EUROTECH
Imagine. Build. Succeed.

ENERGY MANAGEMENT SYSTEM 4.0

Edison, a leading energy operator in Italy, selected Eurotech's IoT expertise and technologies to develop an Energy Management System (EMS) to monitor power consumption. The application was developed within the Smart Audit project by Edison, that aims to offer IoT-based EMS for SMB, HORECA and Retail businesses.
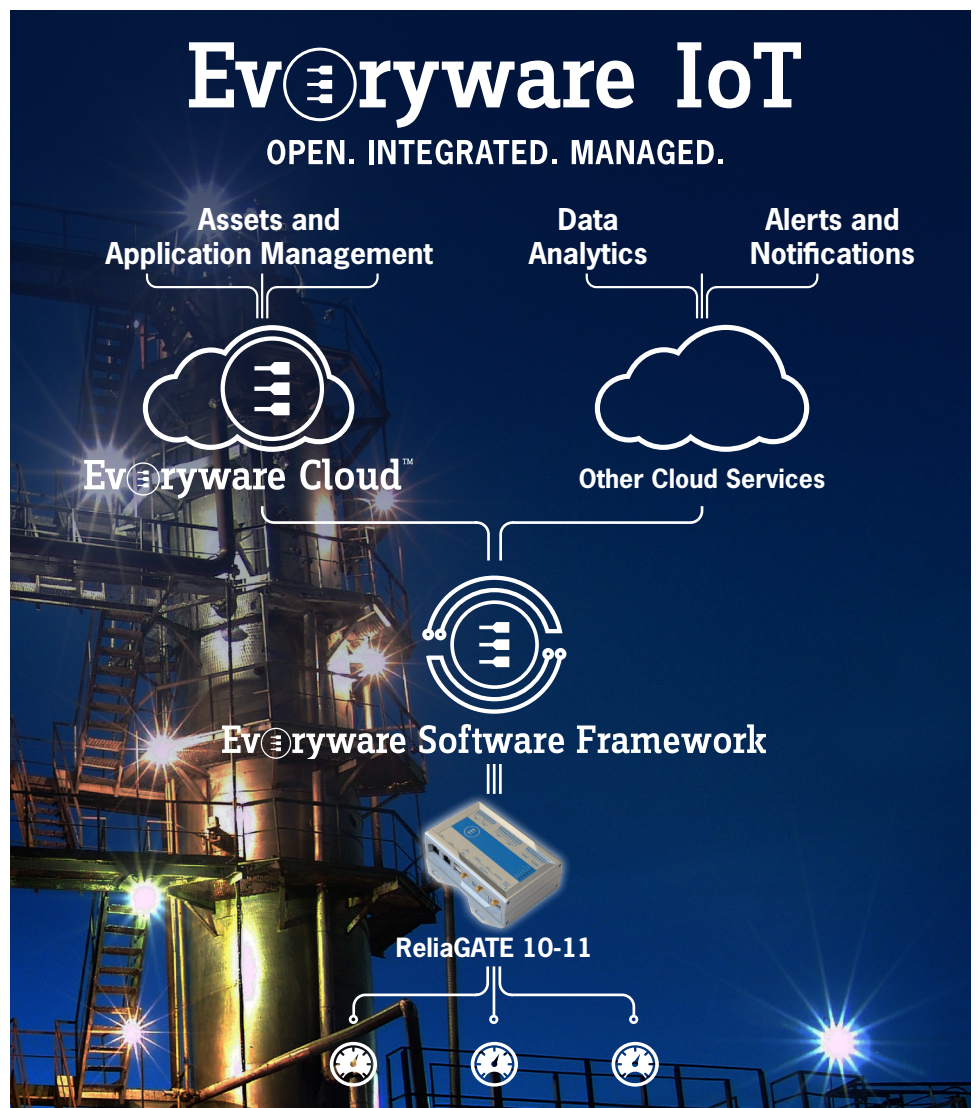
Edison

Edison is one of the main energy operators in Italy and Europe with activities in electricity procurement, production and trade, and in energy and environmental services thanks to its Energy & Environmental Services Market Division, established in 2016. Edison offers its public and private customers tailor-made solutions for the reduction of public and private customers' energy consumption and environmental impact: from preliminary analysis, both traditional and digital audits about industrial or building systems, to consumption optimization interventions; from the design, construction and management of energy self-production plants, to the local planning supporting the offer for districts and public administrations focusing on energy redevelopment of buildings and urban regeneration, and the development and management of IoT platforms. Edison is also able to provide its customers with energy advice and assistance for the request for incentives (such as Energy Efficiency Certificates). The different kinds of business models proposed to the customers - from the direct financing to the project financing - are an important element to tallow the Clients to choose the best model to finance interventions for their businesses. Environmental services complete the offer.

Everyware IoT
OPEN. INTEGRATED. MANAGED.

