

# Service Provider Builds SAN for Growth and Future Service Delivery

Customer Case Study



TOTVS chooses Cisco MDS 9710 Multilayer Directors to create highly scalable, flexible hosting infrastructure.

## EXECUTIVE SUMMARY

### Customer Name:

TOTVS

**Location:** São Paulo, Brazil

**Employees:** 10,000

### Business Challenge:

- Meet new scalability demands associated with growth
- Simplify SAN management
- Prepare to support Fibre Channel over Ethernet in future

### Network Solution:

- Cisco MDS 9710 Multilayer Directors
- Cisco MDS 9148 Multilayer Fabric Switches
- Cisco Prime Data Center Network Manager

### Business Results:

- Centralizing SAN infrastructure and reducing cabling costs by 30 percent
- Significantly scaling performance through high-density switch design
- Simplifying management across unified switch fabric

## Business Challenge

TOTVS provides a wide range of enterprise technology services, including software development, application hosting, cloud computing, and consulting services. Enterprises use the company's services to free themselves from technology concerns and focus on their primary businesses. Based in Brazil, TOTVS is that country's market leader and the sixth largest software company in the world, supporting more than 26,000 customers in 23 countries.

TOTVS' main data center hosts applications that are used by clients, such as TOTVS ERP and Fluig, a platform that allows clients to manage processes, documents and identity through a single interface. Fluig integrates applications including business process management, enterprise content management, analytics, mail, social media, web content management, and Fluig's secure identity management solution. TOTVS' SAN stores and switches 200 terabits of storage and is growing quickly as customers increasingly prefer to access and run applications in the cloud.

"Rapid growth is a certainty," he says. "As we upgrade our SAN infrastructure, we know that we'll need more scalability and flexibility than ever. When it was time to upgrade our SAN switches, our requirements were high performance, easy manageability, and the ability to eventually support Fibre Channel and Fibre Channel over Ethernet connections in the same switch."

## Network Solution

After briefly evaluating other options, TOTVS chose to deploy dual redundant SAN fabrics based on Cisco® MDS 9710 Multilayer Directors. The Cisco MDS 9710 systems are director-class SAN switches designed for deployment in large-scale storage networks to enable enterprise clouds. A comprehensive set of intelligent features on a high-performance, protocol-independent switch fabric meets



**“The Cisco MDS 9710 is a powerful switch that will enable us to scale quickly and meet our customers’ increasing demands. It gives us the ability to migrate our data center architecture to next-generation switching capabilities, adopt FCoE on the same switches when the time is right, and support more users on the same network.”**

Fernando Faustino  
Data Center Director



TOTVS’ requirements for uncompromising high availability, scalability, and simplified integration of new technologies.

“The Cisco MDS 9710 helps us meet our scalability goals with its high-density design,” says Faustino. “We are initially deploying the switches with 8-Gbps capacity, but the Cisco MDS 9710 ultimately gives us up to 24 terabits per second of Fibre Channel system bandwidth and 4/8/16-Gbps full line-rate Fibre Channel ports or 10-Gbps FCoE in a single chassis. We can get up to 1152 Fibre Channel ports in a single rack.”

High performance will meet customers’ needs today and tomorrow. The Cisco MDS 9710 architecture also provides 16-Gbps line-rate, nonblocking, predictable performance across all traffic conditions for every port in the chassis. High performance and scalability are sustained by redundancy on all major components, including the fabric card. Combined with nondisruptive software upgrades and stateful process restart and failover, the Cisco MDS 9710 is perfectly suited for TOTVS’ SAN core.

TOTVS chose Cisco MDS 9148 Multilayer Fabric Switches for its SAN edge. The Cisco MDS 9148 switches are optimized for performance while requiring minimal space. They include industry-leading SAN security to support compliance and regulatory requirements and are easy to deploy and provision. Once deployed, they require no training to operate.

TOTVS also uses Cisco Prime™ Data Center Network Manager (DCNM). The Cisco DCNM dashboard can manage systems spanning the Cisco Nexus® and Cisco MDS 9000 Families, regardless of protocol type such as Fibre Channel, Fibre Channel over Ethernet (FCoE), Ethernet, IBM Fibre Connection (FICON), and Small Computer System over IP (iSCSI). As TOTVS moves toward migrating its network switches to the Cisco Nexus Switch family, Cisco DCNM will allow the team to manage LAN and SAN fabrics in a single dashboard.

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### Business Results

“Once we fully implemented, we will have more capabilities with great economy of scale,” says Faustino. “We can cost-effectively add servers to support a growing portfolio of services and an expanding customer base.”

The new deployment is going smoothly. TOTVS is consolidating and centralizing its SAN infrastructure, which has simplified cabling complexity and reduced cabling costs by 30 percent. Fewer cards and chassis require less power and cooling, which Faustino expects to see reflected in lower energy costs.

SAN management will soon become easier too. With Cisco DCNM, the IT SAN and LAN teams can share the same management interface with other Cisco data center switches. And in the future, they will also be able to manage high-performance Fibre Channel and FCoE connectivity across a unified fabric.

**PRODUCT LIST**

- Cisco MDS 9710 Multilayer Directors
- Cisco MDS 9148 Multilayer Fabric Switches
- Cisco Prime Data Center Network Manager

**Next Steps**

As TOTVS anticipates much growth and success, the Cisco MDS 9710 systems will be there to help the company meet its customers' challenges and remain a leading provider of business services.

**For More Information**

To find out more about Cisco Multilayer Director Switches, visit [www.cisco.com/en/US/products/ps5990/index.html](http://www.cisco.com/en/US/products/ps5990/index.html).

To learn more about TOTVS, visit [www.totvs.com/home/us](http://www.totvs.com/home/us).

This customer story is based on information provided by TOTVS 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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