A community in the cloud

Castilla-La Mancha enhances services while saving costs with Intel and Cisco

The province of Castilla-La Mancha is famous as the erstwhile stomping ground of the most famous hero of Spanish literature, Don Quixote, and is one of the largest autonomous regions in the country, with an area of almost 80,000 km^2. Including its capital city, Toledo, the region has five urban areas, with the rest of its two-million-strong population scattered across its vast rural landscape. In fact, it is the most sparsely populated part of Spain, presenting a significant logistical challenge for the 68,000 employees of the regional government, which is responsible for delivering administrative, healthcare and education services to all inhabitants.

CHALLENGES

- **Better services.** Boost diversity of government services and make them available to inhabitants across the region
- **Multi-departmental collaboration.** Enable government departments to share resources for better cost and energy efficiency
- **Improve performance.** Ensure shared IT environment can support high user demand and varied service portfolio

SOLUTIONS

- **Virtual platform.** Shared cloud platform built on a virtual computing environment (VCE) from Intel, Cisco and others
- **Consolidated architecture.** 16 Cisco B200 M2* blade servers, powered by two Intel® Xeon® processors 5650, each support 70 virtual machines
- **High performance.** Virtualization-friendly features of Intel® technology optimize performance of the new system in real time

IMPACT

- **Reduced costs.** 48 data center sites consolidated into two, driving expected savings of EUR 400,000 (USD 550,000)
- **Simpler management.** New applications can be provisioned in eight minutes instead of days or weeks
- **New services.** Significant new projects are now possible – beginning with Papás 2.0* education portal, which already has over 7,000 users

Reaching wide

Castilla-La Mancha was eager to enhance the services it offered to local citizens, but at the same time it faced tightening budgets. This meant investment in any new resources had to be carefully planned for maximum return. Although the population of the region is widely spread out, a high proportion (95 percent) has access to broadband Internet, so the regional government decided to focus on developing its online capabilities to both enhance the quality of service and reduce operating costs.

"By using the cloud, we wanted to enable our residents to carry out more administrative tasks – such as paying their taxes or applying for a driving license – online, in a way that kept management time and cost low," explained Pedro-Jesus Rodriguez Gonzalez, head of IT and Internet for Castilla-La Mancha. "At the same time, we were developing a new portal called Papás 2.0, designed to unite over 100 educational sites from across the region and provide them with online learning tools and virtual classrooms."

Castilla-La Mancha

CISCO

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Head of IT and Internet,
Castilla-La Mancha

Intel and Cisco empower Spanish province to connect with rural inhabitants through the Cloud

Spotlight on Castilla-La Mancha

An autonomous region in central Spain, Castilla-La Mancha has a population of just over two million. Its principal city is Toledo, famous for its steel, while the region itself is associated with numerous symbols of Spanish culture, including vineyards, Manchego cheese and Don Quixote. With an area of around 80,000km^2, the region is split between vast plain and rocky mountain terrain.

To ensure the region was well positioned to build and evolve these and other cloud-based services, the team needed the right foundation. It identified four key requirements for the infrastructure it planned to build:

- **Reliable performance** that would deliver quick responses to any user request, even at times of very high demand
- **Simple virtualization** to enable easy centralization and management of over 700 government sites and services, from all departments
- **Power efficiency** that would both keep energy costs low and enable Castilla-La Mancha to meet its objective of being a green organization
- **Robust security** to protect the personal data of the many individuals using online services

Make it virtual

Castilla-La Mancha executives reviewed a number of options when seeking a solution to meet these pressing needs. It determined its requirements were best met by a VCE provided by a collaboration of leading providers including Cisco, VMware, EMC and Intel. Deployment was supported by Telefonica and a local systems integrator, Ermestel.

The new VCE is underpinned by 16 Cisco B200 M2 blade servers, each powered by two Intel Xeon processors 5650. These physical servers currently support 70 virtual machines, split into eight virtual data centers, one for each government department. "It's a complex virtual environment, and we demand a high level of flexibility and scalability from it," said P.J Rodriguez Gonzalez. "Having Intel technology at the heart of the new solution was an important success factor for us."

The team at Castilla-La Mancha recognized the capabilities of the Intel Xeon processor 5650 to address its four focus areas. "Its high performance is proven, so we were confident that it could support high user demand for our services without impacting response times or user experience, while the in-built Intel® Virtualization Technology enables us to integrate virtual machines across our environment, regardless of the hardware or software present," P.J Rodriguez Gonzalez explained. He and his colleagues also identified the energy efficiency benefits of Intel® Intelligent Power Technology, which enables them to scale power use up and down depending on demand. Not forgetting the importance of data security, Castilla-La Mancha is also using Intel® Trusted Execution Technology (Intel® TXT) and Intel® Advanced Encryption Standard Instructions (Intel® AES-NI) to create trusted virtualization pools and ensure ubiquitous encryption across the VCE.

Both Intel and Cisco worked closely with Castilla-La Mancha throughout the project, from initial design stage until completion, to ensure the new cloud environment was tailored to the organization's requirements. "Having both these industry experts on hand to share their expertise and consultancy was tremendously helpful," commented P.J Rodriguez Gonzalez.

A multi-purpose cloud

With the new cloud platform now in place, Castilla-La Mancha is well on its way to achieving its target of consolidating its 48 data center facilities into just two sites. By using virtualization and investing in fewer, more energy-efficient servers, it is expecting to see a total saving of EUR 400,000 (USD 550,000).

Moreover, with management of its data center resources now much simpler, Castilla-La Mancha can provision a new service in as little as eight minutes, where previously it could have taken days or even weeks. This means the IT administration team has seen much of its time freed up to focus on more innovative projects.

A case in point is the new Papás 2.0 portal, which already has more than 7,000 registered student users, 30,000 teachers and 16,000 parents. The virtual classrooms have proved very popular since they enable teachers to share content with pupils in remote areas and collaborate with colleagues across the region. By encouraging students to make use of IT in their studies, the portal is also helping improve their IT skills and enabling parents to keep better track of their child's progress.

As a next step, the region is already planning to implement cloud-based healthcare services and is running a pilot at one hospital. Upon the successful completion of this pilot, this initiative will be rolled out to hospitals, clinics and other medical sites across Castilla-La Mancha.
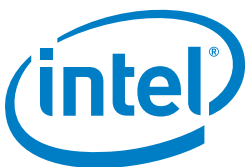
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