



Spring '23 Release

Features, updates, and integrations around EdgelQ's DeviceOps platform for connected product companies



Customer

```
require 'uri'  
require 'net/http'  
require 'openssl'
```

```
url = URI("https://api.edgeiq.io/api/v1/platform/user/  
authenticate")
```

```
http = Net::HTTP.new(url.host, url.port)  
http.use_ssl = true
```

```
request = Net::HTTP::Post.new(url)  
request["Accept"] = 'application/json'  
request["Accept"] = 'application/json'  
request["Content-Type"] = 'application/json'
```

Parking Sensor

Created
30 Dec 2022

The sensors in the front and rear bumpers ultrasound signals which are reflected by an obstacle in the detection range.

Manufacturer: Mercedes Benz
Model: Model 230
Device type: Gateway

230 Devices

145 ONLINE 60 IDLE 10 OFFLINE 20 NEVER REPORTED



Product

Device Errors



Field Service

[View more](#)

What's Inside

Glossary



A collection of terms we use throughout this release and will refer to repeatedly

Updates



All the latest features, functionality and integrations we are excited about, often with a sneak peek of what's on the horizon

Section 1

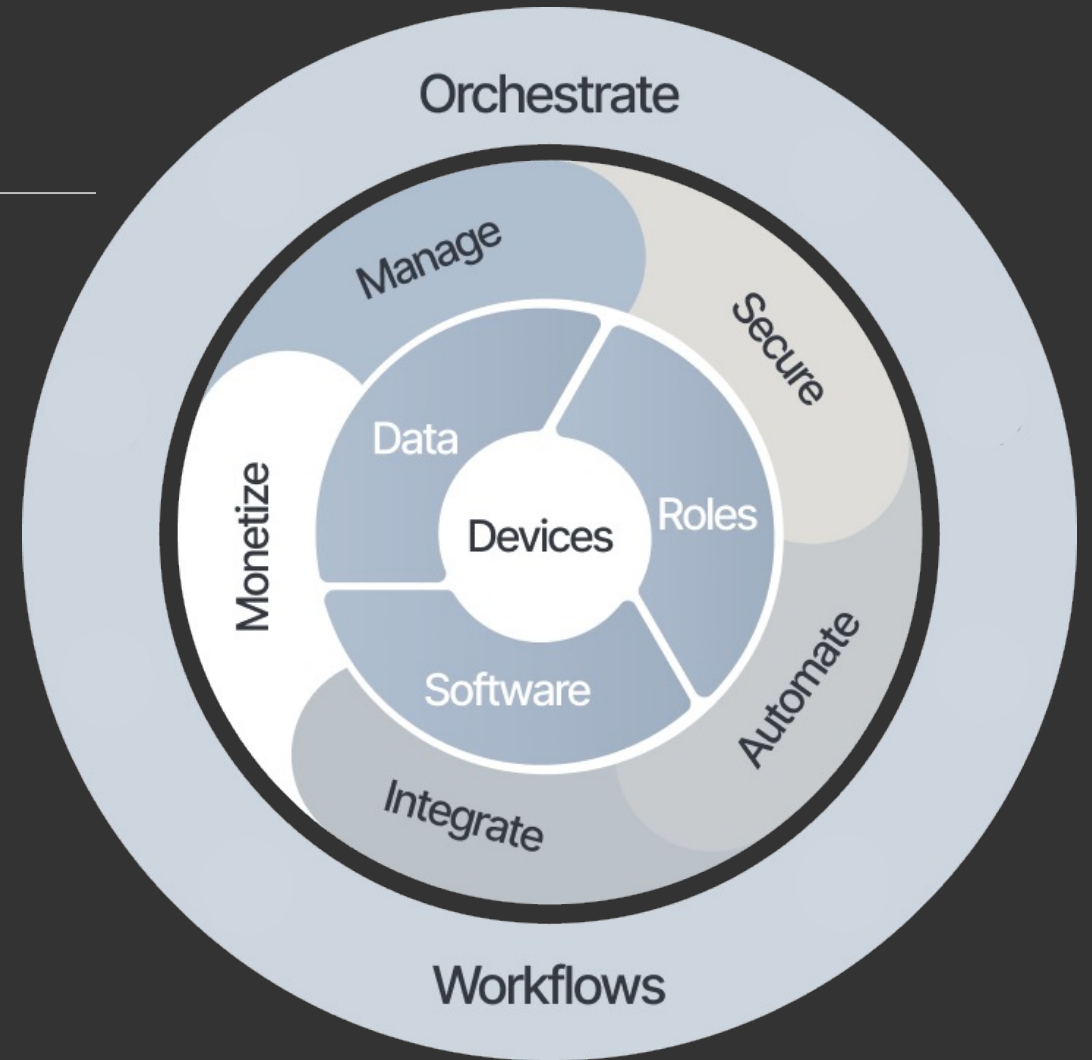
Glossary

DeviceOps Terms to Know



DeviceOps

the lifecycle management of connected devices, their data, and the orchestration of workflows throughout their value chain of stakeholders, applications, and infrastructure



Core DeviceOps Capabilities



Device Management

Define device profiles, bulk onboarding, onboarding, lifecycle/state management, wellness monitoring, alerting and notifications, remote diagnostics, commands, configuration and software update management



Security and Administration

Granular, role-based access at the user and account levels, configurable user profiles, multi-tier hierarchy support for nearly unlimited account/sub-account layers. Multi-factor authentication, data encryption for data in transit, device-initiated service engagement, Secrets feature for storing third party service credentials.



