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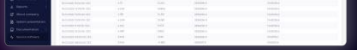
V.A.D Technical Engineering and Investment s.r.o.

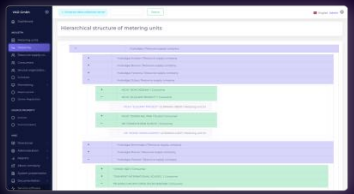
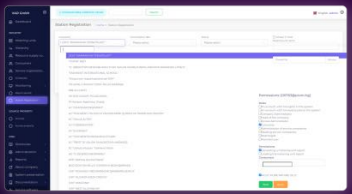
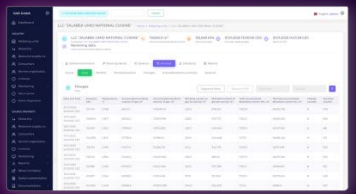
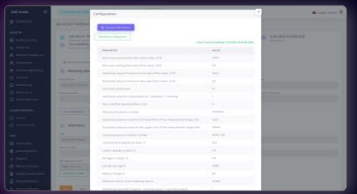
GLOBAL **ENTERPRISE** **IOT** PLATFORM

AI-Powered Server Software

vadgmbh.eu



Modular Architecture

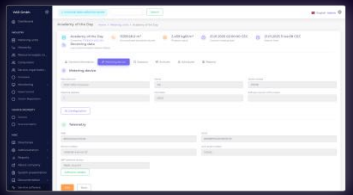
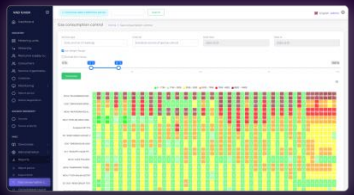
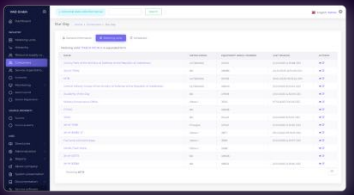
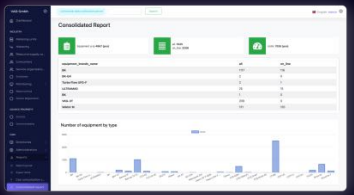
Distributed database and multi-threaded data processing modules for server load optimization.

Multi-tenancy

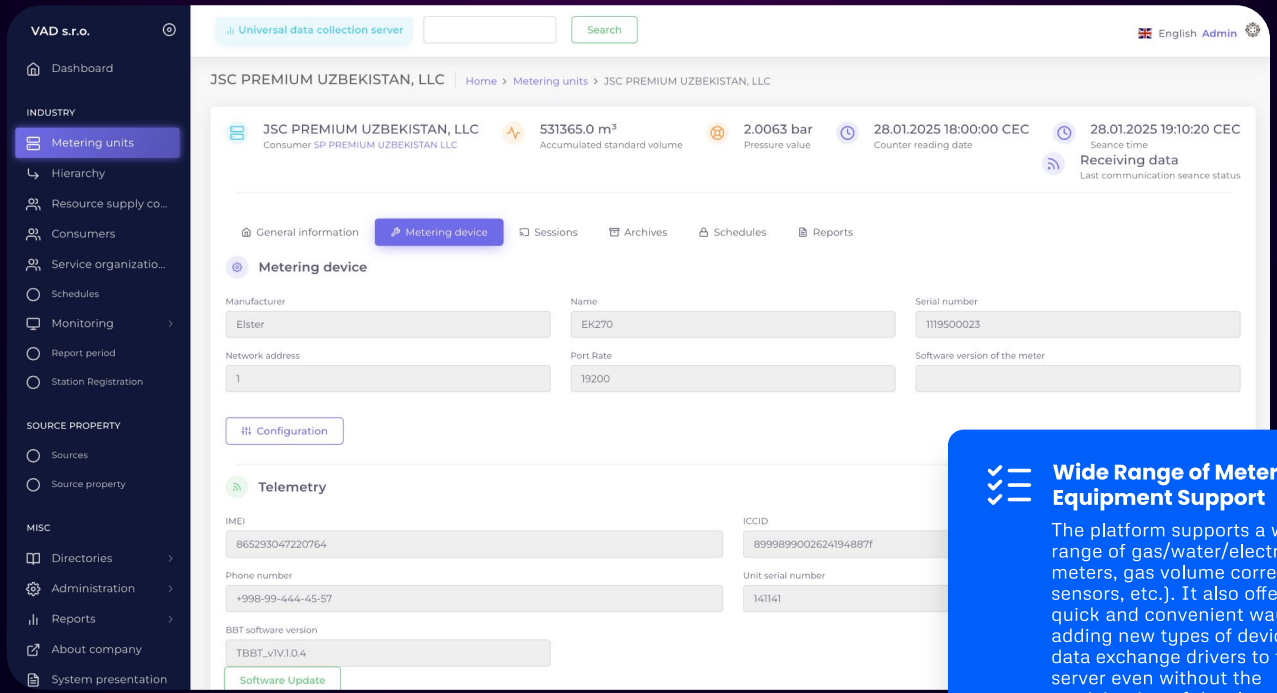
Enables one application instance to serve multiple customers efficiently

Multi-language Support

12 languages already supported with more upcoming soon.

