



Integrate Milesight Gateways and Devices into the Ecobook Platform



Version Change Log			
Version	Revision Date	Revision Details	Revised By
V1.0	20250510	Initial	Lockon



Preface

Ecobook is a smart workspace management platform developed by Skynapse Business Technology Pte Ltd, based in Singapore. It aims to help organizations optimize resource allocation for meeting rooms, workstations, and visitor management. Since its inception in 2008, Ecobook has evolved from a simple web-based application into an enterprise-grade solution, widely used in corporations, educational institutions, community centers, and co-working spaces.

Ecobook offers a variety of core features, including meeting room and desk booking systems, digital signage panels, visitor management, data analytics, and integration with Microsoft 365 and Google Workspace. Users can book and check in through web portals, mobile apps, or digital signage. The platform also includes intelligent recommendation features to prevent resource conflicts, streamline workspace management, enhance employee experience, and support the hybrid work model for greater collaboration.

This document demonstrates how to integrate the UG65 gateway directly with the Ecobook platform, using the AM308 and VS340 devices as examples to walk through the complete setup process.

1. Prerequisites

- **Gateway Model:** UG65 (UG56 and UG67 are also supported)
- **Sensor Models:** AM308, VS340
- **Internet Access:** The gateway must be connected to the internet

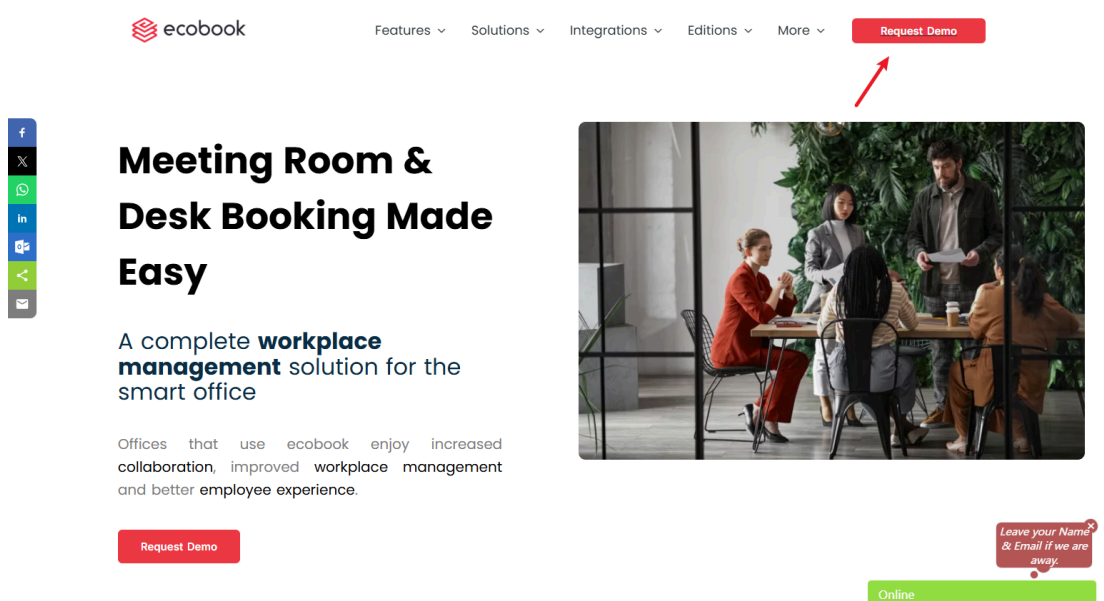
Important Note:

Ecobook currently supports AM series products, as well as the VS340 and VS341 models. Support for more types of sensors is continuously being added. For the latest device compatibility information, please contact Ecobook directly.

2. Obtain Basic Platform Information

Visit: [🔗 Meeting Room Booking System | Desk Booking System | Ecobook](#)





Click the "**Request Demo**" button and fill in the required information based on your actual use case. In the "Message" field, clearly specify the types of devices and gateways you intend to use.

