

European IT Supplier to Financial Services Industry Builds Highly Available Data Center

Summary

Company:

SIA

Industry:

Financial Services, Technology

Business Challenge:

- Upgrade its two data centers to ensure the highest level of business continuity for its customers
- Create a low latency, highly resilient and future-proof network, with significantly better performance than a traditional three-tier data center architecture

Technology Solution:

The solution was built using solutions aligned with Juniper's MetaFabric architecture vision:

- [MX960 3D Universal Edge Router](#)
- [QFX5100 Switch](#)

Business Results:

SIA has now been able to:

- Provide its banking and financial services customers across Europe with the highest levels of service performance and availability
- Operate more efficiently, without the need to reserve valuable network links for Spanning Tree Protocol
- Build a flexible operating environment with automation capabilities for greater efficiency

SIA is the European leader in the design, creation, and management of technology infrastructures and services for financial institutions, central banks, corporations, and public administration (P.A.) bodies in the areas of payments, e-money, network services, and capital markets. SIA Group provides its services in over 40 countries, and also operates through its subsidiaries in Hungary and South Africa. The company has offices in Milan, Brussels, and Utrecht.

In 2015, SIA managed the settlement of 9.9 billion transactions, 3.3 billion card transactions, 2.8 billion payments, 41.7 billion financial transactions, and carried 358 terabytes of data on its network.

The SIA Group is made up of seven companies. These are the parent SIA, the Italian companies Emmecom (innovative network applications for banks and businesses), Pi4Pay (advanced collection and payment services), TSP (front-end services for companies and P.A.), Ubiq (innovative technology solutions for marketing), Perago in South Africa, and SIA Central Europe in Hungary.

The Group, which has approximately 1,600 employees, closed 2015 with revenues of €449.4 million.

Business Challenge

SIA was looking to refresh the technology in its two data centers and wanted to improve on its traditional three-tier data center network architecture. The new network had to ensure extremely high network availability with resiliency for every possible failure condition, and provide very low latency to maintain reliable data replication between its mainframe computers.

As Emanuele Landini, network operation manager at SIA, explains: "The services we provide for our customers, such as online services connectivity, data transport, and monitoring of trading are critical to their businesses. It is essential that we maintain the highest levels of performance and availability across our entire infrastructure at all times."

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Flexibility and ease of upgrade to meet future requirements such as 100GbE port speeds were also a critical requirement for SIA. “We need to be able to support a mix of interface speeds and media types, 1GbE and 10GbE fibre and copper, for example, to connect to different systems such as servers, firewalls, and load balancers. We also need to be able to scale up to 40GbE uplinks between network layers, and support 100GbE in the future,” says Andrea Galeazzi, network services director at SIA.

It was also important that SIA find a proven solution, so one of its requirements of potential suppliers was that they could demonstrate their technical performance in a realistic proof-of-concept testing environment.

“The Juniper solution has given us a flexible operating environment with powerful automation capabilities. It really is a data center platform for the future.”

Emanuele Landini, Network Operation Manager, SIA

Technology Solution

TEXOR, Juniper’s local partner focusing on networking, security, application network services, and data access solutions, built a proof-of-concept laboratory in Italy to thoroughly test performance of a two-layer architecture in a risk-free environment, so SIA was confident it would deliver the required performance.

The test-bed included Juniper Networks® MX960 3D Universal Edge Router, to provide both core switching and data center interconnection, and Juniper Networks® QFX5100 Switch in a virtual chassis configuration. The MX960 provides greater than 10 Tbps of system capacity for mission-critical cloud and data center deployments, while the QFX5100 switches are high-performance, high-density platforms that are designed for top-of-rack, end-of-row, and spine-and-core aggregation deployments.

Following rigorous and successful proof-of-concept evaluations, SIA chose the Juniper solution to build a new two-layer data center architecture. SIA avoided the use of Spanning Tree Protocol (STP) in order to maximize the use of all available link capacity. It configured the network with an IP/MPLS backbone with traffic engineering (TE) to support multiple services, and to concurrently provision Layer 2 and Layer 3 services between locations for low latency traffic forwarding. The data centers

were interconnected in active/active mode to ensure the highest levels of business continuity for its customers.

Business Results

SIA can now provide its banking and financial services customers across Europe with the highest levels of service performance and availability. Its highly resilient new data centers are performing with low latency just as predicted by the tests in the proof-of-concept laboratory.

SIA appreciated Juniper’s commitment to the project. “We had complete commitment from Juniper and TEXOR, helping us design the best architecture, building a local proof-of-concept facility for us, and investing time and resources on site throughout the project. It was more of a partnership than a technology supplier relationship,” says Francesco Lanza, head of service line-connectivity network services at SIA.

And Emanuele Landini adds: “The Juniper solution has given us a flexible operating environment with powerful automation capabilities. It really is a data center platform for the future.”

Next Steps

As well as providing a highly resilient data center platform that can continue to scale, in the future SIA can use the Juniper solution to deploy Virtual Extensible LAN environments (VXLAN) and solve virtualized data center challenges such as distributed Layer 2 visibility and extended reach using Ethernet VPNs (EVPN).

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

To find out more about SIA services solutions, please visit www.sia.eu/en.

About Juniper Networks

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Corporate and Sales Headquarters
Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or +1.408.745.2000
Fax: +1.408.745.2100
www.juniper.net

APAC and EMEA Headquarters
Juniper Networks International B.V.
Boeing Avenue 240
1119 PZ Schiphol-Rijk
Amsterdam, The Netherlands
Phone: +31.0.207.125.700
Fax: +31.0.207.125.701

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