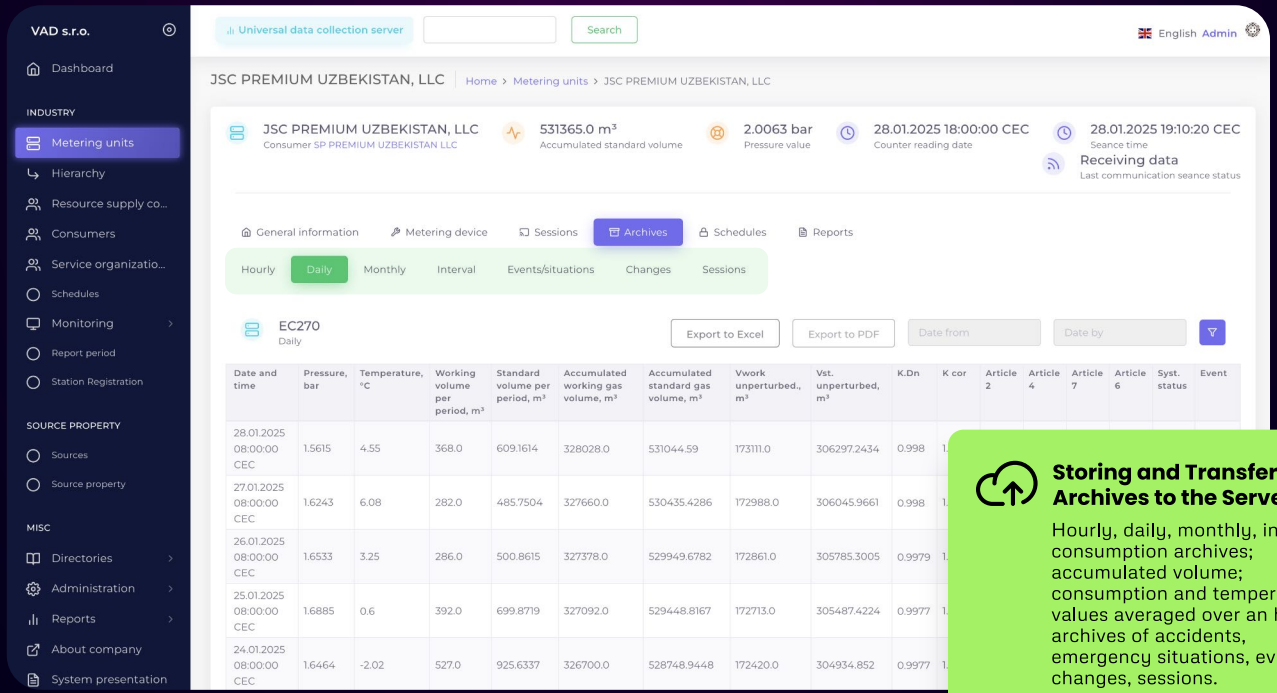







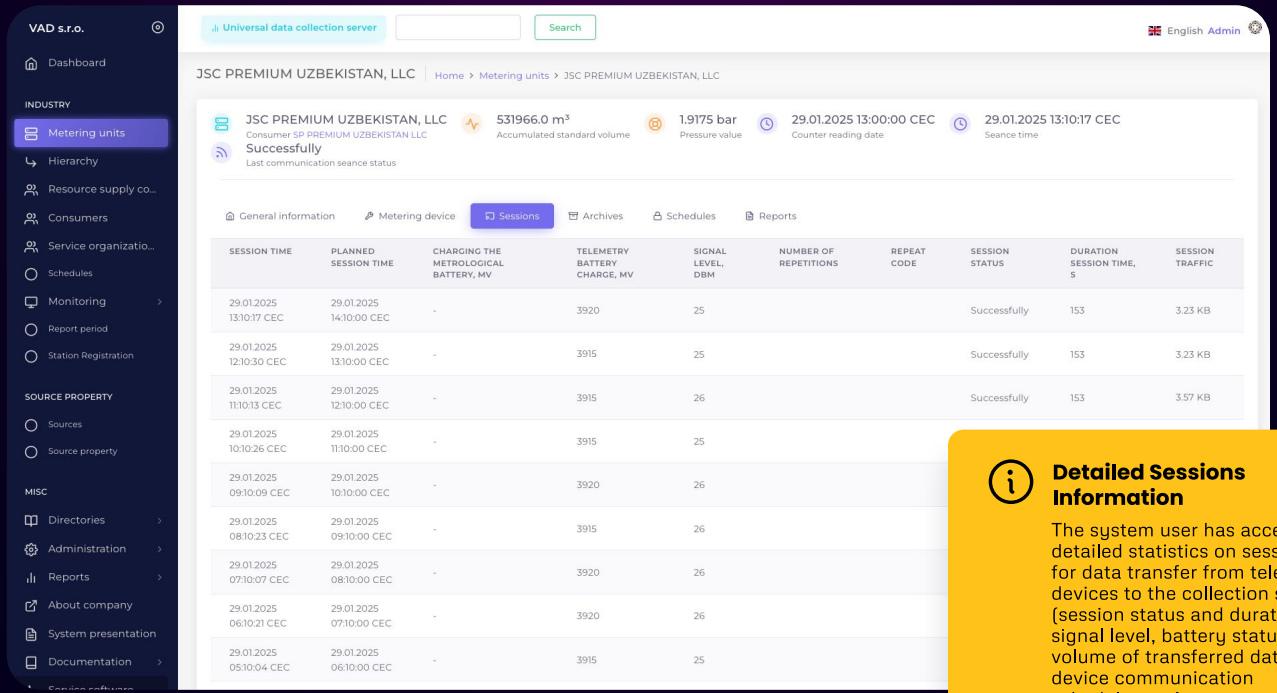
Wide Range of Metering Equipment Support

The platform supports a widest range of gas/water/electricity meters, gas volume correctors, sensors, etc.). It also offers quick and convenient way for adding new types of devices and data exchange drivers to the server even without the participation of developers.



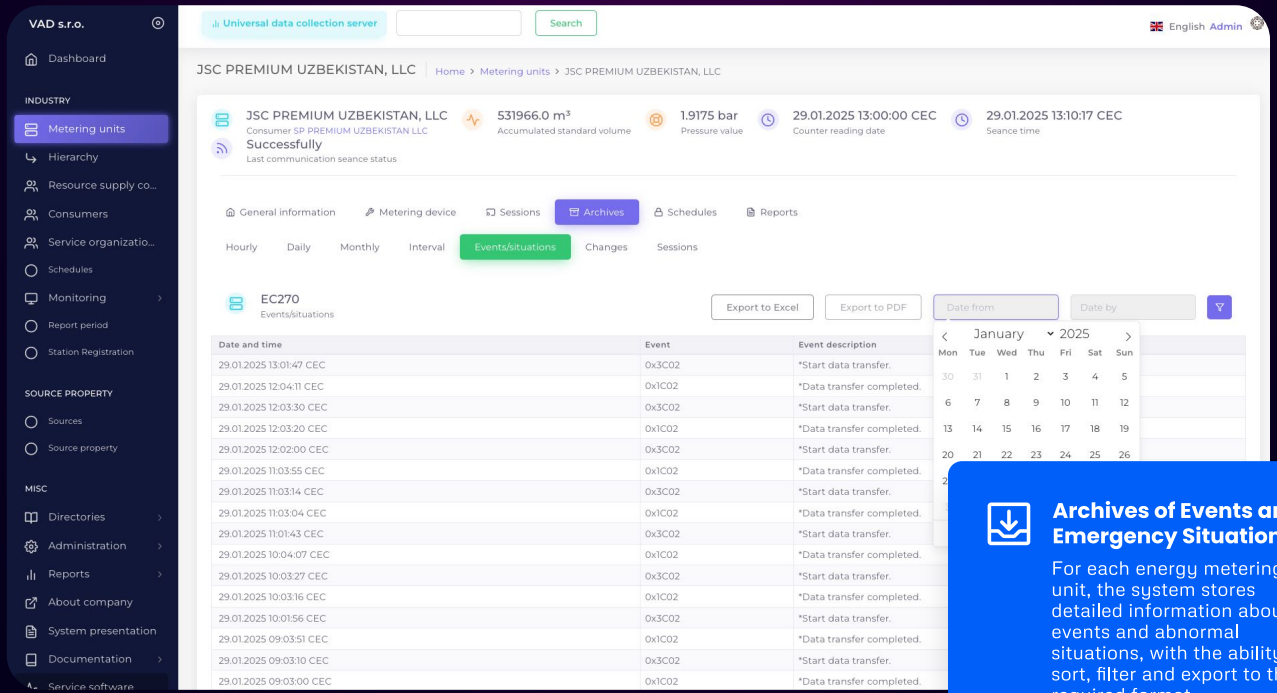
Storing and Transferring Archives to the Server

Hourly, daily, monthly, interval consumption archives; accumulated volume; consumption and temperature values averaged over an hour; archives of accidents, emergency situations, events, changes, sessions.



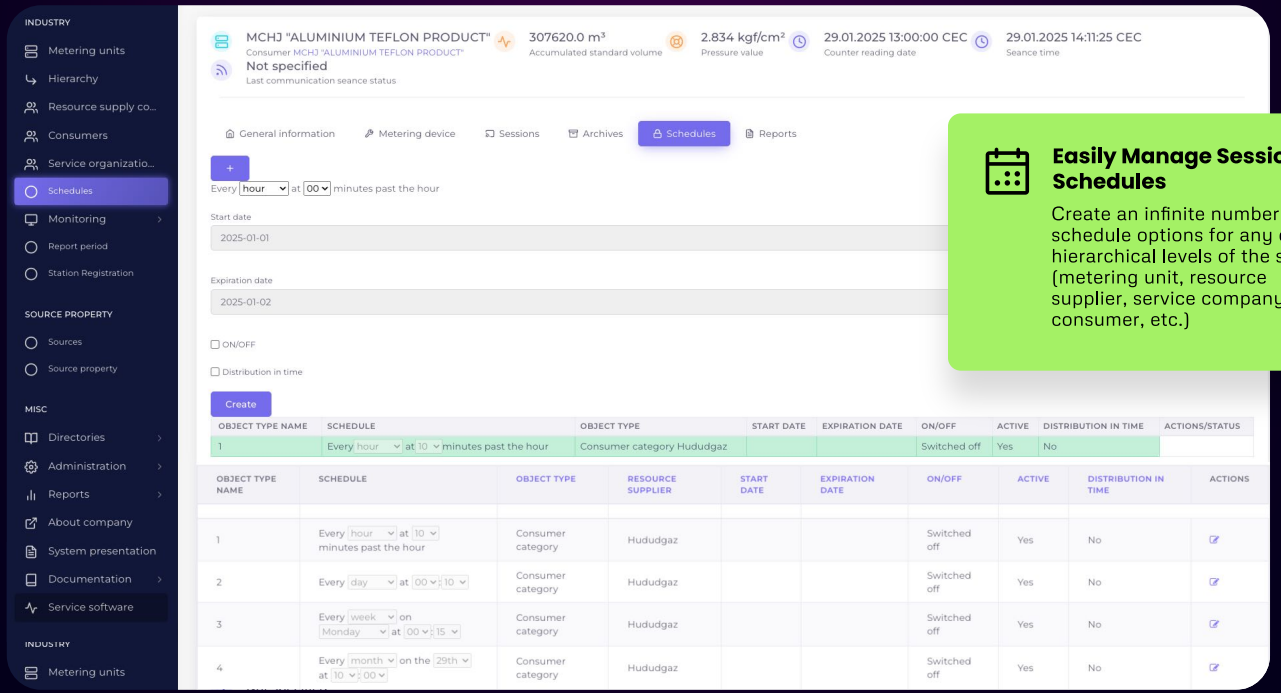
Detailed Sessions Information

The system user has access to detailed statistics on sessions for data transfer from telemetry devices to the collection server (session status and duration, signal level, battery status, volume of transferred data, device communication schedule, etc.)



