



Everbridge Access Control Integration Guide

Everbridge Suite

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Overview

The Everbridge Access Control Connector integrates Everbridge's event-based alarming system with the client system APIs.

The Connector is available on iPaaS (integration Platform as a Service). iPaaS is the middle layer between the connector agents and Everbridge Suite. iPaaS simplifies the installation and configuration of integrations with the Everbridge platform.

To enable iPaaS, ask your Everbridge representative to enable **EB Open iPaaS** and **Access API** for your Organization.

Use Cases

Access control integrations enable updating the Last Known Location of contacts based on their badging activity. The connector is designed to capture access events from the client system. Access events will update the dynamic location of contacts to reflect their most recent locations and the buildings they have entered.

By automatically updating the dynamic location of contacts, message senders can view the exact location of contacts on the **Everbridge Universe** map. Message senders can use polygons or rules to notify all contacts who may be affected by a location-based emergency in a specific building or area.

Prerequisites

NOTE: If the client integration will utilize Everbridge External IDs, proceed to Step 3.

You need to do the following in Everbridge:

1. Create an Additional Information field to hold the identifying attribute that will correlate badge holders with Everbridge contacts. For details on creating an Additional Information field, see the *Additional Information* section of the [Everbridge Suite User Guide](#).
 - **NOTE:** Only Text/Textbox and Number data types can be used to hold Badge IDs.
-
-
-

2. Set the value of that Additional Information field for the reach of your contacts.
3. Add or upload your buildings. For details, see the *Uploading Buildings* section of the [Safety Connection User Guide](#).
4. Add the name of your Access Control Integration to **Location Sources**. The name must match the “source” that is sent in the payload. For details, see *Location Sources* in the [Safety Connection User Guide](#).

Connectivity

External connections to Everbridge servers are made via HTTP/SSL on port 443 using TLS 1.2 and 1.3.

What's Next?

Perform the procedures in the Everbridge iPaaS Configuration section. As needed, the steps to modify agents, delete agents, or search for a specific agent are provided in the iPaaS Usage section.

Everbridge iPaaS Configuration

At the Organization level, you can configure shared agent settings from **Settings > Everbridge Open > iPaaS > Settings**.

Everbridge Identifier

If your people records contain Everbridge External IDs, select **External ID** in the Everbridge identifier drop-down list and skip to the **Reader/Location Mapping** section; otherwise, you will need to use an **Additional Information** field to hold the identifying attribute that will be used to correlate client users with Everbridge contacts.

- After you create an Additional Information field, you will see it in the Everbridge Identifier drop-down list.
- Select the correct attribute from the drop-down list.
- You are then prompted to do a full contact sync. This is required to update all your synced contacts to point to the new Additional Information field. If you click **Cancel**, the attribute reverts to the previous selection and the contacts do not sync.

Client Identifier

The **Client Identifier** is the field in client integration used to identify people.

Select one of the following two choices:

