



opt.cloud // Intelligent Control Center



PRODUCT DESCRIPTION

opt.cloud is the intelligent control center of Olmatic Power Tracking, which combines all products through digitization within an IoT cloud infrastructure. The innovative frontend visualizes every connected product in real time and gives the user the opportunity to get full transparency and a clear representation of any energy and cost parameters from his system from anywhere and at any time. The backend of the **opt.cloud** also permanently records corresponding energy parameters in real time in order to be able to make an optimal load peak forecast based on the integrated AI. The **opt.cloud** serves as a central component in order to be able to implement maximum optimization of energy costs and an increase in energy efficiency.

FUNCTIONS

The **opt.cloud** visualizes the recorded data in real time in the frontend. So the user always has a clear representation of any energy and cost parameters and can use them for further analysis and optimization purposes. As soon as the **opt.cloud** detects or can predict a peak load with the help of artificial intelligence, regenerative energy sources and storage can be switched on automatically. As an alternative to this, it is also possible to counteract the detected peak load by targeted load shedding, i.e. targeted shutdown or regulation of defined consumers to counteract. Using these fully automatic processes, load peaks that occur can be compensated for in a targeted and proactive manner by means of regenerative and free-of-charge energy or a short-term reduction in energy consumption. In order to be able to implement this, the **opt.cloud** records the corresponding energy parameters in real time and permanently at any consumer in the backend, digitizes them and stores them in a central storage location. This data collection forms the basis for the use of the artificial intelligence of **opt.cloud**. The specially developed algorithms for artificial intelligence continuously analyze the database in order to recognize patterns, which in turn provide information and conclusions about when and for what reason a load peak occurred on the consumer. By recognizing these specific patterns, it is possible to make a detailed load peak prediction.

OPEN PLATFORM

The **opt.cloud** contains open interfaces and provides a documented API to connect third party products. This makes it possible to change the existing system to other energy parameters, such as Temperature, compressed air, etc. to expand. This enables the user to set up a comprehensive and central energy management system that combines all parameters within a central platform. In this way, the increase in energy efficiency can be pushed as far as possible.

TECHNICAL OVERVIEW

Device API	Microsoft Azure IoT Edge
Protocols Supported	MQTT, AMQP, HTTPS, WebSockets
System Latency	Germany North: ~ 20ms / max. 30ms globally in Europe
Infrastructure	MS Azure
Location of data storage	North Europe (Ireland)
Long-Term Storage	> 10 years
Service Level Agreements	System Uptime: 99,99% / Credits: 10% for Uptime < 99,9%, 25% for Uptime < 99%
Number of nodes/devices	max. 1.000.000
Data Usage	S1: 400.000 / S2: 6.000.000 / S3: 300.000.000 messages per day
API Calls	160 KB/sec/unit = 40 API calls/ sec/unit