After receiving your request, the Ecobook team will reach out and provide two key parameters:

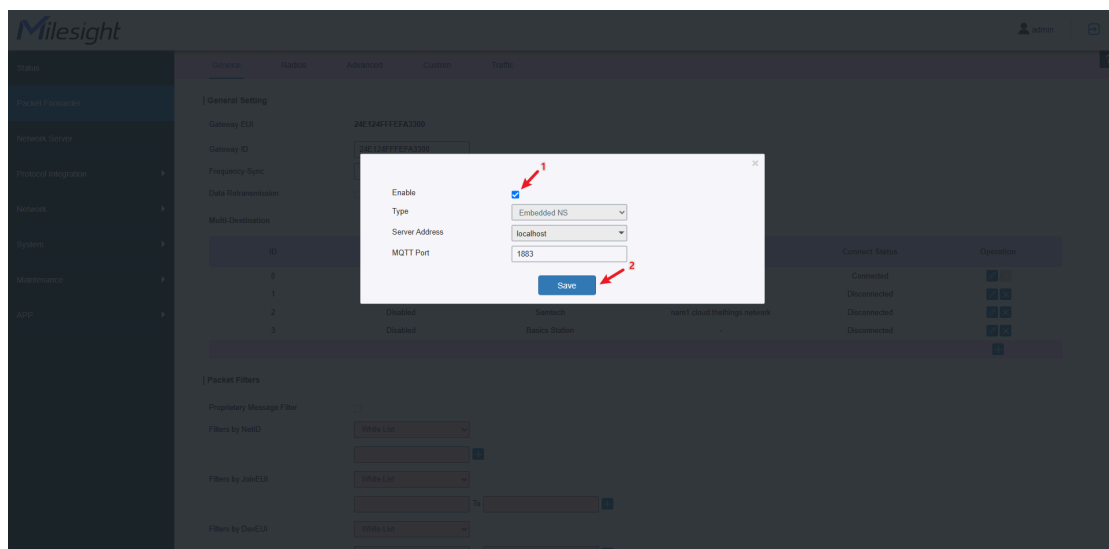
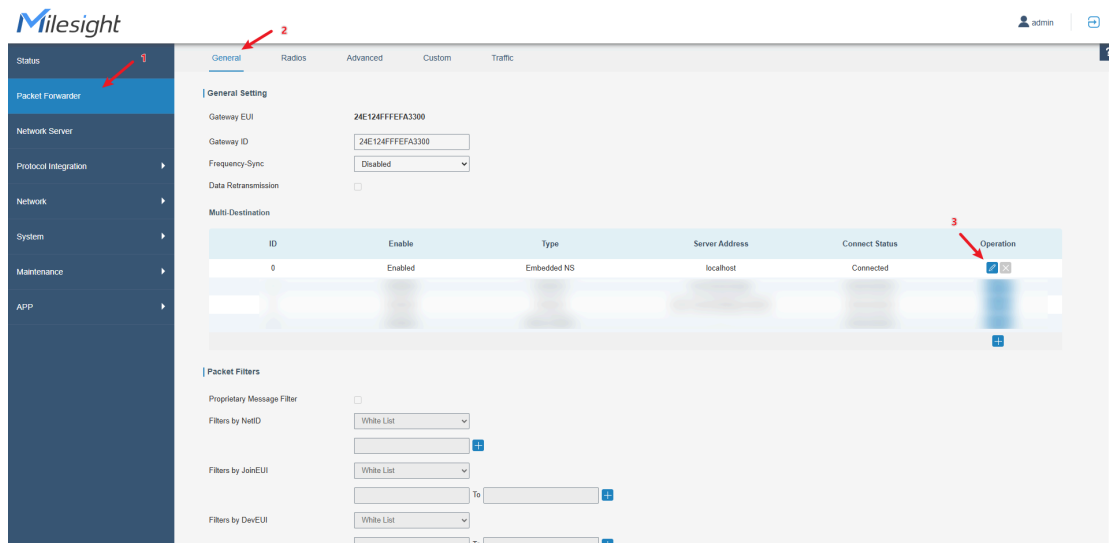
- **URL Endpoint** (varies depending on sensor type)
- **Token** (sensitive information, not displayed here)
- **API Documentation:**

[API Doc - Ecobook Events Services System Specifications \(v1.0\)](#)

3. Gateway Configuration

3.1. Enable Built-in Network Server (NS)

Log in to the gateway management UI (refer this [article](#))and follow the screenshots provided in the guide.(If already enabled, you can skip this step.)