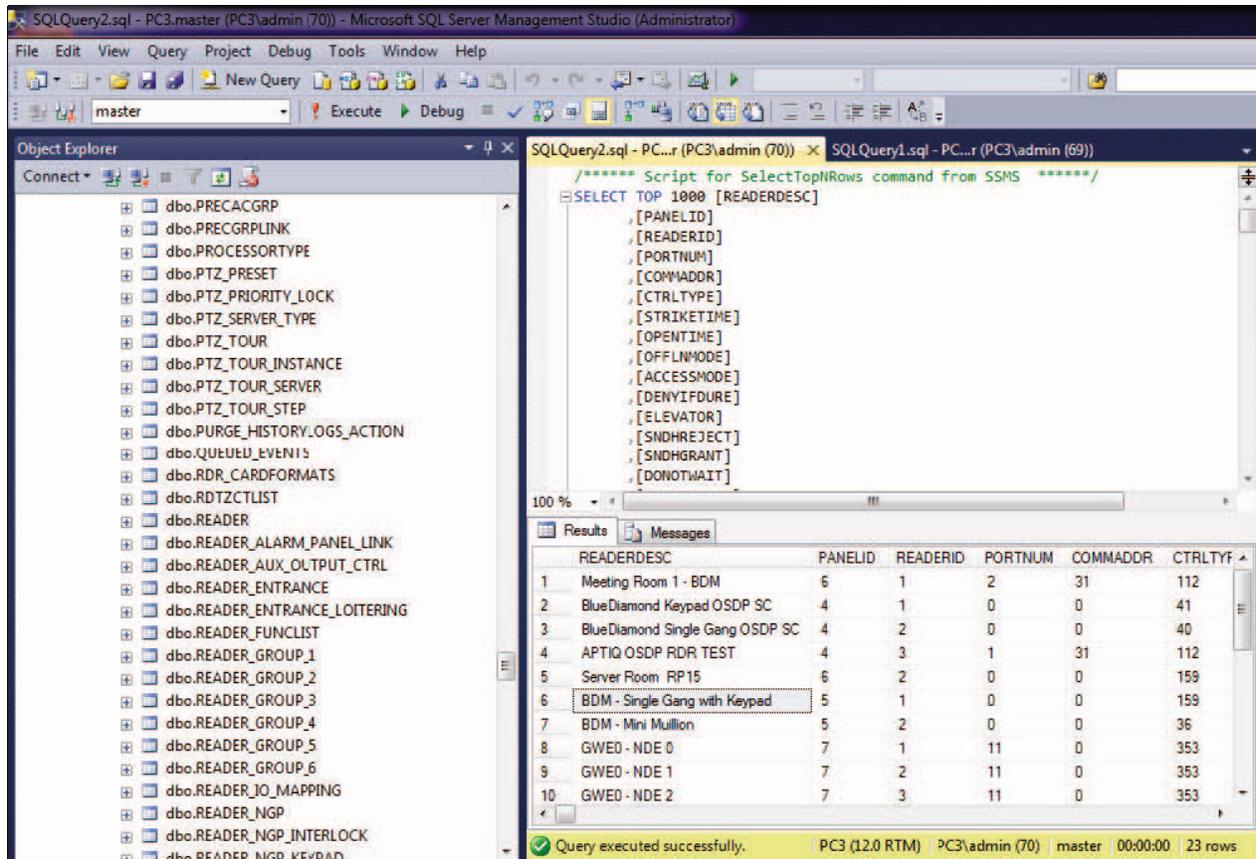
- **Default** - This is the Badge ID.
- **Other** - Enter the name of the field in the client integration that will be used to correlate people with Everbridge contacts.

Reader/Location Mapping

After you upload your buildings, you must map your Readers to Everbridge locations. Once the Everbridge client agent is running, the badge readers will automatically be sent to Everbridge every hour. You will then need to map each of these readers to Locations. Navigate to the **Reader/Location Mapping** page by selecting the **Reader/Location Mapping** link on the **Settings** page. Here you can add, modify, and delete badge Reader to Location mappings:

Reader	Description	Location Name (ID)
7_2	4th Floor	Los Angeles - (1245)
5_1	3rd Floor	Los Angeles - (1245)
4_1		Not mapped to a location

If you are manually adding readers, the Reader ID is a combination of PanelID and ReaderID. This information can be found in the **Access Control database** under **dbo.READER**. Looking at Row 6 in the image below, the Reader ID would be 5_1.

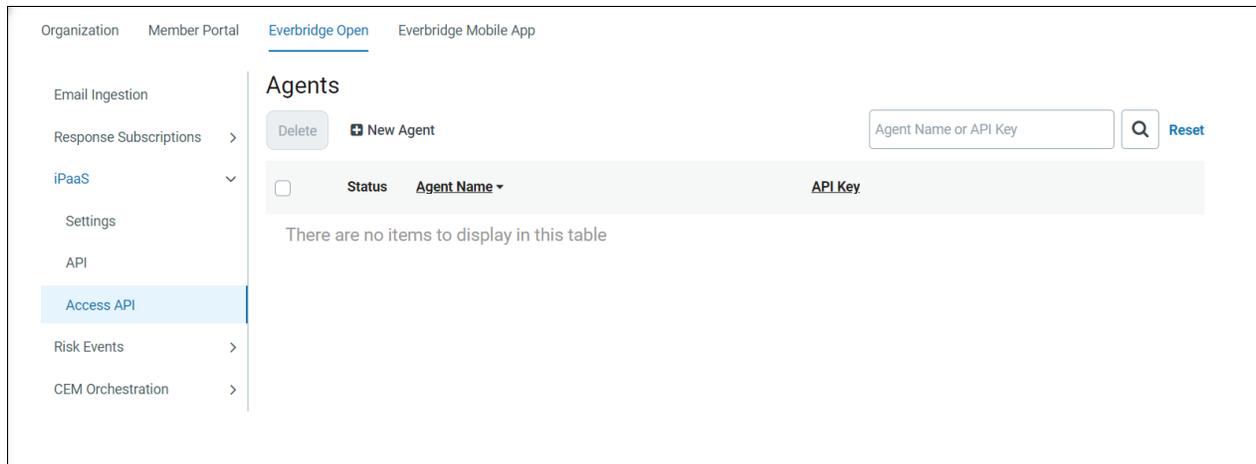


Refresh Everbridge Identifier

Refresh Everbridge Identifier will sync all contacts. You may want to do this if you have changed or added many users. Every hour modified contacts will sync automatically. This is not needed if your badge identifiers are the same as your Everbridge External IDs.