Assets and Application Management

Data Analytics

Alerts and Notifications

Everyware Cloud™

Other Cloud Services

Everyware Software Framework

ReliaGATE 10-11

Eurotech integrated hardware and software architecture

The Smart Audit project has a two-sided goal. On the one hand, it aims to provide customers with tools to monitor and be aware of their own power consumption, thus being able to define targeted energy strategies thanks to Edison consultancy. On the other, Edison technical assistance operators would have the tools to perform remote monitoring and diagnostics based on customer's consumption data and provide best-in-class consultancy tailored to the specific needs. "Understanding the customer's monitoring needs and a correct data interpretation are key elements to start a path towards energy efficiency" states Edison.

Edison adopted Everyware IoT, Eurotech edge-to-cloud architecture that integrates hardware and software to connect plants and devices deployed in the field with IoT cloud platforms and applications: in less than a year Edison "has been able to monitor more than 1400 field process variables from 60 field devices".
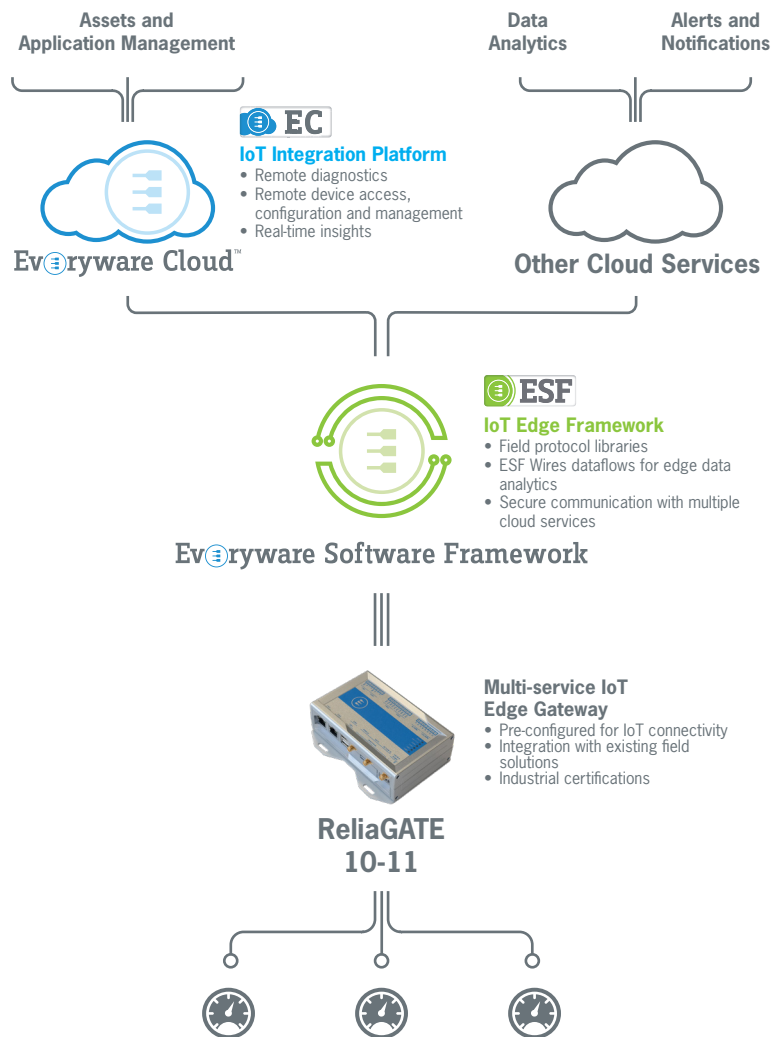
Edge data collection and management

Edison adopted Eurotech ReliaGATE 10-11 as embedded hardware to connect to field plants and sensors and collect edge data to provide real-time insights about energy consumption. The ReliaGATE 10-11 is an ARM-based and rugged Multi-service IoT Edge Gateway that is designed to operate in difficult embedded environments, like power plants.

Everyware Software Framework (ESF), Eurotech IoT Edge Framework installed on the ReliaGATE 10-11, provides field protocol native support to interface with the plant's sensors. ESF digitalizes analogic data and integrates them with leading IoT cloud platforms for diagnostics. The gateway can therefore be used to create new IoT systems or retrofit existing plants.

Remote data analytics and device management

Edison adopted different cloud platforms to manage the data coming from the connected field devices and perform remote diagnostics. Among them, Eurotech Everyware Cloud provided an IoT Integration Platform to remotely access, configure and manage field-deployed devices and analyze data related to power consumption. Edison technical support was provided with web-based dashboards for real-time data monitoring for consultancy purposes.

Everyware IoT
OPEN. INTEGRATED. MANAGED.

Assets and Application Management

Data Analytics

Alerts and Notifications

EC
IoT Integration Platform
• Remote diagnostics
• Remote device access, configuration and management
• Real-time insights

Everyware Cloud™

Other Cloud Services

ESF
IoT Edge Framework
• Field protocol libraries
• ESF Wires dataflows for edge data analytics
• Secure communication with multiple cloud services

Everyware Software Framework

Multi-service IoT Edge Gateway
• Pre-configured for IoT connectivity
• Integration with existing field solutions
• Industrial certifications

ReliaGATE 10-11

SUCCESS FACTORS
- Remote device and embedded application management
- Real-time data available on multiple cloud platforms
- Pre-configured, easy-to-install hardware to be integrated with existing field solutions

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case study