

# NS EDGE

## - White Paper Energy Sector -

**NS EDGE** has developed an advanced cybersecurity observability solution tailored for deployment in the energy sector. This solution utilizes machine learning algorithms and deep learning to analyze and correlate terabytes of NetFlow and SCADA logs from diverse sources. By automating threat detection and significantly improving mean time to detect (achieving real-time detection), it enhances the efficiency of security operations in the energy industry. Significantly, it accomplishes these capabilities while conserving computing resources and storage space.

### Relevance to Energy Resilience

As a Cybersecurity Observability Platform, NS Edge directly addresses the Energy Resilience Challenge. In an era of increasing digitization and interconnection within the energy industry, **cybersecurity observability is pivotal**. It serves as a vital tool to **mitigate risks and safeguard critical infrastructure**. By internally inspecting and understanding system states based on external outputs, cybersecurity observability plays a crucial role. This involves robust log analysis, encompassing NetFlow logs for network traffic insights and SCADA logs for operational data of energy control systems.

### Efficiency at Scale

We store enriched events not logs, reducing the volume up to **1:1000 ratio**

### Real-time Threat Detection

Instantaneous threat identification enables prompt response and mitigation, reducing the risk of data breaches.

## Competitive Advantages

### with NS Edge

- Scalability +50, 000 GB/ day
- Low processing power and memory
- Lower Total Cost of Ownership
- Stops threats before they compromise valuable data and assets
- Lower Carbon Footprint

# Technical Solution

## Data Handling for Energy Resilience:

NS EDGE employs a thoughtful approach to data handling pipelines and storage to **ensure data integrity and privacy**. It adheres to strict guidelines imposed by regulatory frameworks, such as transparent and consensual data collection and usage mandated by bodies like the Energy Regulatory Commission (ERC). Key principles guiding this approach include:

- **Storing Histories, Not Just Logs:** Providing human-readable narratives alongside machine-generated logs.
- **Enriching Data Close to the Source:** Real-time enrichment of data upon ingest for accuracy and efficiency.
- **Treating All Data as Security Data:** Recording key events from every application to protect against security threats.
- **Intelligent Data Pipeline:** Implementing an efficient data pipeline with a low Total Cost of Ownership (TCO).

## Predictive Analytics for Critical Hardware:

NS EDGE's platform includes predictive analytics capabilities to analyze and predict the behavior of critical hardware connected to SCADA systems. By processing vast quantities of logs, it **can identify anomalies in real-time**, indicating potential hardware failure or compromise. This pre-emptive action reduces downtime and potential damage, **enhancing system resilience**.

## Resource-Efficient Data Processing:

NS EDGE emphasises resource efficiency, requiring minimal computing power compared to traditional methods. Its algorithms achieve a remarkable compression ratio, condensing raw data into meaningful insights while maintaining data integrity and analytical accuracy.

## Data Handling for Energy Resilience:

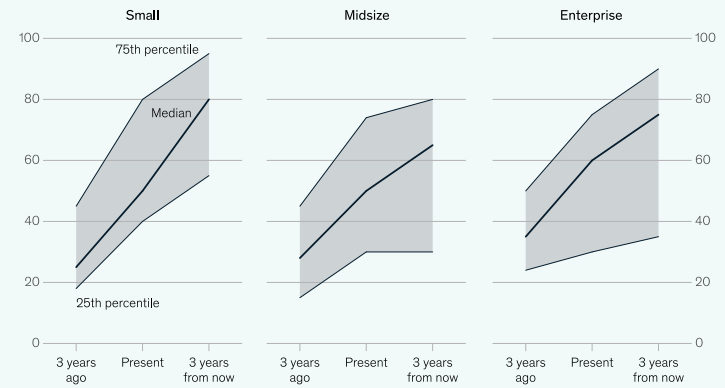
NS EDGE's platform is designed to handle substantial volumes of data, scaling to process hundreds of terabytes per day. It is source-agnostic, accommodating data from various hardware and software sources across networks.

## Graph-Contextualized Results:

NS EDGE delivers graph-contextualized, human-readable results, accelerating threat detection by visualizing complex data patterns and relationships in an intuitive format.

Chief information security officers expect enterprise visibility and log consumption to rise, but performance will vary.

