Resilient connectivity for the energy industry

Defend against DDoS and intrusion attacks with Anapaya GATE

Introduction to Anapaya GATE

Built on SCION, the next-generation Internet, Anapaya GATE secures critical energy infrastructure by hiding services from the public internet while ensuring users are able to connect to mission-critical systems. It adds an additional security layer to operational data and control systems making them resilient against cyberattacks. With Anapaya GATE, energy providers can safeguard smart grids, manage renewable energy sources securely, and maintain uninterrupted operations in a rapidly evolving threat landscape.

Challenges in the energy industry

As more and more energy infrastructures run services on the internet to offer remote access to technicians, connect smart meters (IoT) or manage distributed production (solar cells) and charging stations, new challenges arise, such as:

- **Vulnerability to cyber threats:** Critical energy infrastructure is increasingly susceptible to cyber attacks

- **Operational disruptions and safety risks:** Cyber-attacks can lead to severe disruptions and safety issues

- **Continuous monitoring and rapid response:** Essential to maintain the reliability and resilience of critical energy systems

- **Compliance with new regulations:** Meeting the stringent demands of new regulations requires advanced skills and strong cybersecurity practices

- **High operational costs:** Costs associated with legacy networks that do integrate poorly with new technologies and are costly to update and maintain

Benefits of Anapaya GATE

Reduced attack surface:
By making critical services invisible to unauthorized entities, Anapaya GATE significantly diminishes exposure to cyber threats, including DDoS and intrusion attacks.

Inherent security architecture:
Built on the SCION network architecture, Anapaya GATE provides a robust defense against potential cyber threats, addressing vulnerabilities present in today's Internet.

Optimized performance:
The solution optimizes network performance across metrics like latency, jitter, and drop rate, ensuring a seamless and efficient digital experience.

Uninterrupted operations:
Designed for resilience, Anapaya GATE ensures continuous operations even during disruptions to data access, maintaining consistent availability of critical services.

Regulatory compliance:
Offer data sovereignty by controlling data paths and access levels, energy companies can ensure compliance with regional data protection regulations, maintaining data sovereignty.

Easy deployment:
Anapaya GATE configuration is simple. No additional hardware nor new system to learn during implementation.

Use cases

Remote connectivity for maintenance and hybrid workers	Web-based platforms	IoT systems
Hybrid employees can securely access internal systems like ERP and intranet, or technicians can securely access critical infrastructure to perform maintenance tasks.	Protect online platforms that offer critical services to the public. For example, platforms which communicate power availability in crisis situations requiring inter-organizational coordination and communication to the general public.	Smart grids, renewable energy integration, predictive maintenance, and real-time monitoring depend on secure, reliable and high-performance communication networks.

Success story

Securing Axpo Systems' remote user access with Anapaya GATE powered by SCION

Axpo Systems, as a leading provider of OT solutions to its parent company Axpo Group and 100+ Swiss critical infrastructures, must ensure to its customers the security and reliability of its operating infrastructure, at all times.

How it works:

Axpo Systems' critical services, which employees and suppliers need to access to deliver OT services to their customers, are hosted on the SCION Internet and protected at their HQ server.

Once employees and suppliers connect through their home connectivity provider, their traffic is automatically redirected through the Anapaya GATE and enters the SCION Internet, where they can access the service without requiring any additional actions from the user.

The solution:

Axpo Systems replaced its VPN solution with Anapaya GATE on the SCION Internet, enhancing the security and cyber resilience of its network when accessed by home workstations and third-party providers.

Outcomes:

- **Secure connections** for remote workstations and third-party suppliers, ensuring enhanced data security.

- **Protection against attacks** with a reduced attack surface of up to 99%, preventing DDoS and intrusion attacks, and eliminating network-wide escalations.

- **Cyber resilience** with sub-second path switching in case of path failure or congestion.

- **Simplified monitoring** and quick response to network issues, providing peace of mind.

- **Cost-effective** compared to previous VPN solutions.

- **Reduced administrative** and operational effort, lowering overall workload.

- **Simple and scalable,** offering flexibility for future growth.

Anapaya GATE offers the energy industry a robust solution to enhance the security, reliability, and efficiency of critical infrastructure communications.

Learn how Anapaya can secure your energy operations

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

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