

# Enhancing Global Business Capabilities with Reliable SAN Switching



Banco Bilbao Vizcaya Argentaria, S.A. relies on the Cisco® MDS 9710 Multilayer Director SAN switches to keep pace with rapid growth without worry.

## EXECUTIVE SUMMARY

**Customer Name:** Banco Bilbao Vizcaya Argentaria, S.A.

**Location:** Madrid, Spain

**Employees:** 138,000

### Business Challenge:

- Keep pace with rapid expansion of banking services and locations
- Ensure easy connectivity and interoperability between new and existing director switches
- Maintain high availability and performance for critical banking operations

### Network Solution:

- Cisco MDS 9710 Multilayer Director
- Cisco MDS 9250i Multiservice Fabric Switch
- Cisco MDS 9500 Series Multilayer Directors
- Cisco Prime Data Center Network Manager

### Business Results:

- Achieved high reliability, longevity, and return on ROI
- Simplified management of multiple SANs and SAN fabrics
- Gained 16-Gbps capacity for meeting future needs

## Business Challenge

Banco Bilbao Vizcaya Argentaria, S.A. (BBVA) provides a comprehensive range of retail banking, wholesale banking, asset management, and private banking services. Headquartered in Madrid, Spain, the bank supports operations in Spain, Mexico, Argentina, Chile, Colombia, Paraguay, Peru, Uruguay, Venezuela, the United States, and Turkey. Always looking forward, BBVA has pursued a steady path of growth and acquisition. At the same time, the bank is continually adapting to deliver outstanding customer service, whether for banking in person, by telephone, using mobile devices, or online.

Growth and a multichannel business model have increased demand on the bank's SANs and applications. Client applications, online banking, branch location applications, and investment banking processes all rely on SAN resources. BBVA had upgraded its primary data center in Spain in 2011. A new TIER IV datacenter was constructed in México during 2015. Moreover, BBVA will soon expand its existing data center footprint in Spain and Mexico, adding a second TIER IV data center in each location. The existing data centers had previously deployed Cisco MDS 9500 Series Multilayer Directors, and the switches delivered reliable, high performance ever since.

“As we added new data centers, we wanted SAN switches with the same robust architecture,” says Luis Sánchez Vidal, Engineering–Architecture & Global Deployment, IAAS & Open System Storage Management at BBVA. “We chose Cisco MDS 9710 Directors because they provided easy connection and high interoperability with our existing SANs and offered numerous innovative features.”

## Network Solution

BBVA deployed Cisco MDS 9710 Multilayer Directors in both new data centers in Spain and Mexico. The 9710 meets demanding performance requirements while simplifying management. It transparently integrates Fibre Channel, Fibre Channel



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Luis Sánchez Vidal  
Engineering-Architecture & Global Deployment,  
IAAS & Open System Storage Management,  
BBVA

over Ethernet (FCoE), and IBM FICON, enabling the same architecture to be deployed across different SAN environments. BBVA deploys three SANs: FICON, open systems, and a dedicated SAN for an investment banking application. Each SAN has either a core-edge or a collapsed core-access architecture with two fabrics for failover. The architecture is also standardized globally.

The 9710 supports 2, 4, 8, and 16-Gbps and 10-Gbps ports on a Cisco MDS 9000 48-Port 16-Gbps Fibre Channel Switching Module for both open systems and FICON environments. BBVA uses 16-Gbps links to interconnect switches between data center rooms and deployed 8-Gbps connections to its existing Cisco MDS 9513 Directors. BBVA also uses FCoE technologies through Cisco Nexus® 5000 Series Switches at the first hop to unify and simplify the management of different vendors’ blade servers. With redundancy on all major components and the ability to perform nondisruptive software upgrades, the 9710 delivers high availability to help ensure that banking applications are always up and running.

BBVA uses the Cisco MDS 9250i Multiservice Fabric Switch for remote SAN extension with high-performance FC over IP (FCIP). The bank relies on this configuration for remote replication. It is currently used for SAN migrations too—such as the disaster recovery of Barcelona storage to Madrid data centers.

“We are heavy VSAN users, and Cisco gives us the capacity we need,” says Vidal. “Our main fabric includes 19 VSANs, and the Cisco MDS 9710 allows our virtual machines to have the same SAN attributes as physical servers.”

BBVA also uses Inter-VSAN Routing (IVR). Because VSANs are integrated into port-level hardware, any port in a system or fabric can be partitioned to any VSAN, giving the bank tremendous flexibility. At the same time, traffic is routed at line rate between any ports in a system or fabric without external routing appliances, reducing costs while maintaining high performance. With Cisco MDS 9710 Quality of Service (QoS) features, BBVA can easily manage bandwidth and control latency to prioritize critical traffic.

Since the original storage migration project in 2011, BBVA has taken advantage of Cisco Data Center Optimization Service for assistance with design and implementation plans. The service enables the team to move forward with confidence and minimize project risk.

Today, the 9710 Directors provide SAN switching for traffic across a multivendor SAN and storage environment. BBVA has deployed IBM servers, Oracle servers, HP and Cisco blade servers, and VMware/KVM virtualization, while data is stored across Hitachi, EMC, and NetApp storage systems. BBVA uses Cisco Prime Data Center Network Manager, a centralized management tool, to simplify management of unified fabrics and provide reporting, historical performance analysis, and log event registration. The bank also adopted Cisco UCS® Director to automate and simplify management of some multivendor and multihypervisor workflows.

### Business Results

“Our original Cisco MDS systems have run without disruption since their deployment,” says Vidal. “We’ve had the Cisco MDS 9513 platforms for 8 years, and we expect our Cisco MDS 9710 systems to last a long time as well, giving us extraordinary return on investment.”



## PRODUCT LIST

- Cisco MDS 9710 Multilayer Director
- Cisco MDS 9250i Multiservice Fabric Switch
- Cisco MDS 9500 Series Multilayer Director Switches
- Cisco Prime Data Center Network Manager



Scalability is also essential. With the ability to change line cards in the Cisco MDS systems, the bank can easily keep pace with growth.

“The Cisco MDS 9710 gives us flexibility for the future,” says Vidal. “We have numerous 8-Gbps connections now, several 16-Gbps interconnections, and we can grow as much as we need, when we need. We expect to require 40-Gbps FCoE capabilities sometime during the next few years, and the Cisco MDS will allow us to achieve that.”

The bank also has ambitious plans to accelerate the adoption of innovative technologies, improve collaboration between clients and employees, digitize its business, and operate global solutions. BBVA recently signed a strategic alliance with Cisco, allowing it to become its priority technology partner. Together, BBVA and Cisco will work together on key technology initiatives.

Software-defined networking (SDN) projects will enable virtualization across different parts of the bank’s infrastructure. Unified collaboration solutions will allow BBVA employees to access videoconferencing services from any device and location to increase productivity and enhance customer relationships. Finally, the bank intends to implement an integrated, global network that allows safe access to corporate tools from any device and location.

“The Cisco MDS 9710 Directors represent just one of many exciting steps that BBVA is taking to enhance global business with technology,” says Vidal. “We can’t wait to see what the future holds.”

### For More Information

To find out more about Cisco Multilayer Director switches, visit <http://www.cisco.com/en/US/products/ps5990/index.html>.

For more information about BBVA, visit [www.bbva.com](http://www.bbva.com).

This customer story is based on information provided by BBVA and describes how that particular organization benefits from the deployment of Cisco products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

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