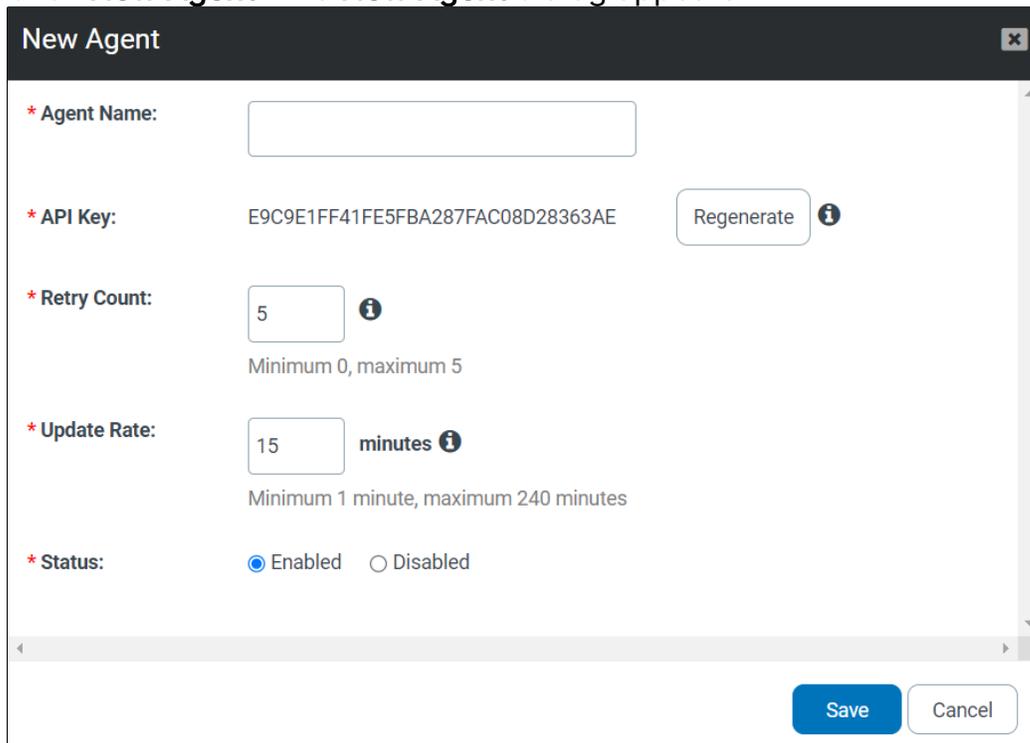
Adding Agents to Your Organization

The **Agent Configuration** is the group of settings that will be used to configure all of the agents used in your Organization. It can be configured from **Settings > Everbridge Open > iPaaS > Access API**.



To create a new Agent Configuration:

1. Click **New Agent**. The **New Agent** dialog appears.



2. Set the following fields:

- **Agent Name** - Display name used to refer to the agent.
- **API Key** - A code used by iPaaS to identify the connector/agent. This will be automatically generated when creating a new agent configuration in iPaaS.
- **Retry Count** - If a message fails, this is the number of retries that will be made. The value can be between 0 and 5.
- **Update Rate** - The frequency of sending data to Everbridge Suite via iPaaS. The value must be between 1 minute and 240 minutes.

- **Status**
 - *Enabled* - Turns on the connection between the connector and iPaaS so that iPaaS can receive messages.
 - *Disabled* - Turns off the connection between the connector and iPaaS so that no messages will be received.
- Click **Save**.

iPaaS Usage

Settings

The **Settings** tab will show a list of all the messages received by iPaaS from the client agent. This will help you troubleshoot issues when things are not working as expected.

The information displayed includes:

Field	Description
Source	This is the sourceSystemType field passed in the message.
Agent Name	The name of the Agent Configuration.
Request ID	Unique identifier that is automatically generated.
Message Status	One of the following values: SUCCESS, FAIL, or INPROGRESS.
Received Date	The date that the message was received.
Source ID	Unique identifier from client message.
Everbridge ID	The Incident/Scenario ID if one has been created.