Data Management

Ingest, normalize, analyze, visualize, federate and store device and telemetry data over any network and any protocol. Bring your own long term data storage and analytics services.



Workflow Orchestration

Dozens of native workflows involving device provisioning, event management and BYOA integrations. A nearly infinite number of business processes can be automated using workflow creation/management services.



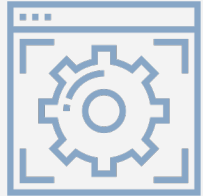
Service Integration

Bring-your-own-cloud and account integrations for core infrastructure, data and enterprise application services. Marketplace of pre-built integrations for select AWS, Azure and Google Cloud Platform IoT, Pub/Sub and data services.

Section 2

Spring '23 Release Updates

Platform Improvements

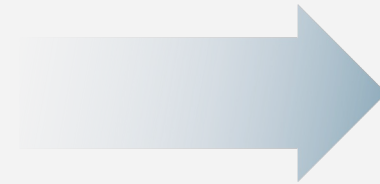


Transformed User Interface

DeviceOps task-focused interface that is organized for the way you work, streamlined and adaptable

Benefits:

- Easier for customers to realize value on Day 1 as UI is intuitive and complements our API
- Easier for non-technical, operational staff to use the application
- Designed for efficiency and scale



Rich Device Filtering

Nearly limitless ways to tag and filter and view millions of devices by type, model, customer account, location, status, and more to quickly find the device or fleet of devices that are of interest for that task.

Benefits:

- Saves vast amounts of operational time and money
- Quickly find and take action on a target device or set of devices that are relevant for a particular action

Platform Improvements



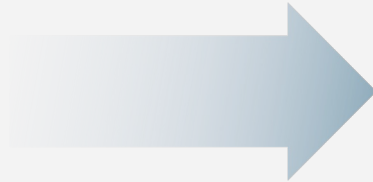
Support for LWM2M

Expands the types of devices EdgelQ supports in addition to MQTT and cloud-managed devices

Benefits:

- Reduces data transfer (up to 70% at initial connection and 30% at steady state) and data usage costs*
- Lower power consumption (33% lower)
- Better coverage and mobility
- More compact size
- Enables creation of digital twins
- Now available for highly constrained devices that are only running an RTOS and using microcontrollers

*LWM2M savings example for 25K devices - 2MB per month @ 50% savings @ \$0.80/MB = \$720K over 3 years



New Data Ingest Protocols

Added support for:

- **Google Pub/Sub:** Devices can now publish data on a topic and EdgelQ will subscribe to that topic and ingest data and orchestrate that data flow to the desired endpoint
- **SNMP Polling Protocol Support:** EdgelQ can now ingest and organize health and status data from devices using the widely deployed Simple Network Management Protocol (SNMP)
- **“Cloud native”** - HTTP “push” - device sends data to us; HTTP “pull” - we get data from some endpoint on a schedule; GCP Pub/Sub
- **Edge Service - TCP; HTTP server;** HTTP client; Shell command; SNMP polling; Modbus; BACnet; CANbus

Benefits:

- Single platform for all DeviceOps capabilities reduce development investment and OpEx costs
- Reduce training time

Platform Improvements



Multi-Tier User and Account Hierarchy

Flexibility to create unique accounts and sub-accounts assigned to affiliates, such as customers and partners.

Enables the ability to map devices to unique and distinct device structures with the granularity to model your service the way your business is organized.

Create device profiles for different accounts in different regions with different support structures so that those organizations have access to the devices under their domain

Benefits:

- Provides access at the User and Account level to only the devices that are authorized to enforce and comply with your enterprise security model
- By limiting access to devices at the Account and/or User level - your organization can save a vast amount of operational time and money by being able to find, control, and monitor only the relevant devices simplifying your operations



AWS Support

EdgeIQ DeviceOps Platform is now listed in the AWS Marketplace for purchase. Enhanced AWS IoT Greengrass 2.0 Support, including:

- Ability to support zero-touch deployment and upgrades of Greengrass on target edge devices
- Ability to define multiple Thing Groups on a device
- to ensure the correct deployment of applications on edge devices

Benefits:

- Bring-Your-Own Account
- Dramatically streamlined provisioning and management workflows
- Eliminates manual configuration of services and certificate management

Device Lifecycle Management



Device Escrow State

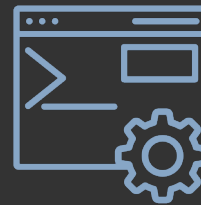
(Transfer Capability)

As part of Device State Lifecycle Management - Escrow State provides device manufacturers the ability to pre-provision devices with our management software and transfer devices to customer accounts at a later date.