Share of total log volume monitored across enterprise network by company size,<sup>1</sup>%



\*Question: What percentage of total log visibility would you estimate your security operations center SIEM (security information and event management) currently has in total across the enterprise network? N = 173.  
Source: McKinsey Cyber Market Map 2022

McKinsey  
& Company

## Harnessing Emerging Technologies:

NS EDGE utilizes emerging technologies like the Rust programming language and advanced machine learning algorithms to redefine cybersecurity in the energy industry. This innovative approach sets new standards for efficiency, speed, and accuracy in cybersecurity operations.

# NS EDGE

**SENSING THREATS AT THE EDGE OF  
THE NETWORK**

NS Edge Energy Resilience, an innovative solution crafted to revolutionize data management in the energy sector, ensuring regulatory compliance, fortifying security, and optimizing operational efficiency.

- **Key Solution Benefits**

- **Enhanced Grid Resilience:** NS EDGE Cybersecurity Observability strengthens the resilience of energy grids by detecting and mitigating cyber threats in real-time, ensuring uninterrupted energy supply and operational continuity.
- **Regulatory Compliance Assurance:** Ensure compliance with stringent regulatory frameworks governing the energy sector. By transparently handling data and adhering to privacy regulations, NS EDGE mitigates the risk of penalties and legal liabilities.
- **Heightened Infrastructure Security:** Safeguard critical energy infrastructure against cyber threats with robust data handling processes and proactive threat detection mechanisms. NS EDGE fortifies system security, protecting against potential disruptions and unauthorised access.
- **Operational Efficiency:** Reduce operational costs and streamline processes with efficient data processing and storage solutions. NS EDGE optimizes resource utilisation, leading to significant cost savings and improved operational efficiency.
- **Scalability for Future Growth:** Adapt to evolving energy demands and technological advancements with NS EDGE's scalable architecture. Accommodate growing data volumes and operational complexities without compromising effectiveness or incurring exponential cost increases.

## Unparalleled advantages:

### Scalability

Capable of handling vast amounts of data, NS Edge scales effortlessly to meet evolving business needs.

### Lower TCO (Total Cost of Ownership)

NS Edge provides a lower Total Cost of Ownership (TCO) than traditional solutions. By optimizing data handling and using AI, it reduces costs from purchase to ongoing expenses like maintenance and upgrades.

### Reduced Carbon Footprint

Efficient resource utilization and streamlined operations contribute to a lower environmental impact, aligning with sustainability goals.

### NS Edge Cybersecurity Observability

is not merely a solution; it represents a paradigm shift in energy sector data management. By prioritizing security, regulatory compliance, and operational efficiency.

NS Edge empowers energy companies to thrive in an increasingly complex digital landscape while safeguarding the trust and confidence of customers and regulatory authorities alike.

# Our Team



## **James E. HARRIS**

### **CEO and Co-Founder**

- Previous Senior Official at **FBI Cyber Division** and the Counterterrorism Internet Operations Section
- High skills in developing **AI algorithms** and **20+ years** of experience in cybersecurity
- **Successful exit, Cybersecurity startup Economic, Inc.**
- Distinguished Engineer (Fellow) at Fortune 100 financial company



## **Alexandru CIOFLAN**

### **COO and Co-Founder**

- **12+ years** of experience in project management with **8+ years focus on IT industry**
- Previous B2B export specialist at CN Romtehnica SA, a Romanian Ministry of Defense company
- Co-Founder and Managing Partner of Antikythera LLC, a US based Cybersecurity Advisory company



## **Dorian MIHAI**

### **CTO and Co-Founder**

- +10 years of IT experience in various roles
- Worked as Systems Engineer for both public and private entities
- Consulted for The Romanian Romanian Chamber of Deputies



## **Alina STEFAN**

### **CSO**

- Previous Country Director: Native Teams, Azimo, Medijobs
- Board Director ( Start-ups & Scaleups Romania & US)
- **+12 years expertise** in Strategy, Sales and Marketing, Fundraising, Business Consulting- in Europe and US



## **Anca Burke**

### **CGO**

- **+15 years expertise** in management, business and strategy development, ,
- Result oriented with a strong track record of developing relationships and partnerships with Fortune 500 companies

# Contact Us

**Explore how NS Edge solutions empower your organization to proactively outmaneuver contemporary threats.**

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