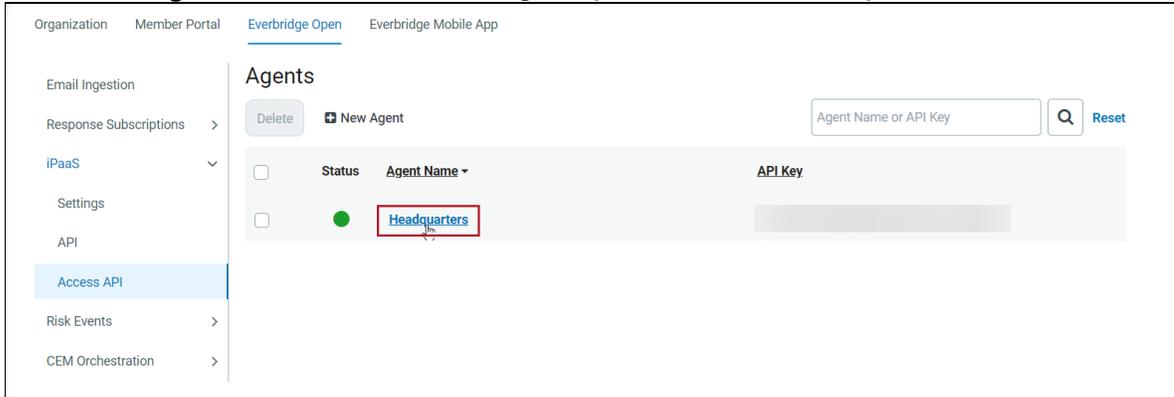
To get message details, click the link in the **Request ID** column.



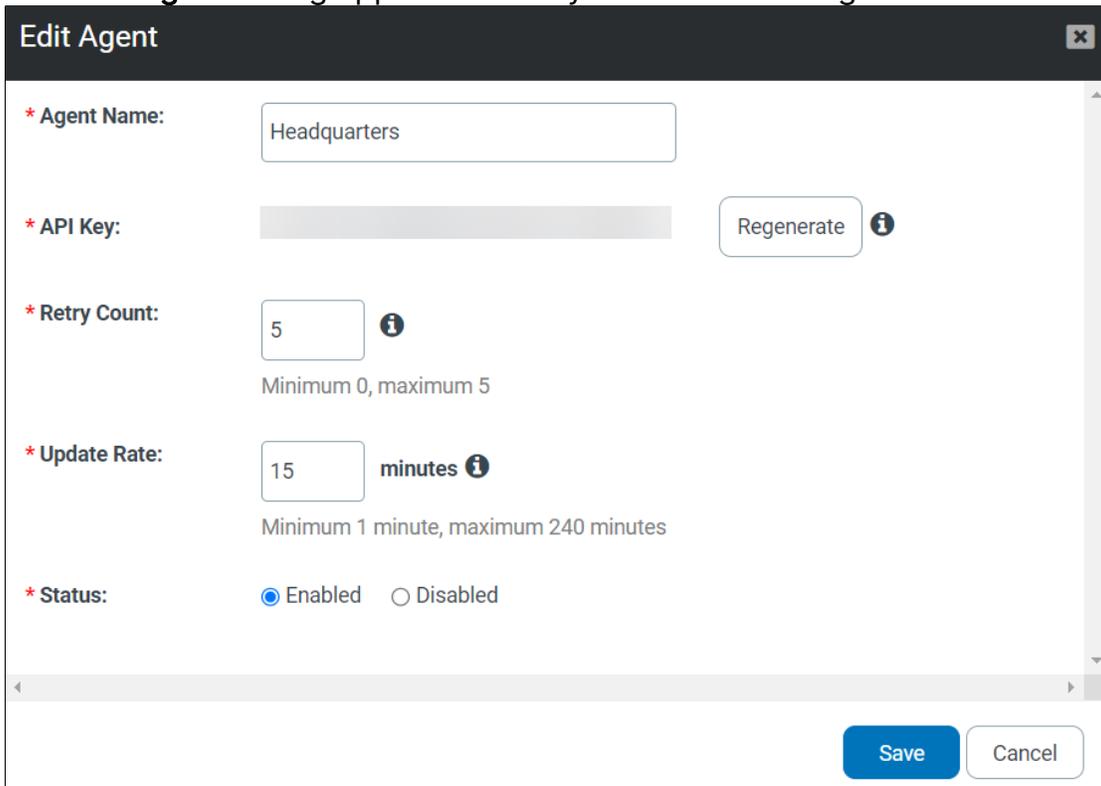
Modifying Agent Configurations

To modify Agent Configurations:

1. Click the **Agent Name** link of the agent you want to modify.



2. The **Edit Agent** dialog appears. Make your desired changes.



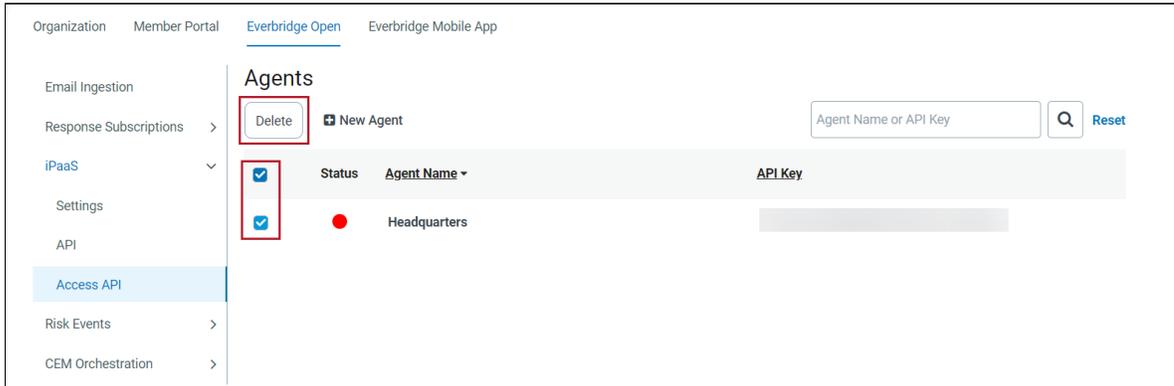
- If you need a new API key, click the **Regenerate** button.
- Optionally, change the **Update Rate** (minimum 1 minute, maximum 240 minutes) or the **Retry Count** (minimum 0, maximum 5).

3. Click **Save**.

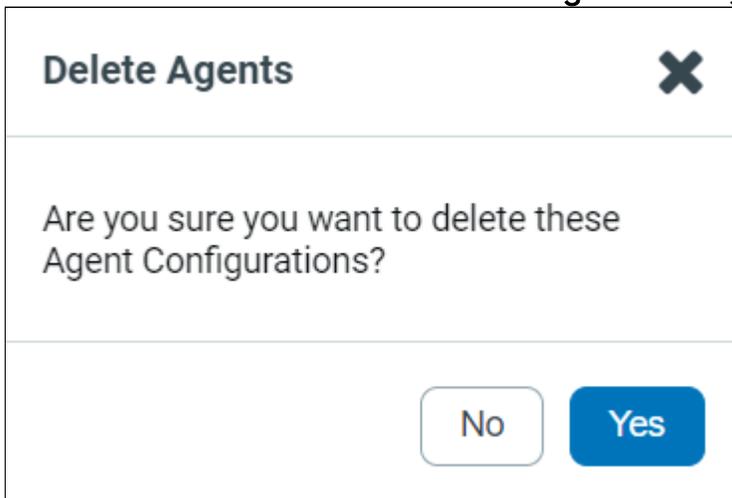
Deleting Agent Configurations

To delete agents:

1. Select the checkbox of each agent you would like to delete from the agent list view. If you would like to delete all agents, select the checkbox above the list to select all.



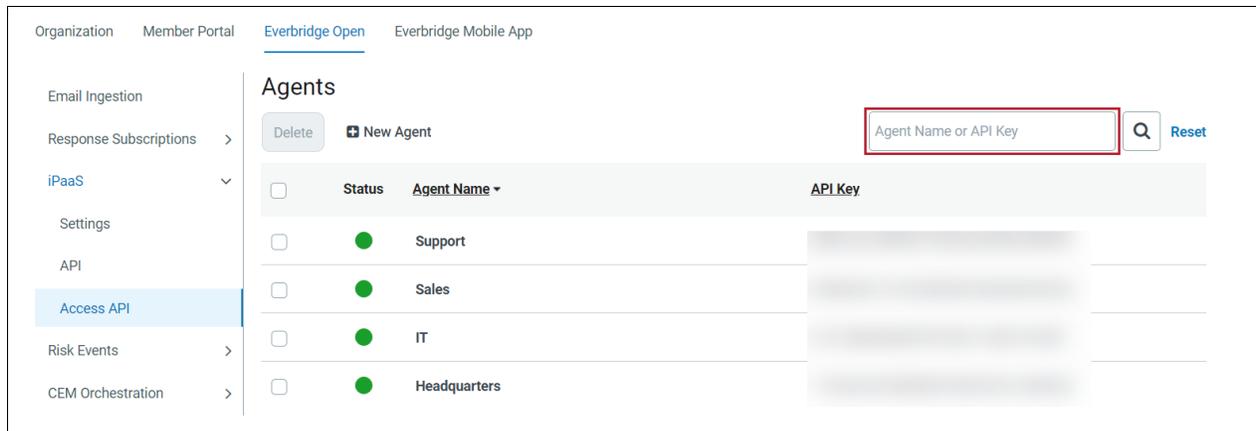
2. Click the **Delete** button. The **Delete Agents** dialog appears.



