

Digital superhighway connects Galicia with the world

Formerly hindered by low Internet access, an entire region of Spain gains high-speed Internet services



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—José Ángel Abeal Riveiros, CEO, Retegal

**HP customer
case study**
HP Technology
Services

Industry
Telecommunications

Objective

Raise rate of Internet access in the region of Galicia from 70 percent to 100 percent in four years

Approach

Engage HP Technology Services consultants as trusted advisors to guide development and deployment of a region-wide broadband network that enables telecoms to serve all residents

IT improvements

- Move from ATM network to MPLS-based infrastructure
- Achieve region-wide standard of 10 gigabits/sec
- Reduce ongoing cost of network operations
- Acquire state-of-the-art networking expertise and technologies

Business benefits

- Transform from ISP into operator of vendor-neutral network
- Enable private carriers to serve subscribers region-wide via network
- Open Galicia to European Market and global opportunities
- Increase citizens' access to education, jobs, health services and other advantages
- Improve economic growth and quality of life throughout Galicia



A land of rugged coasts, mountains and small cities in northwestern Spain, Galicia is a region whose traditions, culture and economy are rooted in its geography.

Most Galicians live and work near the coast. Residents of the region's mountain-bound rural communities tend to leave home for higher education and good jobs. Inland, the Internet has had little impact on ways of life and livelihoods. With a topography that obstructs long-distance signal transmission, the region ranked among the lowest in Spain in its rate of Internet access.

Galicia's economy has concentrated along its coastline, where cities grew around the region's traditional fishing and shipbuilding industries. Yet new sectors have emerged in recent decades. Galicia is home to the global textile giant Inditex. Rural growers are cultivating new markets for organic produce. And the Santiago de Compostela pilgrimage road has become a magnet for tourism.

Customer solution at a glance

Hardware

- HP FlexNetwork Architecture
- HP 8800 Router Series
- HP 7500 Switch Series

Software

- Network consulting services to plan, design and implement infrastructure include:
 - Planning workshop
 - Network Architecture & Design
 - Network Integration & Deployment

Determined to end the region's electronic isolation, Redes de Telecomunicación Galegas Retegal, S.A. (Retegal), a public utility and a subsidiary of the Regional Government of Galicia, is working with HP to build a region-wide broadband network that brings state-of-the-art telecom services to all 2.8 million citizens of Galicia.

HP: trusted partner for service transformation

Formerly, Retegal delivered voice, data, TV, radio, cable and mobile services over its large, heterogeneous ATM network. Envisioning a bold public-private partnership, Retegal decided to transform itself into the operator of a vendor-neutral broadband infrastructure based on MPLS technology.

Retegal's new network would enable such telecom providers as Iberbanda, Telefónica and R Cable to provide broadband services without taking on the costs and risks of building a backbone across Galicia's challenging terrain.

"In 2009, we confronted the problem that only 70 percent of our population in Galicia had access to broadband Internet," says Retegal CEO José Ángel Abeal Riveiros.

As part of the Galician government's four-year, €81 million economic development plan, Retegal gained funding to build a new broadband infrastructure.

Retegal's networking experts collaborated with HP Technology Services consultants to plan, design and implement the region-wide network, which is based on robust, high-performance HP 8800 MPLS routers and HP 7500 switches.

"Trust is fundamental to Retegal when choosing a business partner," says Abeal. "We have worked with HP often and have high regards for both its technologies and services. As a trusted technology company with state-of-the-art networking products and expertise, HP was the ideal partner for this major project."

17.3 percent growth in Internet access within 14 months

Within 14 months of working with HP, Retegal has already achieved substantial progress toward its four-year goal to advance Internet access in the region from 70 percent to nearly 100 percent.

"We've implemented about 80 percent of our new network," says Abeal, "and 400,000 people in Galicia have gained broadband access, a year-over-year growth rate of 17.3 percent. By 2013, we expect 94 percent of our population to have broadband access through this network. We will connect the rest of the users in remote areas not served by MPLS technology via satellite."

The new infrastructure has the bandwidth, availability and adaptability that telecom providers require to deliver high-quality services to geographically isolated schools and homes as well as businesses with ever-higher bandwidth needs.