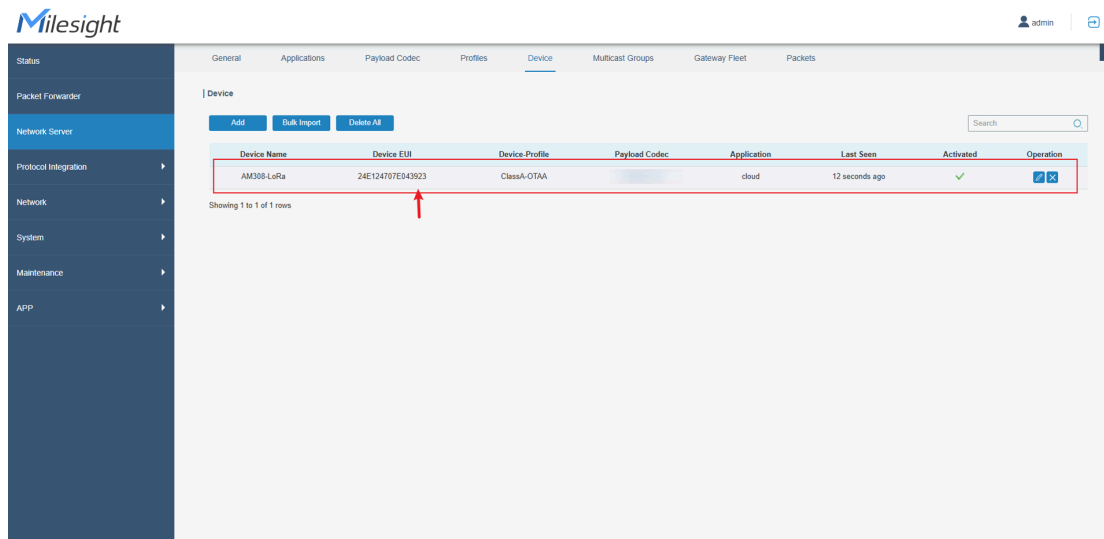
Once completed, the built-in network server is ready.

3.2. Add AM308 Device

Refer to the guide: "[How to Connect LoRaWAN Nodes to Milesight Gateway](#)" for step-by-step instructions.

After adding, the result should look like this:





3.3. Configure Decode Script

Refer to the guide: "[How to Use Payload Codec on Milesight Gateway](#)".

When adding custom decoding logic, insert your code inside the **milesight(...)** function, just before the **"return decoded;"** line.

This ensures your logic is executed properly and included in the final output.

- If using **AM series sensors**, add the following code:

```
// The following code is for AM series devices only

decoded.device_name = LoRaObject.devEUI;

decoded.virus_index = 0; // The device doesn't have this value, temporarily set to 0

decoded.pm1 = 0; // The device doesn't have this value, temporarily set to 0

decoded.pm25 = decoded.pm2_5;

decoded.pm4 = 0; // The device doesn't have this value, temporarily set to 0

decoded.co = 0; // The device doesn't have this value, temporarily set to 0

decoded.ozone = (typeof decoded.o3 !== 'undefined') ? decoded.o3 : 0; // Only specific models like AM319 have O3 detection

decoded.no2 = 0; // The device doesn't have this value, temporarily set to 0

decoded.light = decoded.light_level;

decoded.sound = 0; // Only the WS302 model has this field

decoded.h2s = 0; // Only the GS301 model has this field, and the field name can be used directly

decoded.nh3 = 0; // Only the GS301 model has this field, and the field name can be used directly

decoded.no = 0; // The device doesn't have this value, temporarily set to 0

decoded.so2 = 0; // The device doesn't have this value, temporarily set to 0

decoded.o2 = 0; // The device doesn't have this value, temporarily set to 0

decoded.hcho = (typeof decoded.hcho !== 'undefined') ? decoded.hcho : 0; // Only specific models like AM319 have HCHO detection
```

After saving the script, modify the AM308 device configuration to associate it with the custom decoder.



Status

Packet Forwarder

Network Server

Protocol Integration

Network

System

Maintenance

APP

General Applications **Payload Codec** Profiles Device Multicast Groups Gateway Fleet Packets

Custom Payload Codec

Name: AM308-EcoBook

Description:

Template: AM308

Payload Decoder

Payload Decoder Function

```
125 decoded.history = decoded.history || [];  
126 decoded.history.push(data);  
127 } else {  
128 break;  
129 }  
130  
131 // The following code is for set series devices only  
132 decoded.device_name = LoRaObject.deviceName;  
133 decoded.via_lines = 0; // The device doesn't have this value, temporarily set to 0  
134 decoded.pml = 0; // The device doesn't have this value, temporarily set to 0  
135 decoded.pml2 = decoded.pml;  
136 decoded.pml = 0; // The device doesn't have this value, temporarily set to 0  
137 decoded.co = 0; // The device doesn't have this value, temporarily set to 0  
138 decoded.co2 = 0; // The device doesn't have this value, temporarily set to 0  
139 decoded.co2 = (typeof decoded.co2 !== 'undefined') ? decoded.co2 : 0; // Only specific mode  
140 decoded.co2 = 0; // The device doesn't have this value, temporarily set to 0  
141 decoded.light = decoded.light_level;
```