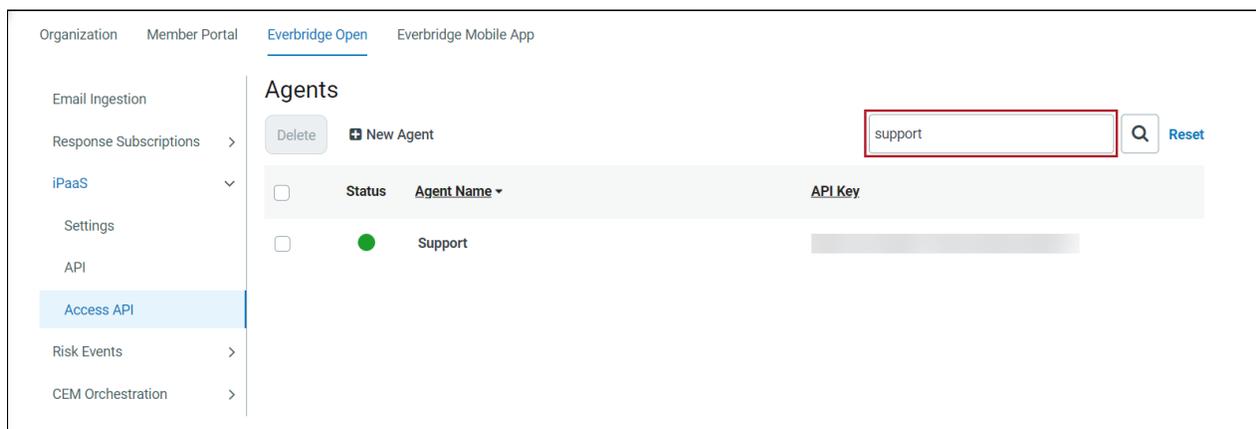
3. Click **Yes** to confirm the deletions.

Searching

You can search for agent configurations based on the API key or agent name. Type the API key or agent name and click the magnifying glass icon.

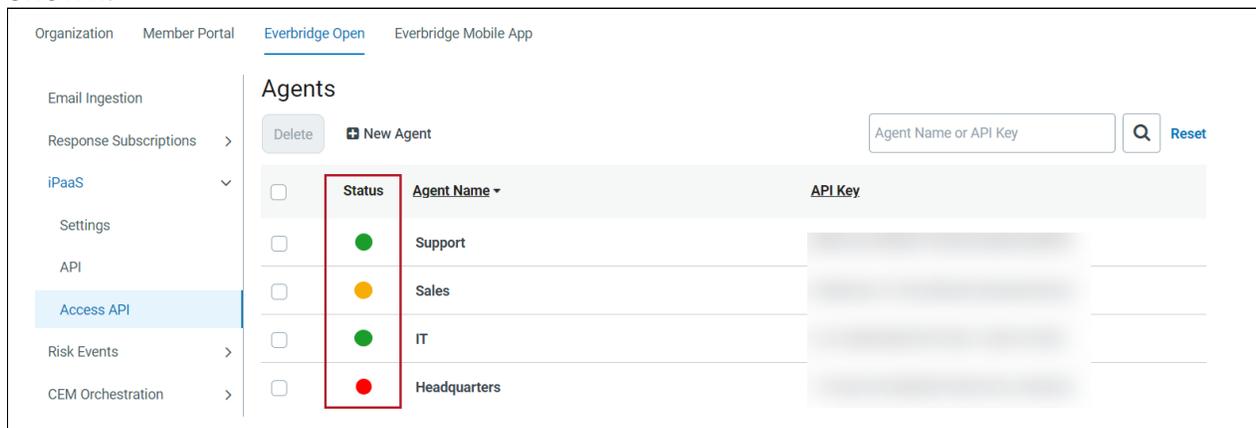


The item is displayed for you to view or modify.



Agent Health Check

The agent will be checked for a heartbeat every minute. If there is no response for two consecutive checks, a red status icon will be displayed in the agent list. If the connector is having issues communicating with the client, an orange status icon is shown.



iPaaS API

iPaaS uses RESTful APIs to:

- Update Last Known Locations.
- Send heartbeat information.