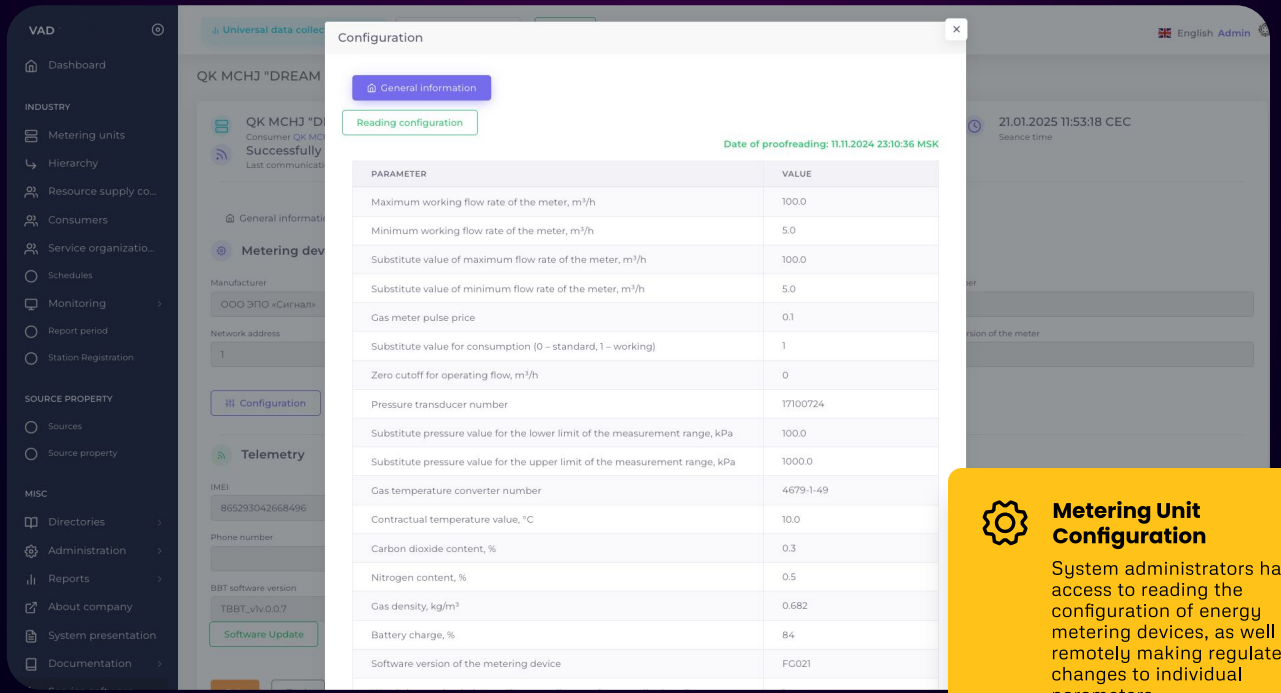
Archives of Events and Emergency Situations

For each energy metering unit, the system stores detailed information about all events and abnormal situations, with the ability to sort, filter and export to the required format.



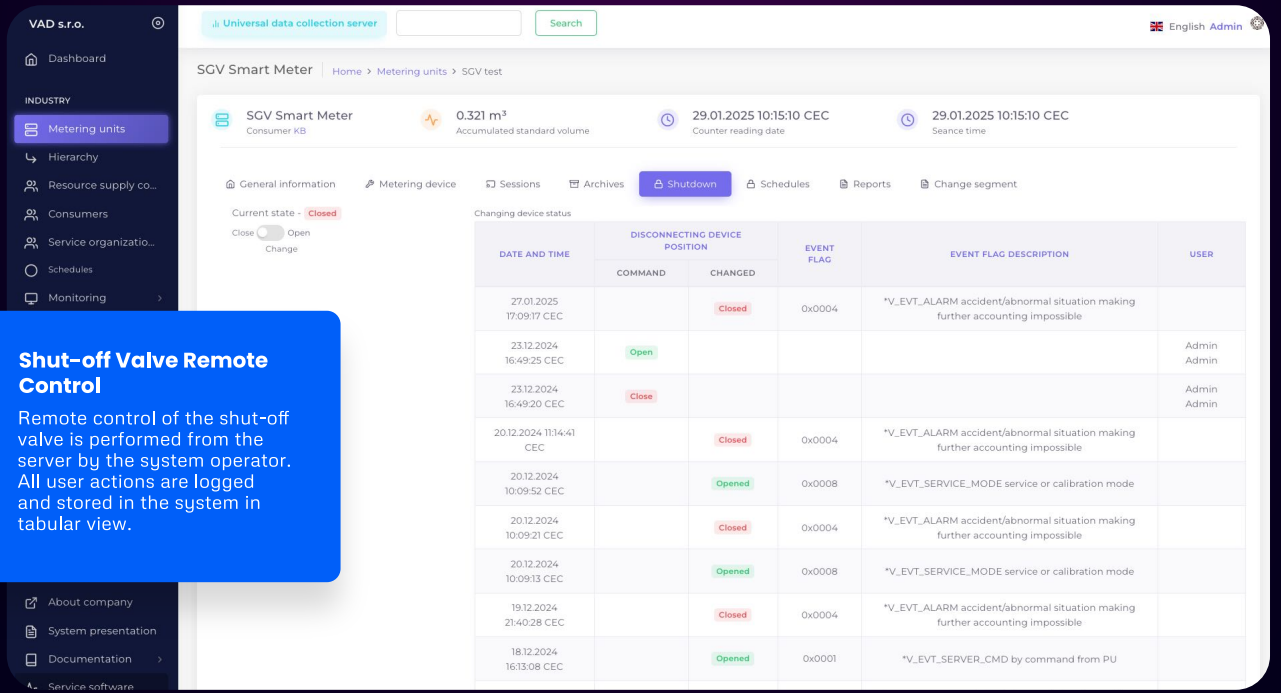
Easily Manage Session Schedules

Create an infinite number of schedule options for any of the hierarchical levels of the system (metering unit, resource supplier, service company, consumer, etc.)



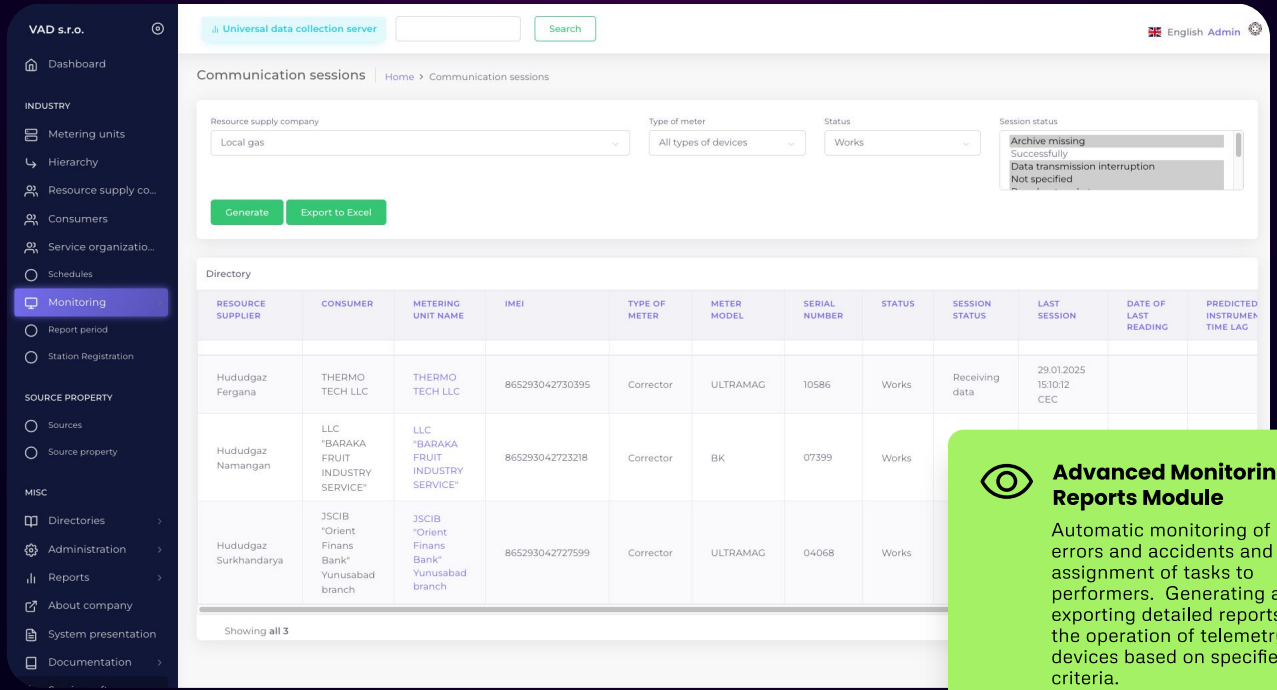
Metering Unit Configuration

System administrators have access to reading the configuration of energy metering devices, as well as remotely making regulated changes to individual parameters.



