EDUCATION

- **CLIENT**
  Universidad Popular Autónoma del Estado de Puebla (UPAEP)
- **CHALLENGE**
  Comply with new personal data protection legislation, while increasing IT security, resilience, and application performance
- **SOLUTION**
  Vblock System 300
- **RESULTS**
  Full legislative and security compliance, 150 percent improvement in capacity, and server provisioning improved from hours or days to approximately 30 minutes

MEXICAN UNIVERSITY IMPROVES IT SECURITY AND RESILIENCE

VBLOCK VIRTUALIZED DATA CENTER GIVES UPAEP ASSURED COMPLIANCE AND BETTER ALL-ROUND PERFORMANCE

Universidad Popular Autónoma del Estado de Puebla (UPAEP) is a private, nonprofit university serving around 15,000 students in the state of Puebla in east central Mexico.

With the introduction of new personal data legislation, the university recognized the need to rapidly review its data center arrangements and improve security.

VCE was the only vendor that could provide a completely off the shelf data center infrastructure, with the required performance and resilience, through its Vblock™ System product.

The implementation of the new virtual data center has fully resolved the security issues that UPAEP faced, as entrance to the facility is restricted and all data is copied automatically to a remote disaster recovery site. The faster provisioning of new computing resources has improved overall application performance and speeds across campus. Former problems with the UPAEP ERP application server, for example, have been resolved by doubling its capacity.

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— Javier Corte Spínola
General Director of
Technology Platforms
UPAEP

Challenge

As with any higher education establishment, UPAEP handles a significant amount of students' personal data, along with information dedicated to faculty and research applications. In addition, the university's data center hosts vital systems such as web servers, video feeds from security and surveillance IP cameras, and enterprise resource planning (ERP) applications.

However, the UPAEP campus-based data center had been falling behind. It comprised 23 physical servers, with an average age of six years (some up to 10-years-old), most of which had reached capacity. Its disaster recovery capabilities were limited, relying on tapes for backup. Furthermore, if a server failed, then another had to be procured and physically deployed in its place.

"Recovering data and applications was a difficult and time-consuming exercise," says Sergio Orozco Rivera, head of networks, computing, and telecommunications at UPAEP.

Solution

UPAEP reviewed a number of options, including an offsite hosted solution, but decided to retain the data center on campus in a more secure location and upgrade the technology. In terms of vendor selection, the team settled on VCE.

"We liked the idea of having everything in a single rack," says Javier Corte Spínola, general director of technology platforms at UPAEP. "We did a cost-benefit analysis over five to seven years and found the best return on investment was to move to a Vblock Systems cloud computing model. We asked for references, and they spoke for themselves."

UPAEP ultimately selected a Vblock System 300, combining Cisco Unified Computing System™ (UCS®) B-Series blade servers and converged network fabric with EMC VNX Series unified storage, and VMware vSphere virtualization software. Within this physical infrastructure, more than 35 virtual servers run Linux operating systems, such as Ubuntu, and Microsoft operating systems including Windows 2003 and Windows 2008.

The Vblock System also supports mSQL and Progress databases, although UPAEP is in the process of migrating to Oracle database systems, which will be moved onto the new platform. Finally, security is provided through Apache firewalls and RADIUS authentication servers. The Vblock System additionally hosts all video streams and applications relating to the university's physical security systems.

Results

New virtual servers can be provisioned in around 30 minutes, compared to several hours or even days using the previous physical infrastructure. This deployment has also achieved a step change in service restoration times and helped support the university during busy periods, such as the inscription time for new students.

In addition, the Vblock System gives UPAEP 150 percent more computing capacity than before, meaning the university's IT requirements can be comfortably met for the foreseeable future.

"We have been impressed with the ease of integration between these projects and the Vblock System," says Corte. Furthermore, although cost savings was not a principal factor in the decision to buy the new technology, the upgrade has greatly reduced cabling costs and administration effort. "The ease of management allows us to spend our time on other things," says Orozco. "That is a tangible benefit."

UPAEP is considering using the Vblock System to offer virtual desktop infrastructure to thin client end points via the university's Wi-Fi network. "Providing virtual desktops is easy with Vblock Systems," says Orozco, "and it's something the management team is considering for academic and administrative staff."