Authentication

The API key (generated when the agent was created) must be passed in each API call. The API key can be copied from the iPaaS UI. Each call must contain the following:

Header Name	Header Value
Content-Type Authentication	application/json <API Key from iPaaS agent configuration>

Access Control

To update Last Known Locations, use the following endpoint:

```
POST https://ipaas/v1/ingestion/safety
```

The payload should contain:

```
{
  "header": {
    "creationDate": "2019-03-T18:16:48.225Z",
    "requestID": "string",
    "sourceAddress": "string",
    "sourceSystemType": "string"
  },
  "locations": [
    {
      "arrivalTime": "2019-03-T18:16:48.225Z",
      "badgeId": "string",
      "direction": "INBOUND",
      "id": "string",
      "readerId": "string",
      "source": "string",
      "type": "string"
    }
  ]
}
```

Field	Description
Header	(Optional)
requestID	(Optional) Unique identifier that will be generated if not present in the payload.
sourceAddress	(Optional) The environment from which the message was generated.
sourceSystemType	(Optional) Displayed as Agent type in the Activity view.
locations	The array that will hold multiple badge events.
arrivalTime	Timestamp, in UTC, of when the badging event occurred.
badgeld	Identifier for the physical badge itself, or identity of the cardholder. This value must match the configured Client Identifier in the iPaaS UI.
direction	This value is not currently used. Valid values are INBOUND or OUTBOUND.
id	(Optional) A globally unique ID used for each message. A system-generated GUID is suggested. If omitted, this value is generated by the server.
readerId	The unique ID of the badge reader. The badge reader must be populated and mapped in iPaaS.
source	A description of the client integration system. Used for informational purposes in the iPaaS Activity Viewer and Everbridge Suite Location Sources.
type	The type of event this is. For Access Control integrations, this value should always be Access.

A successful response will appear like:

```
{
  "apiKey": "string",
  "creationDate": "2019-03-28T18:44:41.906Z",
  "ebIncidentIdentifier": "string",
  "eventCount": 0,
```

```

"events": [
  {
    "elementPath": "string",
    "errorDetail": "string",
    "errorType": "string",
  }
],
"externalCallLog": [
  {
    "callDateTime": "2019-03-28T18:44:41.906Z",
    "callURL": "string"
    "response": "string"
    "responseCode": 0
  }
],
"incidentOwnerUsername": "string",
"info": [
  {
    "infoDetail": "string",
    "infoPath": "string",
    "infoType": "string",
  }
],
"infoCount": 0,
"itsmclose": "true",
"itsmincidentID": "string"
"lastUpdateDate": "2019-03-28T18:44:41.906Z",
"matchConditionId": "string",
"messageType": "SAFETY",
"organizationId": "string",
"requestId": "string",
"retryCount": 0,
"sourceAddress": "string",
"status": "INPROGRESS"
"step": "string"
}

```

Badge readers can be manually added and mapped to existing Everbridge buildings in the iPaaS UI. They can also be sent to iPaaS via the API and manually mapped in the iPaaS UI or they can be mapped via the API.

To add, edit, or delete badge readers, use the following endpoint:

```
GET/POST/DELETE https://ipaas/v1/ingestion/safety/readersmapping
```

The payload should contain:



```
{
  "readerList": [
    {
      "assetId": "string",
      "assetName": "string",
      "description": "string",
      "id": "string"
    }
  ]
}
```

Field	Description
assetId	The identifier of an existing Everbridge building.
assetName	The name of an existing Everbridge building. Not used in POST. Returned from GET.
description	(Optional) Identifying information about the badge reader.
id	Badge reader identifier from the access control system.

A successful response will appear like:

```
{
  "modifiedCount": 0,
  "modifiedRequestCount": 0,
  "totalCount": 0
}
```