This technology transformation promises to reverse the region's decline.

"All businesses and schools in the region will gain access to high-quality Internet services," says Abeal. "Such access will make a tremendous difference in education and the economy. Fewer young people will have to travel elsewhere to study or find jobs. Families will be able to access important government health services. And our hotels, factories and farms can more fully participate in global and European Union markets."

HP collaboration broadens vision, deepens expertise

Retegal chose HP as its networking provider through an open RFP process.

"The HP proposal provided advanced networking technologies that could deliver higher capacity and availability than we requested while lowering our ongoing operating costs," says Retegal Technology Manager Juan Luis Buján.

As part of the proposal, a team of HP Technology Services consultants and a project manager would collaborate with Retegal from envisioning and designing the network to installing it and conducting a smooth transfer to the new infrastructure.

"Throughout our project, Retegal's technology services professionals and the HP consultants interacted as peers. Our close collaboration and the continuity of HP project management ensured that all parts of our large and complex network would work together as a whole."

Juan Luis Buján, Technology Manager, Retegal

"We determined that the best proposal for us was from HP," says Abeal. "We had worked with HP on other projects, including the installation of new switches and routers on our ATM network. We had confidence in both the knowledge of HP people and the quality of HP networking technologies."

The new infrastructure had to guarantee the SLAs required by service providers, deliver 10 gigabits/sec for every point of network, and connect all areas of Galicia, including those never served before.

"We needed people who had deep knowledge of MPLS," says Buján, "and a broad vision of the state of the art in networking technologies and trends. We've gained this knowledge by working very hard with HP."

Forging a joint team

In October 2010, the HP team started working with Retegal. The HP project manager began by conducting a workshop with Retegal principals and HP networking consultants. The sessions forged a joint team and helped Retegal decision-makers define the service levels they wanted to provide their customers. These findings became the basis of a design that would not only deliver these services but also keep ongoing management and support cost-effective and efficient for Retegal.

Following the workshop, the Retegal-HP team developed the plan and architecture of the new network, which includes 18 HP 8800 series routers and 17 HP 7500 series switches.

The HP consultants then devised a detailed design of its every switch and connection as well as a scheme to interconnect the existing and new infrastructures during testing and implementation phases.

“Working with HP, we interconnected our old and new equipment, and ran both infrastructures in parallel. We were able to switch off the ATM network and turn on the MPLS platform with no loss of service. We worked hard with HP to ensure a smooth switchover, and we achieved it.”

Juan Luis Buján, Technology Manager, Retegal

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While benefiting from the accountability of a single HP project manager, says Abeal, “Our HP team has been very flexible, providing us with specialized HP expertise, including experts in various technologies.”

Working closely with their Retegal colleagues, the HP consultants staged the new network at a Retegal facility and rigorously tested its performance. After thoroughly validating its integrity, the joint team turned to deployment.

As prime contractor, HP led and supervised its subcontractor, Inycom, in the installation of switches in 40 locations throughout the region, including many remote mountaintop sites.

“One of our primary decisions was to plan a seamless migration that maintained services without disruption,” says Buján. “Working with HP, we interconnected our old and new equipment, and ran both infrastructures in parallel. We were able to switch off the ATM network and turn on the MPLS platform with no loss of service. We worked hard with HP to ensure a smooth switchover, and we achieved it.”

Expanding broadband access fivefold within five years

Galicia is no longer in the slow lane on the digital superhighway. With 10 gigabits/sec as the standard, the new infrastructure increases the quality as well as the quantity of Internet access throughout Galicia.

“High-quality Internet access is going to make a big difference in our region’s future,” says Abeal. “When we began, we were in a bad position, with one of the lowest rates of broadband access in Spain. We’ve undertaken an ambitious plan to transform our level of service and we will keep working through 2013 to achieve our goal. At the conclusion of our four-year program, we expect all residents of Galicia to enjoy high-speed Internet services.”

The Retegal CEO values the part HP has played in this transformation.

“We needed to work with people who understand the various technologies associated with this kind of network,” says Abeal, “people who could bring us a global vision of how these technologies work as a whole. HP experience and expertise guided us in developing our vision as well as meeting its specific technology requirements.”

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