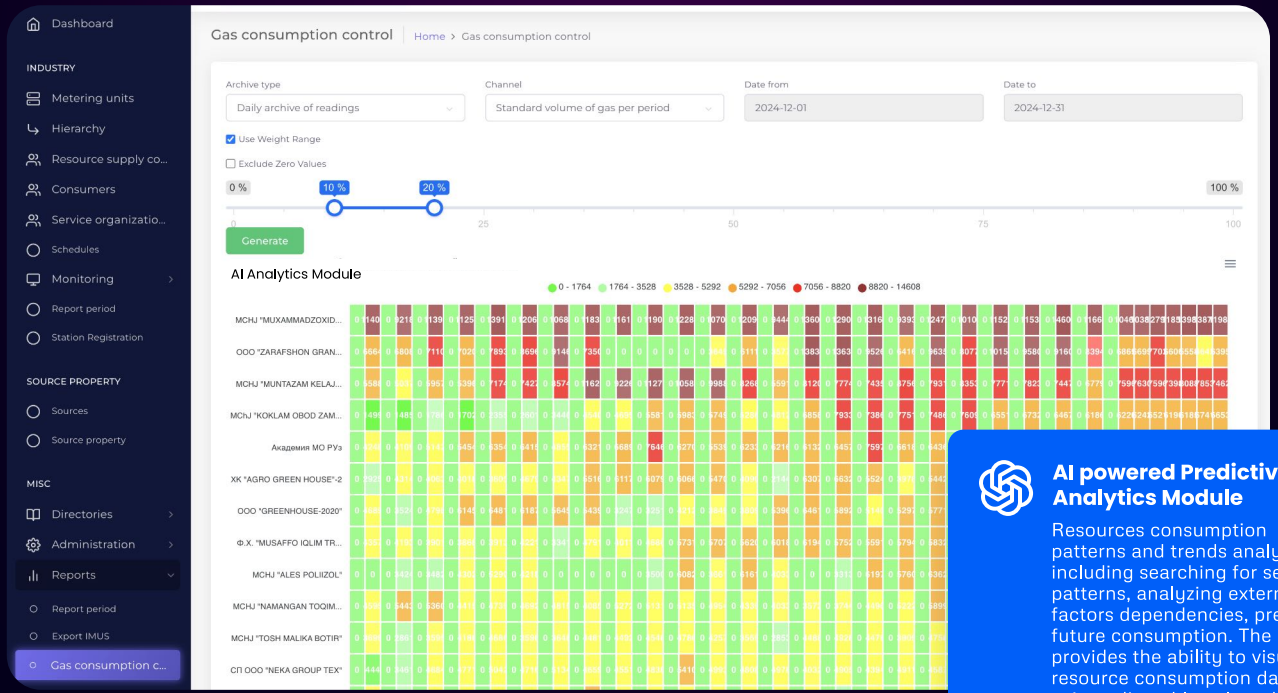
Shut-off Valve Remote Control

Remote control of the shut-off valve is performed from the server by the system operator. All user actions are logged and stored in the system in tabular view.



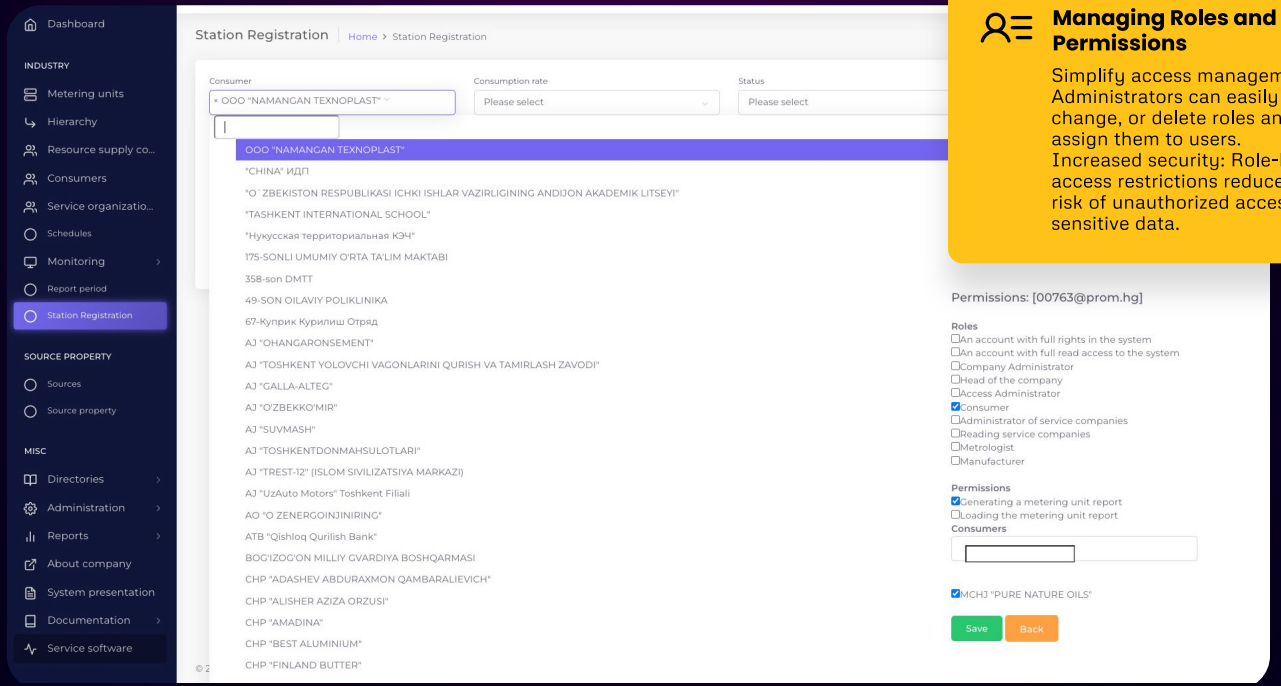
Advanced Monitoring Reports Module

Automatic monitoring of errors and accidents and assignment of tasks to performers. Generating and exporting detailed reports on the operation of telemetry devices based on specified criteria.



