News Feed Item

University of Granada Uses Cisco Technology to Accelerate Teaching and Investigative Capacity

It Is the First Organization in the World to Use an Ethernet Network Designed for 160 Gbps Connectivity Using Cisco Catalyst Switches

BY **MARKETWIRE .**

JANUARY 16, 2013 08:00 AM EST

ARTICLE RATING:

MADRID, SPAIN -- (Marketwire) -- 01/16/13 -- Cisco (NASDAQ: CSCO) has announced that the University of Granada (Spain) has renovated its network infrastructure with the Cisco Catalyst® 6500 Series Switches. The upgrade incorporates higher-capacity processors and 40 Gbps Gigabit Ethernet connectivity cards in order to establish aggregated links and obtain a connection to the 160 Gbps nucleus of the network backbone. The university thus becomes the first academic organisation in the world to reach this capacity using Cisco Catalyst switches.

Thanks to this capacity -- up to 16 times as great as that of most other Spanish universities -- the University of Granada's researchers, students and personnel are able to access the teaching and research resources at maximum speed, making it easier for researchers to work uninterruptedly with centres located within and outside Spain. Offering new services with high bandwidth consumption but minimum latency, the network has been designed to take into account the requirements of high availability, fault tolerance and highly secure access to data, greatly optimizing reaction to contingencies.

The University of Granada comprises 70 buildings spread over eight campuses (five in Granada, one in Ceuta, another in Melilla and one virtual wireless one) interconnected by 2,000 kilometres of its own fibre optic cable. With approximately 85,000 users consisting of students and personnel, it is the third biggest university in Spain and the first to locate the network at the centre of its new development; in 2005 it had already migrated to ATM connectivity with 10 Gbps links, again based on Cisco Catalyst switches, and was the first Spanish university with wireless coverage for all its campuses.

Key Highlights

- The new-generation network -- known as RedUGRNova -- consists of Cisco® routing, switching and safety solutions, including: Catalyst 6500 Series Switches that were updated with Catalyst 6904 40 GE cards; Cisco Nexus® 5500 Series Switches to interconnect the two main university data centres and to unify the LAN and storage networks, including transport via Fibre Channel on Ethernet (FCoE); Cisco ASA firewalls; and the unified Cisco Prime Infrastructure management console. The Cisco Catalyst 6500 Series Switches also incorporate the Supervisor Engine 2T, that can increase the Cisco Catalyst 6500 advanced service modules which add capacities for

balancing load and monitoring traffic capability from 720 Gbps to 2 Tbps, quadrupling the number of devices or users that can connect to a network up to 10,000.

- These solutions allow the university to simplify control and resource monitoring at the same time as it provides internal support for the exponential growth in the number of users and high-output applications (HPC, or high-performance computing) requiring greater network capacity. Such HPC applications include cloud services, IP voiceover, high-definition videoconferencing, instant messaging, e-learning, digital library, Internet television (UGR Media) and storage on SAN networks.

- Likewise, the new infrastructure -- which supports the IPv6 protocol -- is designed to facilitate interconnection with the Pan-European research network GEANT via the IRIS-NOVA network, allowing them to work together uninterruptedly and with minimal latency between researchers from the different faculties and schools and other researchers all over the world.

- The project has been financed with funds from the European Union, while Acuntia, a Cisco Gold Certified Partner, has integrated the new network infrastructure in the University of Granada.

- Thanks to the deployment of its own fibre optic cable to interconnect

  all of its campus and buildings, thus allowing to set-up the network RedUGRNova, the University of Granada will obtain an estimated savings of approximately 100,000 euros per month according to its own calculations.

Supporting Quotes:

- *Antonio Ruiz, networks service and communications manager in the University of Granada*: "Cisco's technology means that we have a single network with maximum availability, scalability and safety all on our campus, enabling us to simplify integration of services, unify its management, and guarantee internal and external communications independently of the amount of bandwidth used now and in the future."

- *Marcos Jimena, sales director for Borderless Networks in Cisco España*: "We are delighted to help the University of Granada become a worldwide benchmark in terms of network capacity. Due to the criticality of its services and the need for high availability and redundancy in teaching and research projects, the new network is based on architecture involving a double chassis in each node, combining the power of the Cisco Catalyst switches with the innovative Cisco Nexus switching technology, benefiting both the University and its users as well as the associated research centres."

Supporting Resources:

- Download the whole of this success story about the project.
- Video that includes a technical demonstration of the project.
- More information about switches for campus networks and Cisco Data Center Solutions.
- Read the Cisco Borderless Networks blog.
- RSS Feed news from Cisco.

About Cisco
Cisco (NASDAQ: CSCO) is the worldwide leader in IT that helps companies seize the opportunities of tomorrow by proving that amazing things can happen when you connect the previously unconnected. For ongoing news, please go to http://thenetwork.cisco.com.

Contact:
Gemma Sahagun
PR Manager, Cisco Spain
+34 91 201 2622
gsahagun@cisco.com