Cross-border cyber resilience· Secure site-to-site connectivity from Switzerland to Spain

Safeguarding operational technology (OT) systems for uninterrupted mission-critical infrastructure operations

▶ **About Axpo Systems**

Employees: 150
Footprint: 5 locations
Industry: OT solutions provider
SCIONabled since 2021
Product: EDGE

Axpo Systems, a leading operational technology (OT) solutions provider serving over 100 clients, ensures the safe operation of critical services through its SOC services. Due to its SOC's international footprint, Axpo Systems faced significant challenges in securing the operations of its OT solutions and preventing attacks from the Internet.

With the introduction of a SCION-based, Europe-wide SOC infrastructure, Axpo Systems now benefits from a secure, resilient, high-performance, and cost-efficient solution. The SCION solution meets the highest resilience and security requirements while simultaneously avoiding the use of expensive international leased lines or exposure of critical services on the public Internet through SD-WAN or VPN connections.

The SCION international network ensures multipath connections between all sites, seamless operations, and safeguards its SOC critical systems, such as the centralized monitoring and control of energy generation facilities across borders.

"By building international site-to-site connectivity based on SCION for our Security Operations Center (SOC) infrastructure, we've made our OT systems more secure and resilient, while achieving cost efficiency and simplified management. This solution benefits both us and our clients in mission-critical infrastructure, ultimately supporting the functioning of society. "

Manuel Dietrich
CTO of Axpo Systems

The challenges

Axpo Systems faced a significant challenge in establishing secure and reliable site-to-site connectivity between its Spanish site in Madrid and its headquarters in Switzerland.

These issues threatened the integrity of its mission-critical SOC infrastructure and OT systems:

- **Prime target for cyber threats:** As a provider of OT solutions, Axpo Systems' infrastructure is a high-value target for cyberattacks.

- **Increased vulnerabilities:** The reliance on traditional solutions like VPN exposed the organization to increased risks, including data breaches following ransomware attacks and service interruptions due to DDoS attacks.

- **High costs and complexity:** VPNs and private lines are expensive solutions that also increase management challenges and operational inefficiencies.

- **Connectivity and latency issues:** The Madrid-Zurich connection suffered from connectivity problems and high latency.

- **Risk of packet loss and lack of control:** There was a significant risk of packet loss, and there was no control over the data path, compromising data integrity and security.

The solution

To enhance the protection of its OT systems and sensitive data, Axpo Systems upgraded its international SOC site-to-site connectivity to SCION.

The setup

Site-to-site connectivity is achieved with Anapaya EDGE in Madrid connecting to Anapaya CORE in Switzerland. The deployment of the solution centered around three main points:

Connection setup
Axpo Systems' Madrid OT System monitoring is connected to the main network in Switzerland through an international provider that supports SCION technology.

Redundancy configuration
The previous VPN setup is kept as a backup to maintain uninterrupted service, with the possibility of adding more SCION providers later.

Last-mile connectivity
A separate Spanish provider manages the direct link from Axpo Systems' Madrid office to their network to eliminate the risk of a single point of failure.

Branch Spain

ISP

ISP

ISP

Main Office Switzerland
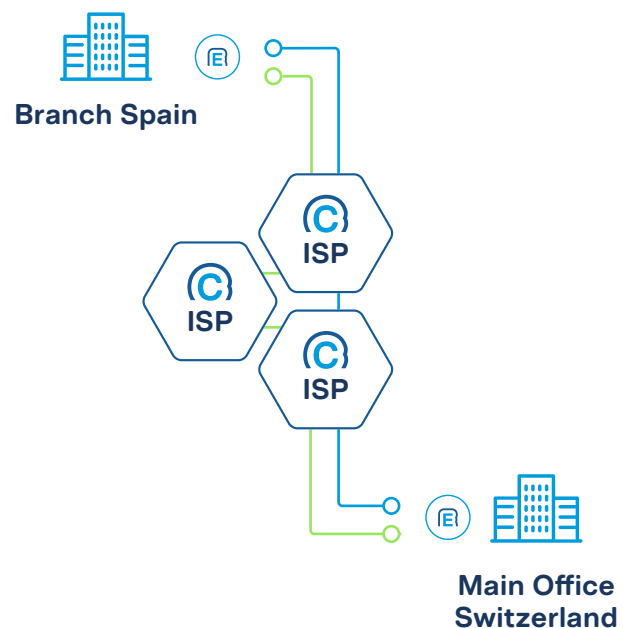
The outcome

The new SCIONabled international infrastructure provides the following benefits:

Secure and resilient global operations

Exceptionally high levels of security and resilience for its international site-to-site connections, ensuring seamless operations of critical OT systems.

Mitigation of cyberattacks

SCION reduces the attack surface by up to 99%, isolates the entire SOC operation entirely from the Internet, thereby preventing intrusion and DDoS cyberattacks while intercepting Internet-based attacks such as hijacking and leaks.

Enhanced data protection

Secure transmission of operational data (e.g., sensor data, control commands) across international sites.

Streamlined and centralized management

Ability to manage the entire infrastructure centrally from Switzerland, increasing efficiency and reducing complexity.

Operational Technology traffic is separated from Business IT traffic **for enhanced security.**

SCION link **is not visible** on the Internet.

Internet link can utilize SCION link for **additional redundancy.**

Increased cyber resilience of OT processes and **reduced operational risks.**

Securing the resilience of Axpo System's Iberian OT system outside the traditional Internet.

Book a demo today

Have questions? Contact us at **team@anapaya.net**