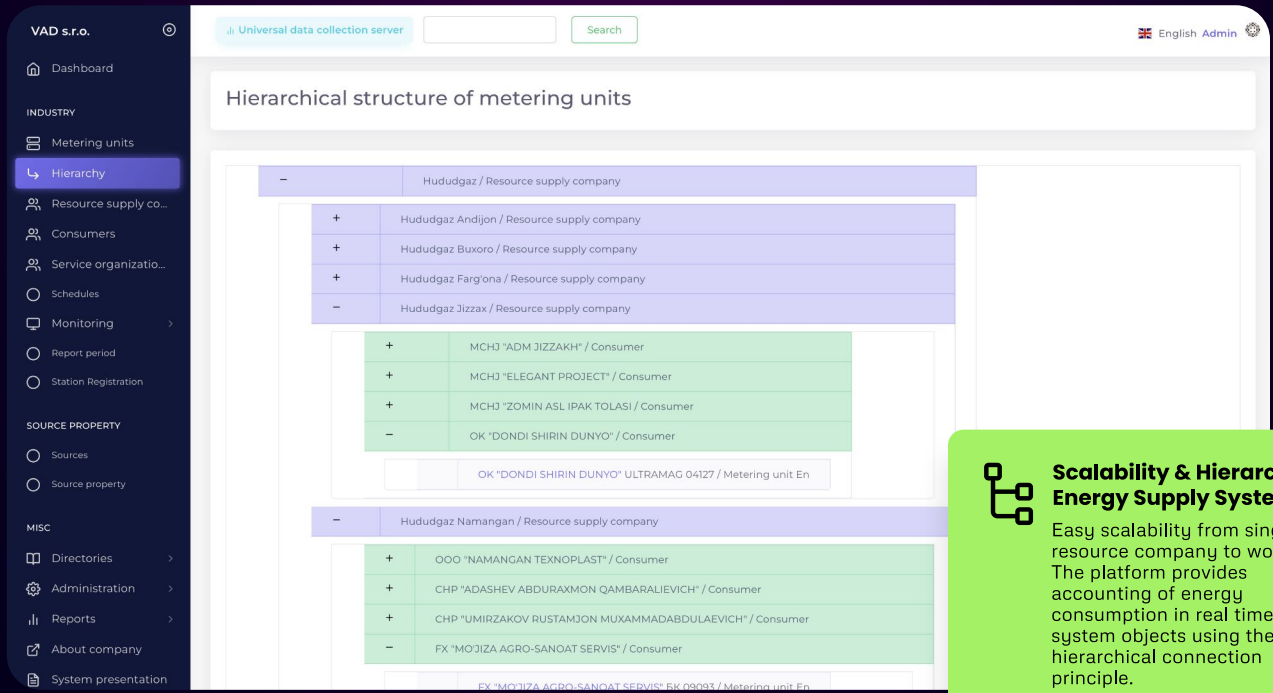
AI powered Predictive Analytics Module

Resources consumption patterns and trends analysis, including searching for seasonal patterns, analyzing external factors dependencies, predicting future consumption. The module provides the ability to visualize resource consumption data using adjustable color tables.



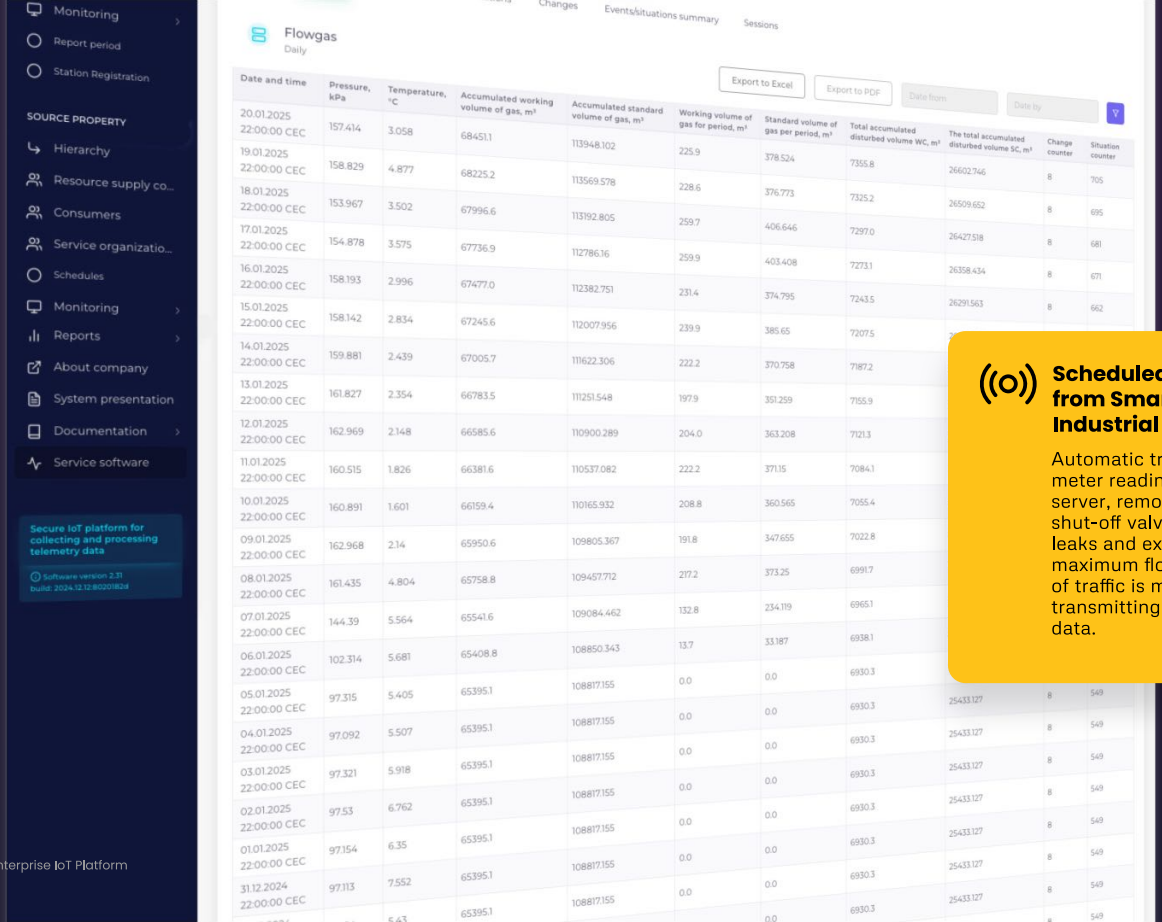
Managing Roles and Permissions

Simplify access management: Administrators can easily add, change, or delete roles and assign them to users.
Increased security: Role-based access restrictions reduce the risk of unauthorized access to sensitive data.



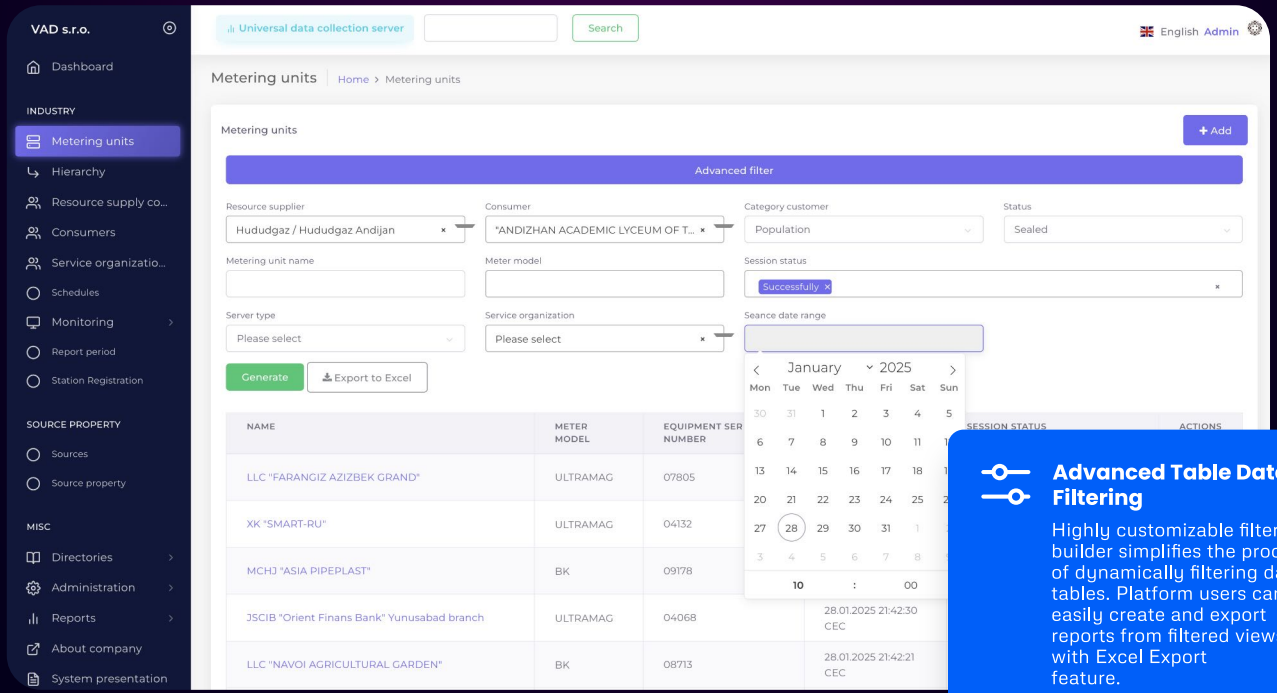
Scalability & Hierarchy of Energy Supply System

Easy scalability from single resource company to worldwide. The platform provides accounting of energy consumption in real time by system objects using the hierarchical connection principle.