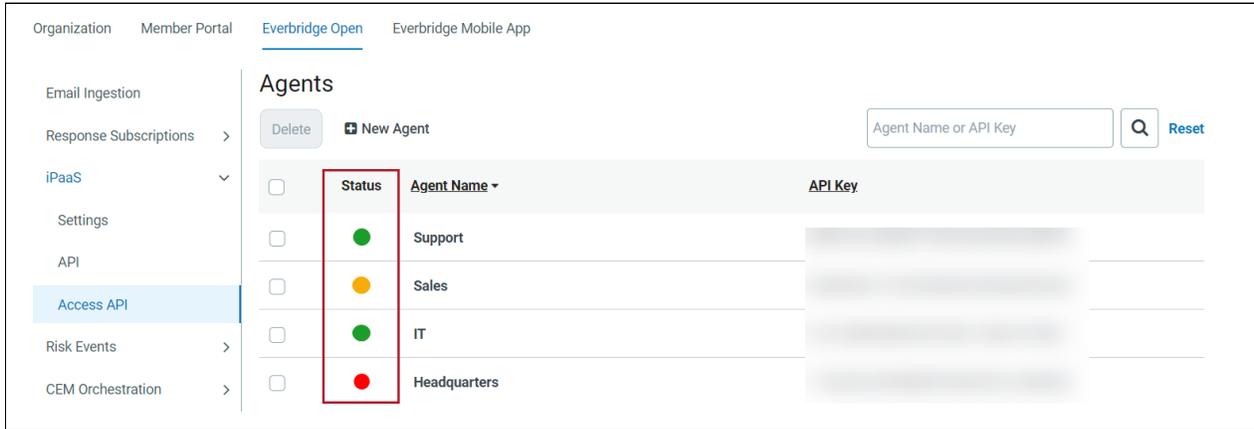
Heartbeat

The agent will be checked for a heartbeat every minute. If there is no response for two consecutive checks, a red status icon will be displayed in the agent list; otherwise, a green status icon will be shown to indicate that the connection is active. The heartbeat should be sent at approximately one-minute intervals.

A webhook will always display a green status icon and the heartbeat API should not be used. To send the heartbeat, use the following endpoint:

```
POST https://ipaas(ingestion-everbridge.net/v1/agent/heartbeat
```

The payload is {} and the only response is the HTTP status code. The expected result is an HTTP 200/OK response. Any other response is considered an error. Status is displayed and is changed as a result of sending a heartbeat.



Viewing Updated Locations in Everbridge

When integrating with access control systems, the Last Known Locations of contacts will be updated in Everbridge. This is shown in **Upload Dynamic Locations** page and the **Dynamic - Last Known Locations** section on the **Contact Information** page, which is accessed by clicking on the contact's name from the **Contact List**.

The screenshot shows the 'Contact Information' page for John Smith. The 'Dynamic Location(s) - Last Known' section is highlighted with a red box and contains the following data:

Location Name	Last Updated Date
Lansing	Apr 14, 2024 20:27:20 EDT

Other visible information includes: External ID: Contacts/V1LKL, Record Type: Employee, Country: United States, Time Zone: [blank].

The following is an example of the **Upload Dynamic Locations** page:

The screenshot shows the 'Upload Dynamic Locations' page with the following table of upload records:

File Name	Batch ID	File Size	Upload Date	Uploaded By	File Status	Records Received	Records Loaded	Upload Option
brianDynLoc.csv	220819891630...	563	Apr 15, 2024 15:52:28 EDT	[User]	Done	3	3	Update
last_known.csv	219620736761...	952	Apr 14, 2024 20:26:06 EDT	[User]	Done	5	5	Update
COR_94923.csv	219620736761...	300	Apr 10, 2024 10:09:50 EDT	[User]	Done	1	1	Update
brianDynLoc.csv	218442197735...	561	Apr 08, 2024 11:06:18 EDT	[User]	Done	3	3	Update
brianDynLoc.csv	218442197735...	570	Apr 08, 2024 10:53:11 EDT	[User]	Done	3	0	Update
brianDynLoc.csv	217700027387...	552	Apr 05, 2024 17:44:49 EDT	[User]	Done	3	3	Update

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Click on the magnifying glass next to an upload to view the **Upload Results** page, which details the records that were loaded with and without errors, and those that weren't loaded due to a critical error.

Upload Dynamic Locations > Upload Result
last_known.csv

Batch ID: 2196207367618687 | Status: Done | Refresh
 Sender: [redacted] | Records Received: 5

Loaded without error (5) | Loaded with error (0) | Not loaded - critical error (0)

External ID	Location ID	Arrival date and time	Expiration date and time
[redacted]	Lansing	2024-04-14T22:26:05-00:00	2024-05-12T22:26:05-00:00
[redacted]	Lansing	2024-04-14T22:26:05-00:00	2024-05-12T22:26:05-00:00
[redacted]	Lansing	2024-04-14T22:26:05-00:00	2024-05-12T22:26:05-00:00
[redacted]	Lansing	2024-04-14T22:26:05-00:00	2024-05-12T22:26:05-00:00
[redacted]	Lansing	2024-04-14T22:26:05-00:00	2024-05-12T22:26:05-00:00

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Clicking on the magnifying glass next to an External ID will open the details of the Last Known Location:

Loaded without error ✕

Last Known Location(s)

External ID	[REDACTED]
Location ID	Lansing
Arrival date and time	2024-04-14T22:26:05-00:00
Expiration date and time	2024-05-12T22:26:05-00:00
Street	[REDACTED]
Apt/Suite	
Floor number	
Room Number	
City	Milwaukee
State / Province	WI
Postal Code	[REDACTED]
Country	US
Latitude	[REDACTED]
Longitude	[REDACTED]
Source	Everbridge Mobile Safety App

Cancel OK