Ideal where the ultimate destination of the device is not known during manufacturing or imaging so the device is put into a state that can easily be deployed and configured with minimal effort.

Benefits:

- Reduces time and cost to deploy by being able to manufacture, provision, and discover devices "in bulk" in your manufacturing process and DeviceOps platform
- Supports various reseller and depot models with the flexibility to quickly deploy pre-discovered devices to any organization through transfer Accounts and Users



User Defined Commands

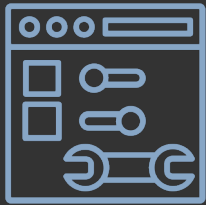
Create, manage and execute at-scale user-defined commands on any device.

Using EdgeIQ's JSON- Compatible templating language, users can define virtually any command or set of commands to run on an edge device. Common commands include standard OS or Application commands; however, the possibilities are endless. Applicable for, but not limited to, user-specific configuration, deployment, status monitoring, control of edge application/services, and diagnostics.

Benefits:

- Provides unlimited control over a fleet of devices to perform actions at scale to reduce operational costs
- Empowers users with the ability to create any command to fit their operational needs without extensive coding or scripting
- Access to User-Defined Commands is controlled via Account and Users - only authorized users can execute specific pre-defined operations. This allows for organizational scale while retaining control without extensive training - enabling more people to take action

Device Lifecycle Management



Configuration Management

Provides a flexible method to configure or reconfigure any device remotely. Configures are pre-defined and can be sent to a device or fleet of devices. There can be multiple configurations stored in the EdgelQ platform that can be applied to a device or fleet of devices. Using our JSON-compatible configuration language - any attribute can be defined and set. Examples of attributes can be Wi-Fi settings, LED configuration, screen background, and default Pan/Tilt/Zoom position.

Benefits:

- Quickly and automatically configure or reconfigure devices at scale reduces operational expense while also reducing the chance for human error (vs. manual configuration/operation)
- Reduce training by tightly controlling and programmatically defining configurations on devices



Data Workflow

Data Transformation Workflow Action

Enables incoming data to be transformed on a granular basis (by device, fleet, user, account) on the fly and sent to a destination endpoint

Enables the data to be normalized for utilization by different users and systems without the need for further manual or automation processing

Various transformations are supported including temperature, time, cleansing, replacement, calculations, and string/number conversation

Benefits:

- Efficient integration of device data into other systems without the need for manual or automatic processing
- Reduce manpower by automatically processing data
- Reduce administrative data wrangling

Policies

Q Search

Active ▾

Account ▾

Category ▾

Main Entrance East

SENSORS

Active

Main Entrance West

DIAGNOSTICS

Deactivate

Warehouse Fro

CCTV

Deactivate

West Wing Temperature

SENSORS

Deactivate

West Wing Temperature

SENSORS

Active

Backyard Secu

CCTV

Active

East Wing Temperature

SENSORS

Active

East Wing

CCTV

Deactivate

Power Output T

DIAGNOSTICS

Deactivate

West Wing Humidity

SENSORS

Active

Production Line

CCTV

Deactivate

Garage & Parkin

CCTV

Active

East Wing Humidity

SENSORS

Deactivate

Packaging Line

CCTV

Active

Garage Perimet

SENSORS

Deactivate

Diagnostics and Repair

User-Defined Remote Diagnostics

Provides the ability to set up user-defined diagnostics commands that can be run on a device and get back device responses to help troubleshoot devices that have issues

Meant to be deployed for tier 1 support staff and used as part of a diagnostic workflow - this enables a programmatic and repeatable process to determine the fault and restore devices to service

These commands can also be integrated into a run book environment to be executed automatically

Benefits:

- Quickly determine faults and return devices to service
- Scale organization by enabling Tier 1 staff to address 90%+ of issues freeing escalation teams to only address the higher tier issues

Automatic Repair Commands

Automatically take remediation action on devices that have issues

These can include things like applying new configurations or settings, rebooting the device, updating software, or reconfiguring network settings





Historically DeviceOps has been point solutions, expensive DIY, and unfulfilled dreams. EdgelQ is delivering the most comprehensive DeviceOps Orchestration Platform to enable the Connected Product Economy to deliver their strategy. Our Winter '23 release is another milestone in delivering our DeviceOps vision.



Tony Lapolito - Chief Product Officer, EdgelQ

Learn More

- Visit our Release Blog
- Review Documentation
- Learn about DeviceOps