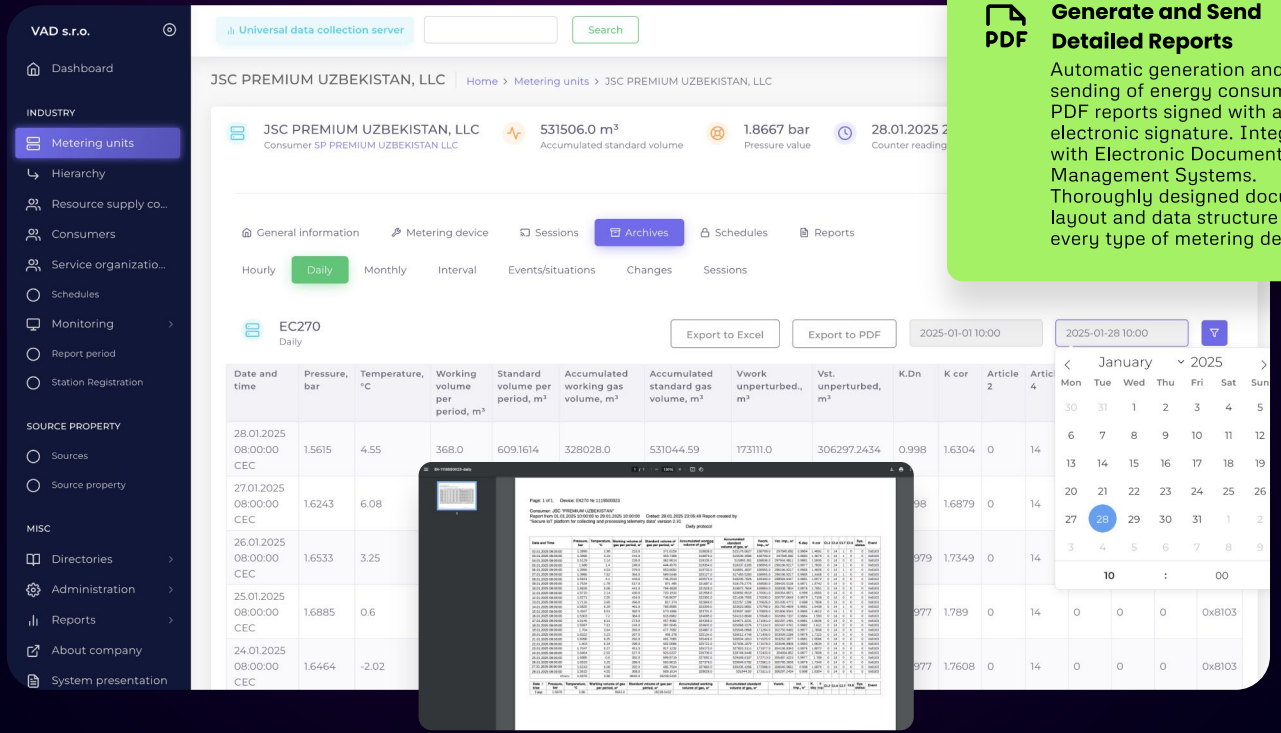
Scheduled Data Receiving from Smart Meters and Industrial Telemetry Units

Automatic transmission of smart meter readings to the collection server, remote control of the shut-off valve, monitoring of leaks and exceeding the maximum flow rate. The amount of traffic is minimized by transmitting only incremental data.



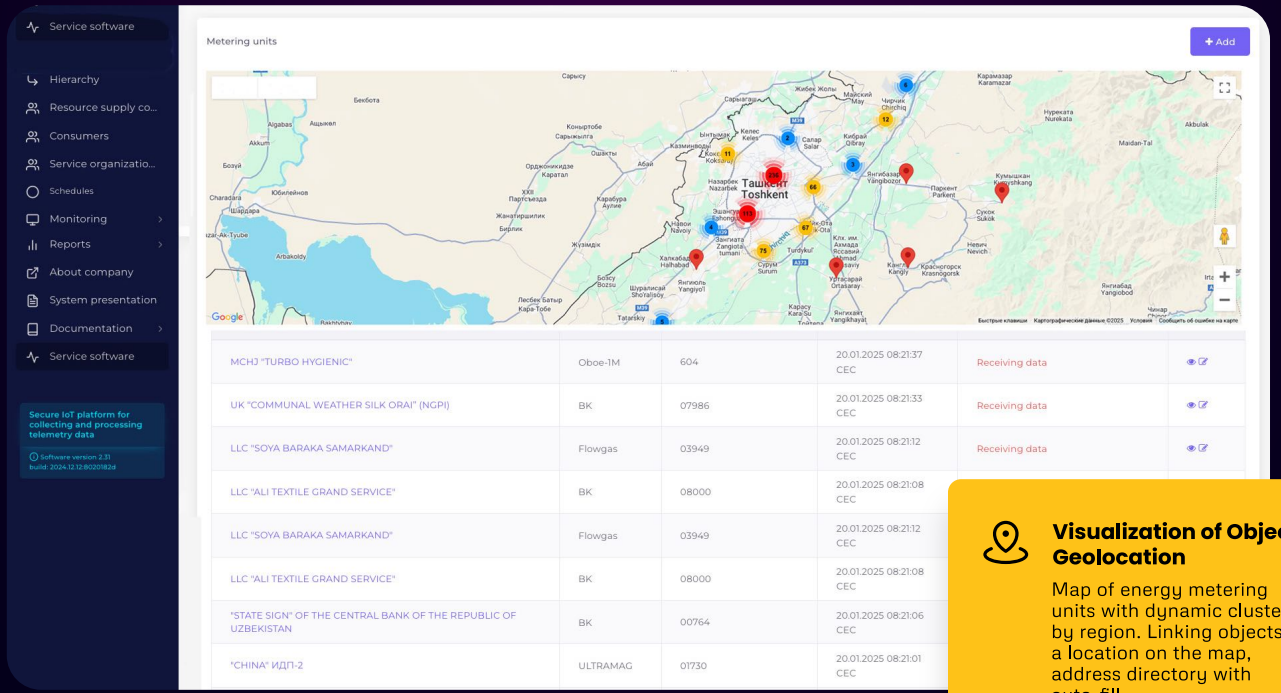
Advanced Table Data Filtering

Highly customizable filter builder simplifies the process of dynamically filtering data tables. Platform users can easily create and export reports from filtered views with Excel Export feature.



