Virtual Desktops Empower Students at Leading Educational Institution

Sciences Po introduces Cisco Desktop Virtualization Solution to reduce costs and improve service delivery, while helping enable BYOD ethos

EXECUTIVE SUMMARY

Customer Name: Sciences Po

Industry: Education

Location: France

Number of Employees: 4000

Challenge

- Cope with bring-your-own-device trend among students
- Improve efficiency of IT service delivery
- Consolidate computing to reduce costs and improve sustainability

Solution

- Cisco Desktop Virtualization Solution, built on Cisco Unified Computing System with Intel® Xeon® 5600 series processors, running on Cisco data center switching platform

Results

- Uptime improved from 99.9 percent to 99.99 percent
- 80 percent server consolidation, plus reduced spend on network core and distribution layers
- Better application performance through enhanced load balancing and availability

Challenge

Established in 1872, the Paris Institute of Political Studies (Institut d'études politiques de Paris or, more familiarly, Sciences Po) is one of the world's most prestigious social science higher education institutions, traditionally educating France's political and diplomatic elite. Catering for such an exclusive student body poses a challenge in IT terms, however.

For a start, most students expect to be able to bring their own mobile and computing devices onto campus, and to use these to access Sciences Po systems and applications. At the same time, the students and faculty spend a lot of time working and publishing via web-based tools, and thus expect high levels of application performance and availability.

These circumstances were problematic for Sciences Po, given the relatively small size of its IT team and the limitations of its traditional data center technology. For example, deploying a physical server could take up to six weeks. The institution needed to upgrade its data center infrastructure to one that would support a secure bring-your-own-device (BYOD) ethos, while at the same time improving IT performance and helping enable easier delivery of services.

Efficiency was also important, given the restrictions of the Sciences Po data center facilities. Franck Epaillard, head of user services in the Sciences Po IT Systems Department, says: "The answer to these issues would be to provide people with a virtual desktop infrastructure to allow access on demand."

Solution

Sciences Po was already a fan of Cisco® equipment, relying on a Cisco Borderless Network with a Cisco Wireless Control System for connectivity across its numerous buildings and campuses. Cisco became aware of the data center challenges as part of its ongoing communication with the institution and with its systems integrator, Axians. A Cisco Desktop Virtualization Solution, based on the Cisco Unified Computing System (UCS), was suggested.

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Head of User Services
IT Systems Department
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The Institute used Cisco Catalyst® 4500 Series Switches and Nexus® 7000 Series Switches to connect its network to the data center, so when it decided to implement a Cisco Unified Computing System™ (UCS™) architecture, plugging the latter into two Cisco UCS 6100 Series Fabric Interconnects was relatively easy. In concert with this, Sciences Po deployed three blade chassis with a mix of UCS B250 M2 Blade Servers and B200 M2 Blade Servers, all equipped with Intel® Xeon® 5600 Series Processors.

Together with Citrix XenApp, UCS delivers virtual desktops to 1200 users, along with virtual servers for teaching and social sciences applications. Virtualization is enabled by Citrix XenSource and XenServer, Oracle VM, and VMware.

A host of other services run on the Cisco UCS platform, including print servers, Samba services, Apache web servers, Lightweight Directory Access Protocol servers, and Microsoft Windows 2003, 2008 R2, and SQL Server 2008 Enterprise Edition. Other applications virtualized on the UCS Blade Servers include Cisco Wireless Control System, LANDesk, and Microsoft Active Directory 2.

Results

Sciences Po has achieved desktop virtualization, class-leading enterprise application performance, server consolidation, and service-oriented infrastructure delivery. The deployment was carried out over the summer break and, to accelerate the transformation, Sciences Po chose the Cisco Unified Computing Support Service to help sustain performance and high availability.

Cisco UCS is the primary production platform with legacy servers retained as a secondary backup for added redundancy and fault tolerance. "We have already decommissioned 80 percent of our physical servers through server consolidation and virtualization," says Epaillard. "Our ultimate objective is to completely transition to a green data center using a highly efficient server set up with minimal environmental impact."

The Cisco Desktop Virtualization Solution allows Sciences Po to provision new desktops quickly and easily whenever needed, for example for students on short-term courses. Epaillard says: "The major advantages of Cisco UCS include ease of configuration, administration, and expandability. The technology provides added value and better performance for our applications by providing outstanding load balancing and availability."

Having a simpler architecture means Sciences Po no longer has to spend as much on technology. And at the same time, the IT department is able to deliver improved service to its users. "We've increased uptime by decreasing system failures," says Epaillard, "and thanks to the integrated auto recovery features and advanced system design, availability has improved from three nines to four nines. Meanwhile, the Cisco technology has permitted our IT staff to adopt a more flexible schedule between weekly rotations."

Next Steps

The move to Cisco UCS has helped Sciences Po progress towards a cloud-centered IT delivery model. Although a roadmap for full cloud deployment has yet to be established, UCS is an important step in that direction.

"The original question the institution asked itself was: how do we gear up our infrastructure and make it ready for virtualization and cloud based computing? The answer was Cisco," concludes Epaillard.

For More Information

To learn more about the Cisco architectures and solutions featured in this case study, please go to:

www.cisco.com/go/ucs

www.cisco.com/go/vdi

Product List

Data Center
- Cisco Unified Computing System (UCS)
  - Cisco UCS B250 M2 Blade Servers with Intel® Xeon® 5600 Series Processors
  - Cisco UCS B200 M2 Blade Servers with Intel® Xeon® 5600 Series Processors

Routing and Switching
- Cisco Catalyst 4500 Series Switches
- Cisco Nexus 7000 Series Switches

Fabric Interconnects
- Cisco UCS 6100 Series Fabric Interconnects

Network Management
- Cisco Wireless Control System

Cisco Services
- Cisco Unified Computing Support Service

Virtualization
- Citrix XenApp
- Citrix XenSource
- Citrix XenServer
- Oracle VM
- VMware

Applications
- Apache web server
- LANDesk
- Lightweight Directory Access Protocol server
- Microsoft Active Directory 2
- Microsoft Windows Server 2003
- Microsoft Windows Server 2008 R2
- Microsoft Windows Server SQL Server 2008 Enterprise Edition
- Print servers
- Samba

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