Payload Encoder

Payload Encoder Function

```
1 /**  
2 * Payload Encoder for Milesight Network Server  
3 *  
4 * Copyright 2024 Milesight IoT  
5 *  
6 * @product AM308  
7 */  
8 function Encode(port, obj) {  
9   var encoded = {};  
10   return encoded;  
11 }  
12
```

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General Applications **Payload Codec** Profiles Device Multicast Groups Gateway Fleet Packets

Custom Payload Codec

Name: AM308-EcoBook

Description:

Template: None

Payload Decoder

Payload Decoder Function

```
143 decoded.h2o = 0; // Only the H3082 model has this field, and the field name can be used dir  
144 decoded.h3 = 0; // Only the G5301 model has this field, and the field name can be used dir  
145 decoded.no = 0; // The device doesn't have this value, temporarily set to 0  
146 decoded.so2 = 0; // The device doesn't have this value, temporarily set to 0  
147 decoded.o2 = 0; // The device doesn't have this value, temporarily set to 0  
148 decoded.hcho = (typeof decoded.hcho !== 'undefined') ? decoded.hcho : 0; // Only specific n  
149  
150  
151 return decoded;  
152  
153  
154 function readUInt16LE(bytes) {  
155   var value = (bytes[1] << 8) + bytes[0];  
156   return value & 0xffff;  
157 }  
158  
159
```

Payload Encoder

Payload Encoder Function

```
1 /**  
2 * Payload Encoder for Milesight Network Server  
3 *  
4 * Copyright 2024 Milesight IoT  
5 *  
6 * @product AM308  
7 */  
8 function Encode(port, obj) {  
9   var encoded = {};  
10   return encoded;  
11 }  
12
```

Status

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APP

General Applications **Device** Profiles Multicast Groups Gateway Fleet Packets

AM308-LoRa

Device Name: AM308-LoRa

Description: 24E124707E043923

Device EUI: 24E124707E043923

Device-Profile: Class-A-OTAA

Application: cloud

Payload Codec: AM308-EcoBook

Port: 1

Frame-counter Validation: ☐

Application Key: 5572404c59e6b4c65e2613230

Device Address: 0f0ee9f3

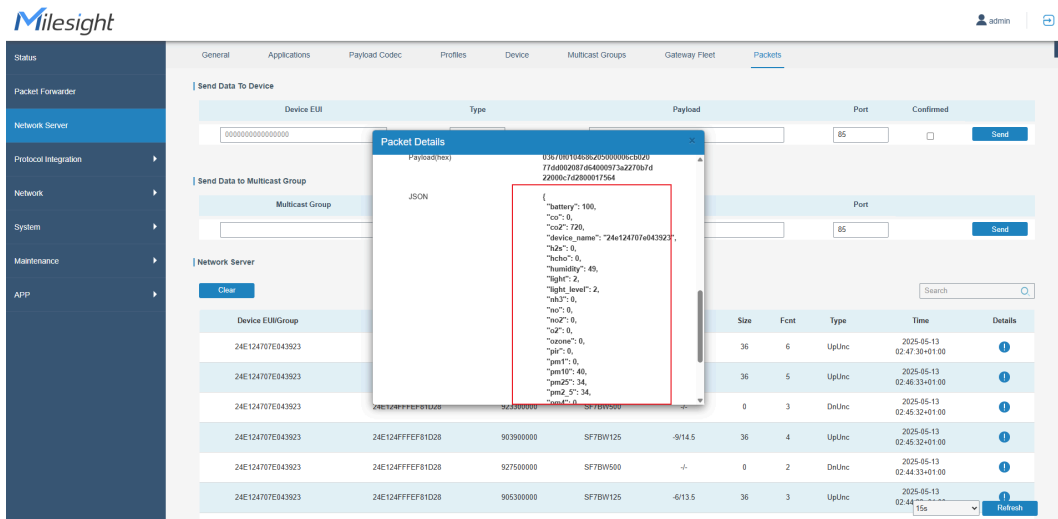
Network Session Key: d4676709643a440670740008

