HP customer case study: Government agency improves services with HP BladeSystem
Industry: Government

Catalunya's government increases application reliability and reduces costs with HP.

Virtualization leads the way to big benefits

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– Daniel Crivillé Nogués, Department of the Presidency, Generalitat de Catalunya

Objective:
The Generalitat de Catalunya needed to replace its aging server architecture to enable applications to launch more quickly. HP BladeSystem portfolio coupled with VMware virtualization reduced energy costs, enabled faster application launching, and provided a more flexible IT infrastructure.

Approach:
The department uses the HP BladeSystem's virtualization capabilities in concert with VMware virtualization technology to consolidate its infrastructure and build a more flexible environment.

IT Improvements:
- New applications and servers can now be deployed in minutes, rather than in up to three weeks.
- The department has a more flexible infrastructure, allowing server resources to be assigned on an as-needed basis.
- IT staff productivity has been improved.

Business benefits:
- Power and cooling costs have been reduced.
- The department can more quickly launch new services.
- The department has saved on floor space.

Searching for ways to improve the delivery of services

The Generalitat de Catalunya is the 800-year-old governing body for the autonomous region of Catalonia in Spain. The government, which has its seat in Barcelona, provides public services for six million people related to education, healthcare, culture, trade, industry, transport, social welfare and housing.

The Department of the Presidency coordinates the work of all the ministries of the Generalitat de Catalunya, and also delivers services directly to residents of Catalonia. Its IT department uses more than a dozen small, customized applications, such as one that allows tens of thousands of young people to make hotel reservations for the summer months in Catalonia. The department's servers were aging, unreliable and expensive to maintain. Because of the lack of flexibility in our infrastructure, it was difficult for the department to deploy new applications.

"We needed to find ways to deliver better services," says Daniel Crivillé Nogués, Department of the Presidency, Generalitat de Catalunya.
"Having to support so many different small applications on aging servers was becoming expensive and difficult. It was also taking us too long to deploy new applications."

To solve the problem, the department turned to the HP BladeSystem and its virtualization capabilities in concert with VMware virtualization technology. The department can now deploy new servers and applications in minutes rather than in three weeks, as it took previously. It has saved in power, cooling, floor space, and maintenance costs, and can more easily manage its numerous small applications. In addition, it has seen a significant increase in IT staff productivity and has been able to add new services without having to add to staff.

"The BladeSystem has not only helped us reduce costs, but to deliver better services to the residents of Catalonia," Crivillé says. "And for us, delivering better services is the bottom line."

The Challenge: Consolidate servers, deploy applications and servers more quickly, reduce costs, and deliver services more effectively

The Department of the Presidency does not have any single, large application that it manages. Instead, it handles many relatively small applications, such as one that serves Web pages and another that manages Blackberry mail. Each application resided on its own server. It was costly and difficult to manage the 25 separate servers that the department was using. It took the department up to three weeks to deploy new servers and applications.

"Managing servers was taking far too much time," Crivillé says. "The servers were becoming very costly for us to maintain. We needed some way to cut down the amount of time it took to deploy servers and applications."

The applications handled by the Department of the Presidency don't always run throughout the entire year. Some of them are live for a brief amount of time, and when they are live, they require a substantial amount of resources. During the rest of the year, they need few, if any, resources. For example, the department runs an application one month of the year that allows young people throughout Spain to make housing reservations in Catalonia for the summer. For that one month, the application needs to have a great deal of computing resources devoted to it, but for the rest of the year, needs little. The department had no way to do this, and effectively manage server resources on an as-needed basis.

The department's servers were aging and unreliable. In addition, it was difficult for the department's small IT staff to adequately maintain 25 servers. As a result, the servers suffered from poor performance, and were prone to downtime. During those times, it was difficult for employees to do their job successfully.

"We had to find a solution that would allow the department to run more effectively," Crivillé says. "We couldn't keep operating in such an unstable environment.

The servers were expensive to maintain because of high power and cooling costs. In addition, the department was running out of space for servers. It was faced with the prospect of having to pay for more space for the servers, and also possibly having to run new power lines into its existing data center.

Staff time was expensive as well. The department's IT staff is small, and it was proving difficult to accomplish all the tasks it wanted to, because of the amount of time devoted to maintaining the servers.

"It wasn't cost-effective to keep the servers running," Crivillé says.
"If we wanted to accomplish everything that we wanted, we had to find a way to reduce our server-related costs, and the staff time we spent on them."

The Department of the Presidency standardizes on the HP BladeSystem and VMware virtualization technology

The Department of the Presidency purchased the HP BladeSystem, and uses the HP BladeSystem's virtualization capabilities in concert with VMware virtualization technology. By consolidating onto the HP BladeSystem, the department has been able to build a more flexible environment, reduce server space, cut heating and cooling costs, and improve server and application reliability.

"We looked at other solutions, but the HP BladeSystem was the best fit for our needs," Crivillé says. "The HP solution had more capacity and superior management capabilities. And the price/performance/power ratio was better than the competition."

The department purchased 45 HP ProLiant BL460c BladeSystem servers, and runs VMware to take advantage of their virtual server (or virtual machine) capabilities. The department can now deploy new applications in minutes, instead of up to three weeks. The IT staff can now easily create test builds of applications before launching new services.

The servers are connected to an HP StorageWorks Enterprise Virtual Array 4000 (EVA4000). Eventually, the EVA4000 will be used as the centerpiece of a disaster recovery solution. The department uses HP Systems Insight Manager and Message Oriented Middleware (MOM) to integrate servers with its ticketing tool. In addition, to manage its virtual environment, it uses VMware VirtualCenter.

Reliability has been improved; servers no longer crash. Costs have been significantly reduced because of the decreased power and cooling requirements. The department need not look for extra space for servers, because the BladeSystem has allowed it to consolidate server space. The cost of maintenance has gone down as well, because it no longer has to maintain as many physical servers. The department can more easily manage multiple applications, and can assign server resources on an as-needed basis.

"The HP BladeSystem has been a big win for us ," Crivillé says.
"We are a small department, but thanks to the HP BladeSystem, we have been able to accomplish everything we've set out to do."

Customer solution at a glance

Primary applications
Government services

Primary Hardware

- HP ProLiant BL460c BladeSystem servers
- HP StorageWorks Enterprise Virtual Array 4000 (EVA4000)

Primary Software

- VMware virtualization technology
- HP Systems Insight Manager
- Message Oriented Middleware (MOM)
- Windows Server 2003
- Windows Server 2000
- VMware VirtualCenter
- Linux

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