



# Konnekt-able

## **EnergyShield: A Unique Integrated Toolkit for Electrical Power and Energy Systems (Cyber Security)**

**Dundalk, 9 September 2019** – The R&D project EnergyShield (EU-H2020), funded by the European Union, held its Kick-off meeting in Bucharest in Romania from 17 to 18 July. Eighteen partner companies from ten different European countries presented their work packages and plans for the next three years. EnergyShield captures the needs of electrical power and energy system operators (EPES) in the field of cyber security. It combines the latest technologies for vulnerability assessment, monitoring and protection to develop a unique integrated defensive software toolkit.

EnergyShield will combine five cyber security tools into three modules:

- Assessment (vulnerability assessment and security behavior analysis),
- Monitoring and Protection (anomaly detection and DDoS mitigation) and
- Learning and Sharing (security information and event management system).

The toolkit will be implemented within the complete EPES value chain and will contribute to the specification, prototyping and demonstration phases of the project.

The consortium is led by the two large industrial partners SIVECO Romania SA (coordinator) and PSI Software AG from Germany supported by seven innovative SMEs, three academic research organizations and seven end-users representing various parts of the EPES value chain. (Other participants: SIGA Data Security Ltd., foreseeti AB, L7 Defense Luxembourg Sàrl, Tech Inspire Ltd., City University of London, Konnekt-able Technologies Ltd., Kungliga Tekniska högskolan, KOGEN ZAGORE EOOD, National Technical University Of Athens, CEZ Distribution Bulgaria, Iren S.p.A., MIG 23 Ltd., Dil Diel OOD, MVETS Lenishta OOD, Elektroenergien Sistemem Operator EAD, Software Company EOOD).



### EnergyShield

**Grant agreement ID: 832907**

Status

**Ongoing project**

Start date

**1 July 2019**

End date

**30 June 2022**

Funded under:

**H2020-EU.3.7.4.  
H2020-EU.3.7.2.**

Overall budget:

**€ 9 858 388,39**

**EU contribution  
€ 7 421 437,50**



Coordinated by:

**SIVECO ROMANIA SA**

 **Romania**



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Konnekt-able (KT) will implement a customized SIEM tool able to interact with the other EnergyShield tools and components. In particular, the SIEM must deal with the federated structure imposed by EnergyShield compliant architecture and should balance the strict security policies enforced by techniques such as homomorphic encryption, anomaly detection, or DDoS mitigation, and the need for fine grained monitoring typical of traditional SIEM systems. In the SIEM particular attention will be devoted to the implementation of security rules specific to each national/regional energy systems and infrastructures, and testing algorithms to determine whether the security requirements of information flows are met, and if not provide appropriate alerts and corrective actions. Both anomaly-based and misuse-based detection approaches will be supported.

As for anomaly based, the data analysis will be both off-line, in order to train anomaly detection systems, and real-time, in order to detect current attacks and trigger security alarms. Implementation for the algorithms designed for both automatic anomaly detection methods, and visual analytics methods, able to visually depict characteristics that assist the human operator to discover attacks and their causes, will be provided. The developed system will also compute the correlations of the user data to previous known attacks, in order to train customized anomaly detection methods. The outcomes of previous security-related European projects, which utilize anomaly detection methods, and the available open source SIEM toolkits, will be exploited, extended and adapted for the needs of EnergyShield.

Rosanna Babagiannou  
R&D Manager

## **ABOUT KONNEKT-ABLE TECHNOLOGIES LTD.**

Konnekt-able Technologies Ltd. is a technology research and development firm, based in the Republic of Ireland. Our vision is simple: to create connections through technology, through the practical application of research, and through collaboration. Konnekt-able's principals have extensive experience in research work and in following that work through to the commercial marketplace. Konnekt-able's Software Engineers, Analysts and Programmers keep abreast of all major technology innovations and developments that can add value to our business activities. We are using a series of development platforms, chosen on the basis of their suitability, adaptability, scalability and flexibility, to successfully design and implement custom-built solutions, which meet complex customer requirements under strict Service Level Agreements where applicable.

## **CONTACT DETAILS**

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