



SODA-IIoT4Energy: Blockchain-based Access Control to manage smart meter credentials & access rights for Smart Grids

Philippe Calvez, Jean-Marc Gambin, Nabil Bouzerna

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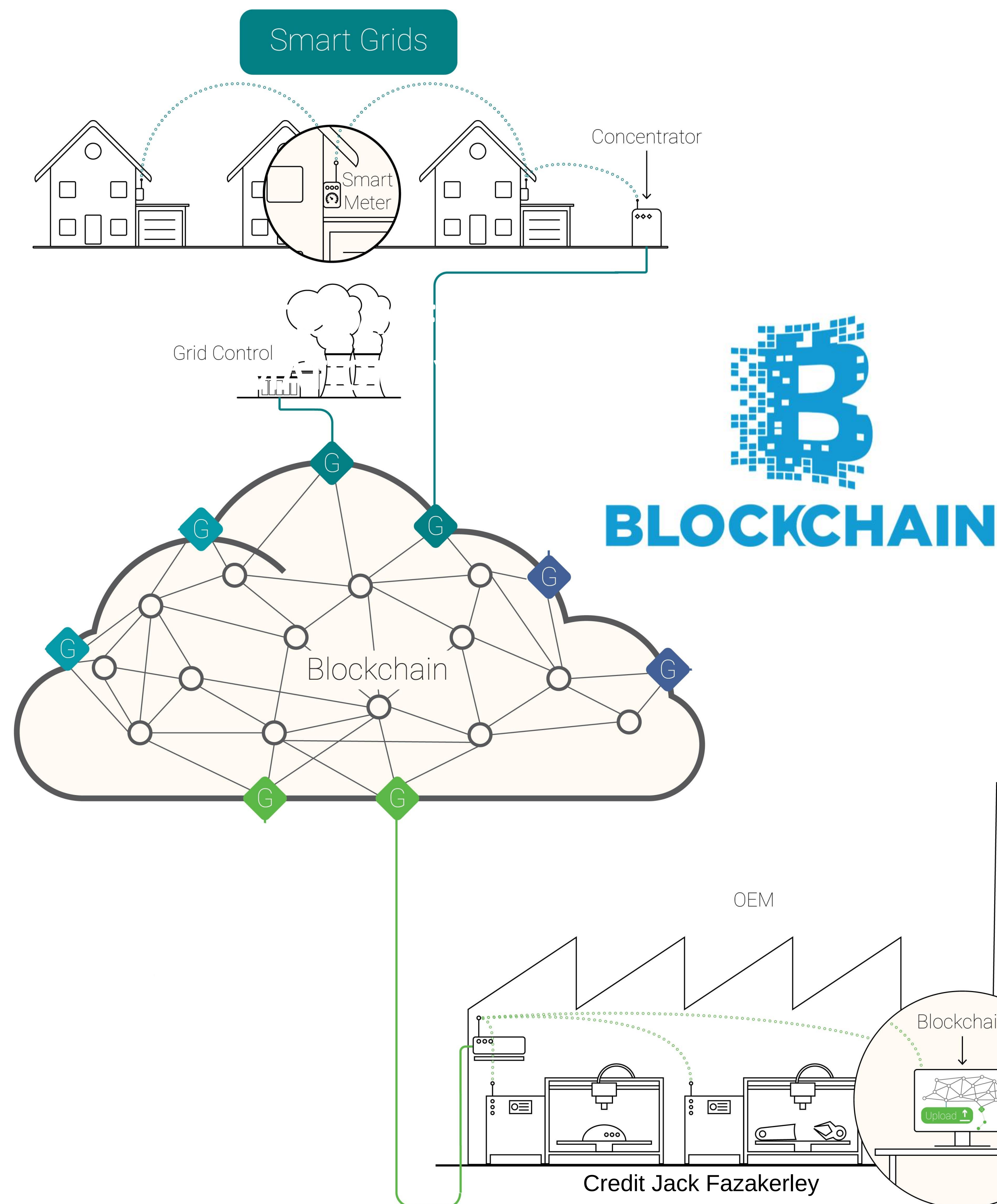
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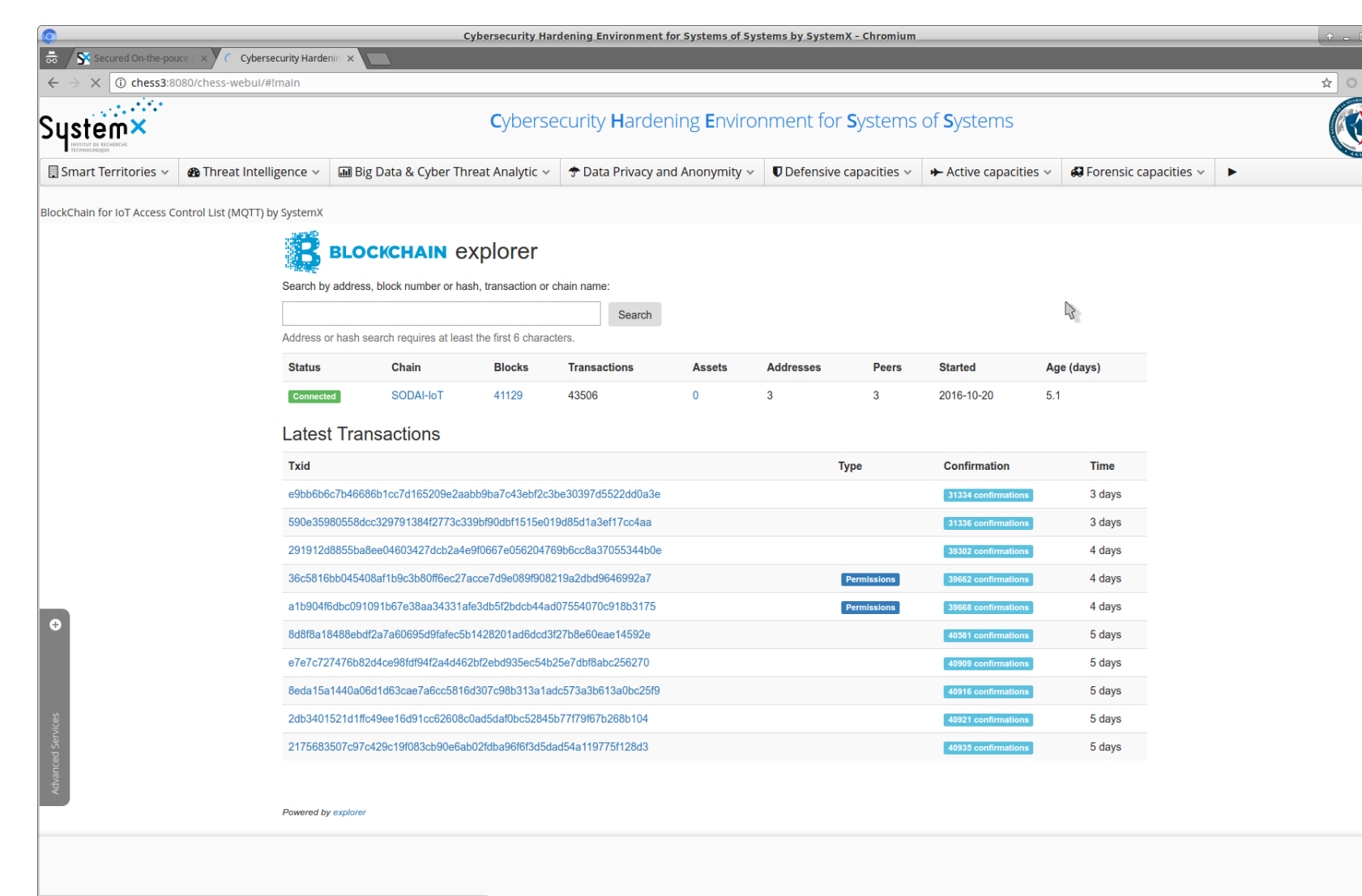
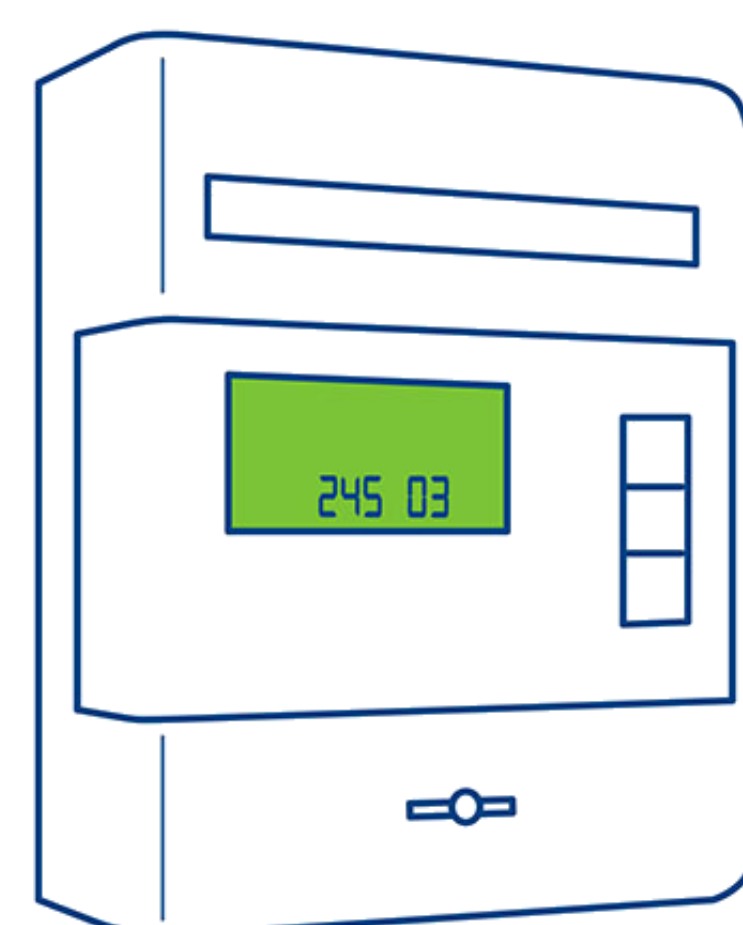
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Smart grids refer to the irruption of communication-based technologies and processes in the operation of energy infrastructures, especially in the fields of transmission protection, monitoring and control, distribution automation, assets management, maintenance and surveillance, distributed energy resources accommodation, demand-response operation and smart metering .