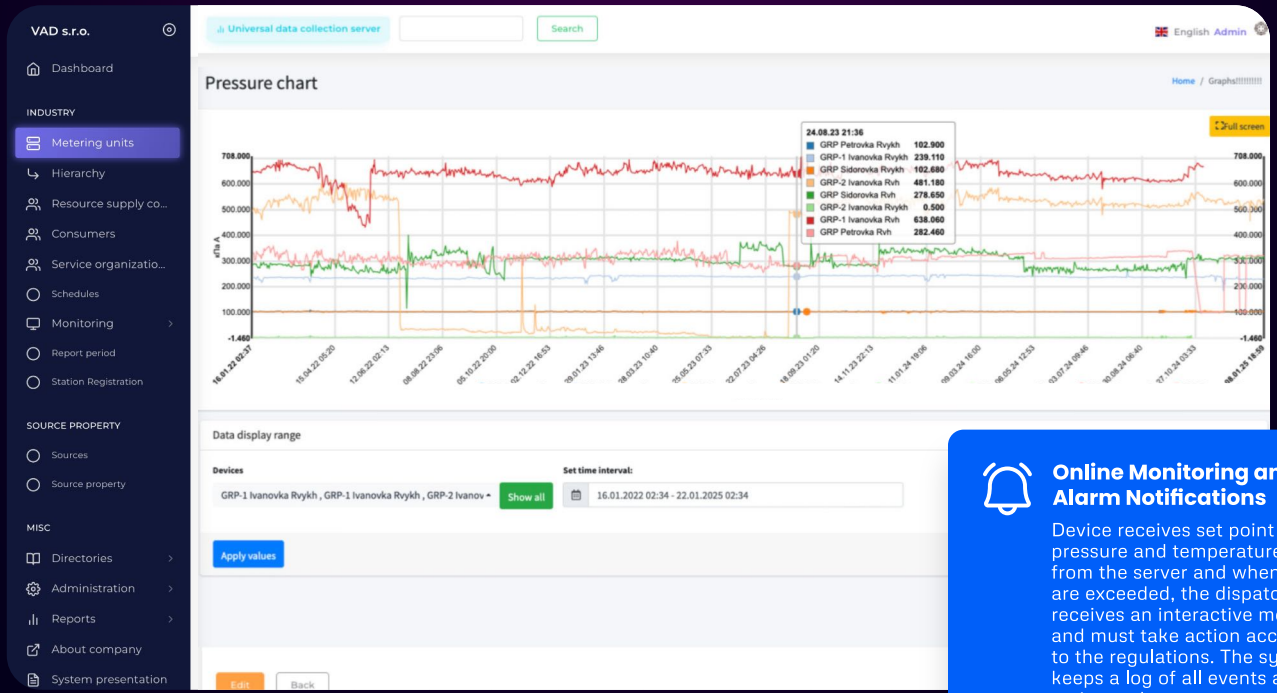
PDF Generate and Send Detailed Reports

Automatic generation and sending of energy consumption PDF reports signed with an electronic signature. Integration with Electronic Document Management Systems. Thoroughly designed document layout and data structure for every type of metering device.



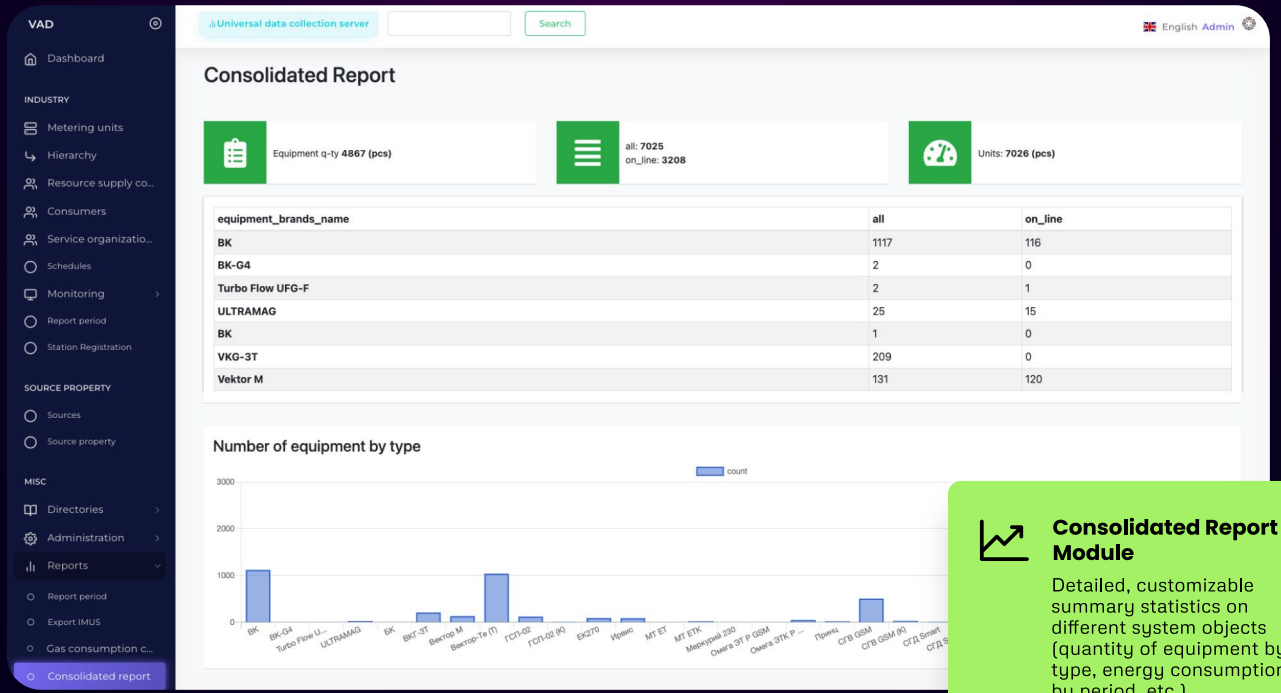
Visualization of Objects Geolocation

Map of energy metering units with dynamic clustering by region. Linking objects to a location on the map, address directory with auto-fill.



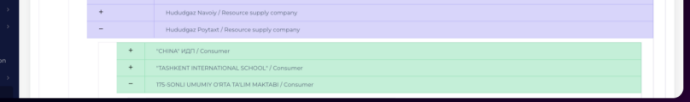
Online Monitoring and Alarm Notifications

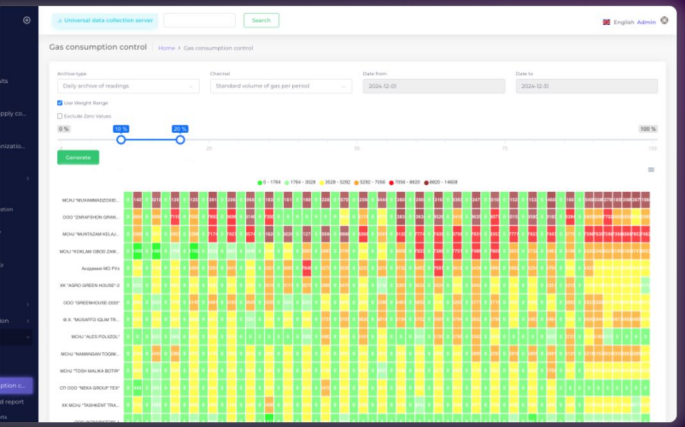
Device receives set point pressure and temperature range from the server and when values are exceeded, the dispatcher receives an interactive message and must take action according to the regulations. The system keeps a log of all events and actions taken.



Consolidated Report Module

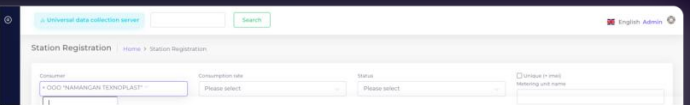
Detailed, customizable summary statistics on different system objects (quantity of equipment by type, energy consumption by period, etc.)

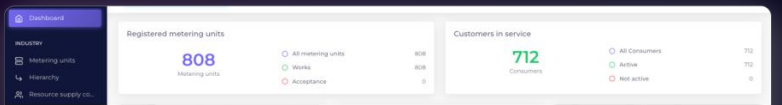




Automated AI Agents and AI Models

- Optimization of business processes for forecasting energy consumption and planning energy supplies to consumer.
- Resource consumption balance.
- Resource supply forecasting.
- Identifying anomalies in resource consumption.
- Search for and control of critical, unbalanced zones of resource consumption.
- Identifying areas of resource leaks.
- Identifying areas of excessive resource consumption.





User Experience

Fully functional web-interface accompanied with mobile app for Android and iOS devices.