Application Session Key: 095d7dc64930512ea0922803

Uplink Frame-counter: 6

Downlink Frame-counter: 4

Save & Apply



- If using VS340 or VS341, use the following decode script:

```
// The following code is for VS340 and VS341 devices only

decoded.device_name = LoRaObject.devEUI;

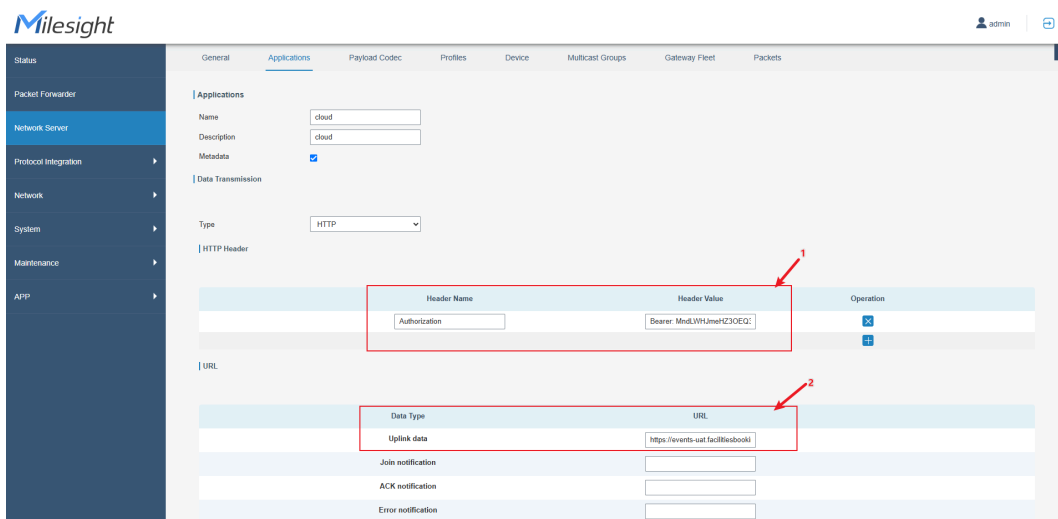
decoded.occupied = decoded.occupancy == 0 ? "false" : "true";

decoded.count = 0; // The device doesn't have this value
```

3.4. Configure HTTP Parameters

Refer to the guide: "[How to Connect Milesight LoRaWAN Gateway to HTTP\(s\) Server?](#)". The key step here is to configure the URL endpoint and token provided by Ecobook.

After configuration, the screen should look like this:



At this point, the gateway setup is complete. After a short wait, the sensor will automatically report data, which you can then monitor.

4. Observe Data

According to the API documentation, each type of sensor has a corresponding endpoint where you can check real-time data. Follow the instructions in the document to perform the query.

Below is the sample data from AM308 and AM319:



IAQ Sensor Data

token	lmdUWHUmat23OEGN30
device name	24E124707E043923
from timestamp (UTC) in yyyy-MM-dd HH:mm:ss format	2025-04-18 06:22:25
to timestamp (UTC) in yyyy-MM-dd HH:mm:ss format	2025-04-18 07:22:25
	Get

AM308 is ok , the cloud platform can get the live data and show up

Results

iaq_status_id	device_id	device_name	asset_id	virus_index	temperature	humidity	pm1	pm25	pm4	pm10	tvoc	co2	co	pressure	ozone	no2	light	sound	h2s	nh3	no	so2	o2	hcho	created_on
5874	118	24e124707e043923	24415	0.00	26.50	59.50	0.00	22.00	0.00	24.00	1.00	531.00	0.00	1007.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:25:52 AM
5873	118	24e124707e043923	24415	0.00	26.50	59.00	0.00	22.00	0.00	24.00	1.00	531.00	0.00	1007.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:24:52 AM
5872	118	24e124707e043923	24415	0.00	26.50	58.50	0.00	22.00	0.00	24.00	1.00	531.00	0.00	1007.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:23:52 AM
5871	118	24e124707e043923	24415	0.00	26.50	57.50	0.00	22.00	0.00	24.00	1.00	531.00	0.00	1007.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:22:50 AM
5870	118	24e124707e043923	24415	0.00	26.50	57.50	0.00	22.00	0.00	24.00	1.00	531.00	0.00	1007.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:21:52 AM
5869	118	24e124707e043923	24415	0.00	26.50	57.00	0.00	22.00	0.00	24.00	1.00	531.00	0.00	1007.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:20:51 AM
5868	118	24e124707e043923	24415	0.00	26.60	57.00	0.00	22.00	0.00	24.00	1.00	531.00	0.00	1007.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:19:55 AM
5867	118	24E124707E043923	24415	1.00	99.20	58.50	0.00	999.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:07:54 AM



IAQ Sensor Data

token	lmdUWHUmat23OEGN30
device name	24E124710D371756
from timestamp (UTC) in yyyy-MM-dd HH:mm:ss format	2025-04-18 06:22:25
to timestamp (UTC) in yyyy-MM-dd HH:mm:ss format	2025-04-18 07:22:25
	Get

this is AM319 device ,and the cloud platform can get device live data and show up.

