and environment, the Madrid Health Service was able to migrate from RISC to an x86 architecture based on Intel technology and drive significant cost savings as a result.

Find the solution that's right for your organization. Contact your Intel representative, visit Intel's Business Success Stories for IT Managers (**www.intel.co.uk/Itcasestudies**) or explore the Intel.co.uk IT Center (**www.intel.co.uk/itcenter**).

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