The demonstrator is specific in that it mostly relies on entities deployed at Engie customer premises (the smart meters), which gain uplink connectivity through concentrators, each serving an entire cluster. The smart meters use highly robust, low throughput, wide-range communications to exchange data with the concentrator. For example, LoRaWAN, Sigfox, NB-IoT,... , 6LoWPAN over power-line communication, and/or WiFi mesh can be used to form clusters and transmit various data including consumption reports, alarms (uplink), software updates or reconfiguration commands (downlink).

Co-designed with Engie and Gemalto, SODA-IloT4Energy offers an access control paradigm whereby access rights are granted to smart meters through the use of security policies stored inside a blockchain.

Secured On-the-pouce Decentralized Architecture for the Industrial Internet of Things (SODA-IloT), co-designed with IRT SystemX, CEA Tech List and Airbus Innovation Group, features innovative solutions to manage IloT access rights management & secure software and firmware updates through Blockchain technology & cryptographic signatures.



The **SODA-IloT4Energy** demonstrator is built on top of the **CHESS platform** (Cybersecurity Hardening Environment for Systems of Systems), an experimental and technical cybersecurity platform funded by **ANSSI** to support cybersecurity research effort at Institute for Technological Research SystemX - Paris-Saclay (EIC R&D project).

This platform is part of French Government “Nouvelle France Industrielle”, Cybersecurity plan, action 8: set up one or more testing and demonstration cybersecurity platforms.