Results

iaq_status_id	device_id	device_name	asset_id	virus_index	temperature	humidity	pm1	pm25	pm4	pm10	tvoc	co2	co	pressure	ozone	no2	light	sound	h2s	nh3	no	so2	o2	hcho	created_on
5889	117	24e124710d371756	24414	0.00	26.20	58.50	0.00	18.00	0.00	19.00	1.00	637.00	0.00	1006.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	4/17/2025 8:35:34 AM
5887	117	24e124710d371756	24414	0.00	26.30	58.50	0.00	18.00	0.00	19.00	1.00	657.00	0.00	1006.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	4/17/2025 8:34:34 AM
5886	117	24e124710d371756	24414	0.00	26.40	58.50	0.00	18.00	0.00	19.00	1.00	672.00	0.00	1006.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	4/17/2025 8:34:08 AM
5884	117	24e124710d371756	24414	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:32:50 AM
5879	117	24e124710d371756	24414	0.00	26.30	57.50	0.00	0.00	0.00	0.00	1.00	619.00	0.00	1006.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	4/17/2025 8:29:23 AM
5878	117	24e124710d371756	24414	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 8:28:55 AM
5866	117	24E124710D371756	24414	1.00	99.20	58.50	0.00	999.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 7:22:17 AM
5865	117	24E124710D371756	24414	1.00	26.20	58.50	0.00	999.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 7:09:16 AM
5864	117	24E124710D371756	24414	1.00	26.20	58.50	0.00	26.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 7:07:52 AM
5863	117	24E124710D371756	24414	1.00	26.20	58.50	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 7:00:51 AM
5862	117	24E124710D371756	24414	1.00	26.20	58.50	10.00	25.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 7:00:33 AM
5861	117	24E124710D371756	24414	1.00	26.20	58.50	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 7:00:11 AM
5860	117	24E124710D371756	24414	1.00	26.20	58.50	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 6:54:58 AM
5859	117	24E124710D371756	24414	1.00	26.20	58.50	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4/17/2025 6:49:57 AM

And the sample data from VS340:



Occupancy Sensor Data

token	Mhd.VHImehZ3OEQ3N36
device name	24e124787d350414
from timestamp (UTC) in yyyy-MM-dd HH:mm:ss format	2025-04-18 08:12:55
to timestamp (UTC) in yyyy-MM-dd HH:mm:ss format	2025-04-18 09:12:55
	Get

Results

occupancy_status_id	asset_id	device_id	device_name	occupied	count	created_on
29	24414	116	24e124787d350414	False	0	4/17/2025 9:32:33 AM
28	24414	116	24e124787d350414	False	0	4/17/2025 9:31:33 AM
27	24414	116	24e124787d350414	False	0	4/17/2025 9:30:50 AM
26	24414	116	24e124787d350414	True	0	4/17/2025 9:30:33 AM
25	24414	116	24e124787d350414	True	0	4/17/2025 9:29:33 AM
24	24414	116	24e124787d350414	True	0	4/17/2025 9:28:33 AM
23	24414	116	24e124787d350414	True	0	4/17/2025 9:27:33 AM
22	24414	116	24e124787d350414	True	0	4/17/2025 9:26:33 AM
21	24414	116	24e124787d350414	True	0	4/17/2025 9:25:33 AM
20	24414	116	24e124787d350414	True	0	4/17/2025 9:24:33 AM
19	24414	116	24e124787d350414	True	0	4/17/2025 9:23:33 AM
18	24414	116	24e124787d350414	True	0	4/17/2025 9:22:33 AM
17	24414	116	24e124787d350414	False	0	4/17/2025 9:21:33 AM
16	24414	116	24e124787d350414	False	0	4/17/2025 9:20:33 AM
15	24414	116	24e124787d350414	False	0	4/17/2025 9:19:33 AM

At this stage, your sensors can now report data in real-time to the Ecobook platform via the gateway.

-END-