Access Administration

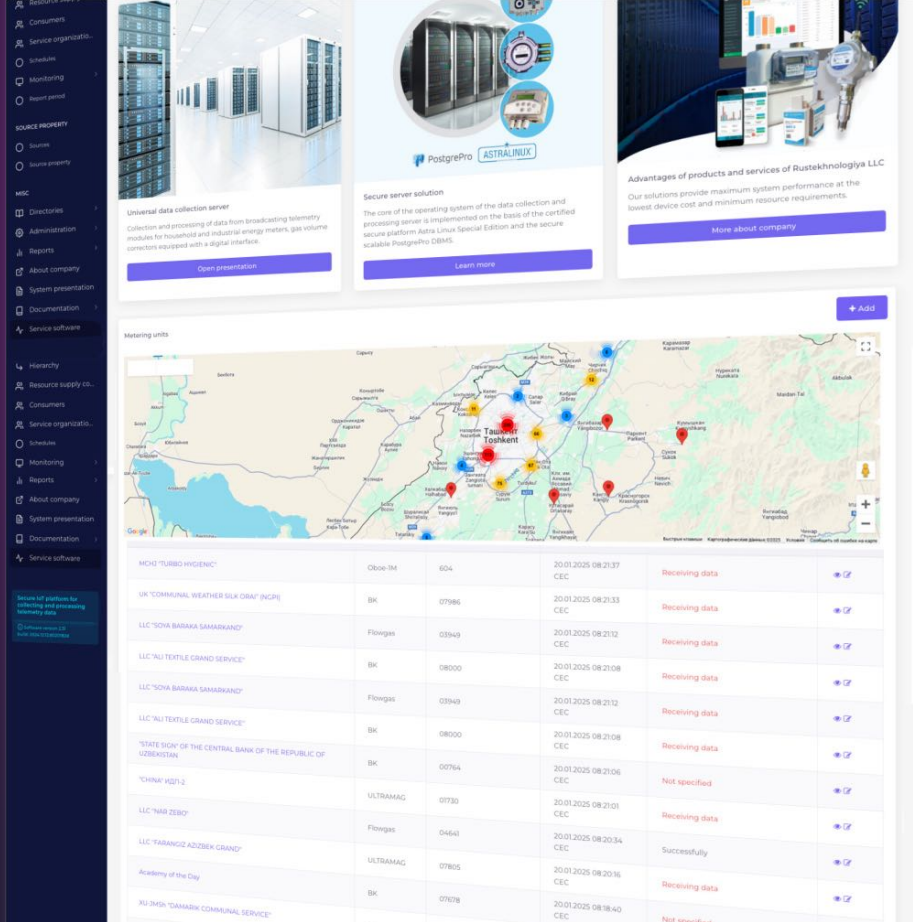
Role-based access control (RBAC) with a specific set of rights and authorities for each user.

Stable & Secure Code

Thorough code testing and external audit.

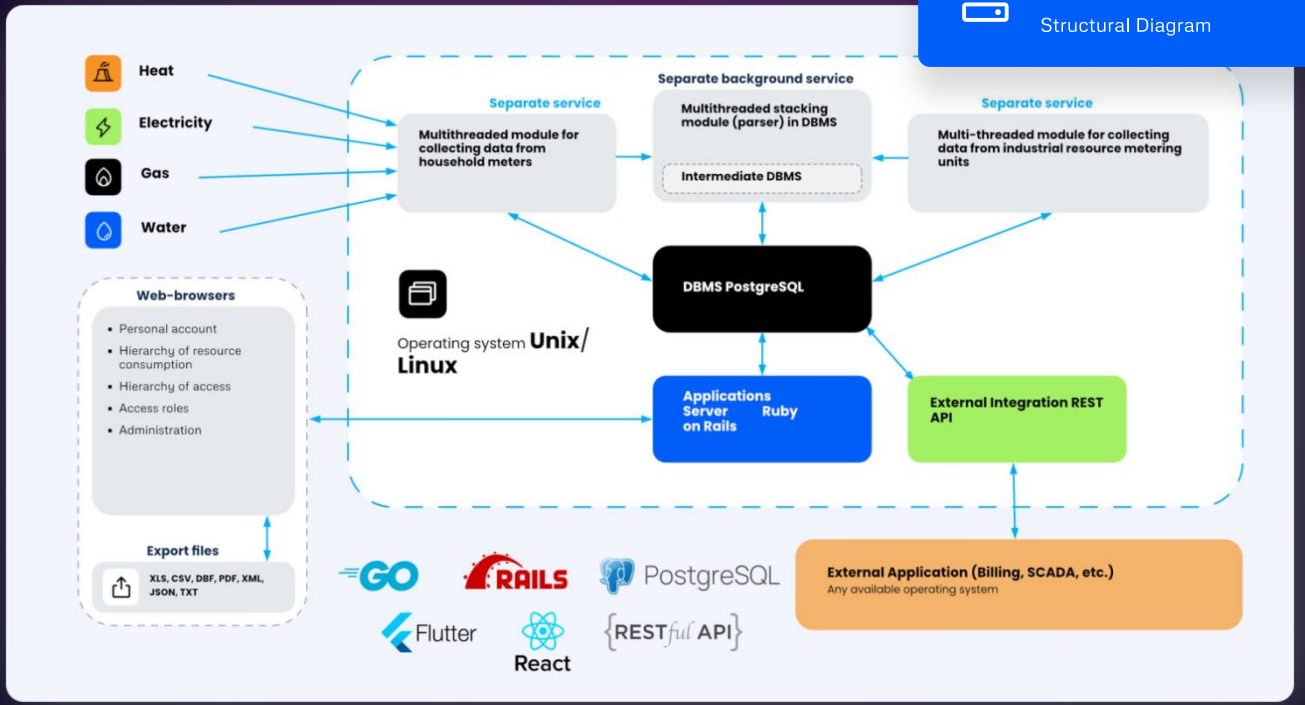
High Availability

Ensuring continuous operation of the server system and minimizing downtime.



Data Collection Server

Structural Diagram

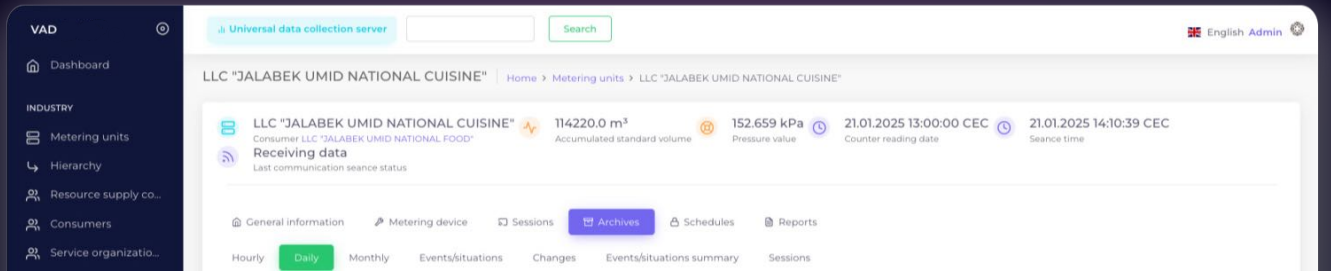


iOS/Android Mobile App

Monitoring and analysis of energy consumption (natural gas, electricity, cold and hot water) of one and/or several objects; push notifications of emergency events; archive of events that occurred in the property; information on tariffs and charges.

Platform Features

- Secure data collection server
- OpenSource libraries and open DBMS
- Built-in support for over 300 types of devices
- City-Region-Country-World Scaling
- Unified user interface for all devices
- Quickly add drivers for new devices
- Multi-language platform interface
- Ready-made integration scripts



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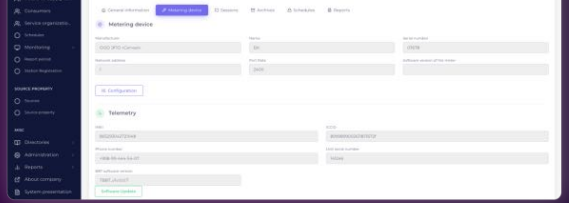

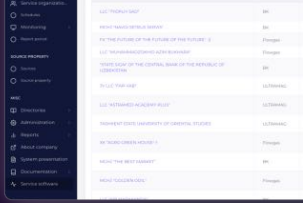

Our Contacts

We're ready for mutually beneficial partnership, full/partly copyright transfer, free source code training, deployment of production in the country of a customer.

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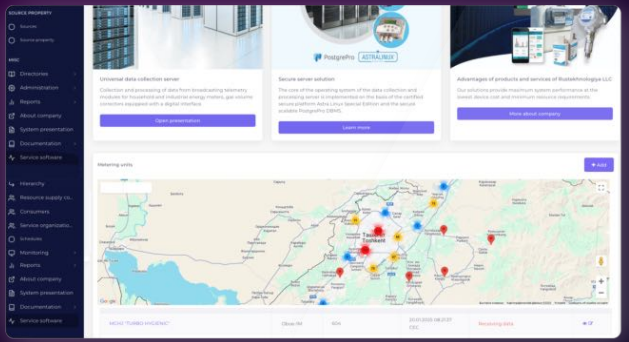

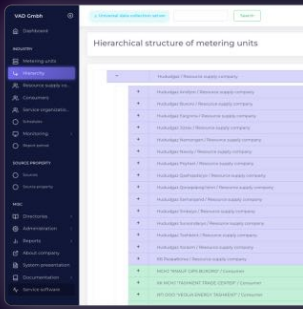

Watch Video Presentation

Read more about Platform