INTELLITHINGS

RoomMe PRO
Integration API

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Table of Contents

Introduction 3

Configuring RoomMe PRO API Integrations 3

RoomMe PRO API 5

Events 5

ROOM ENTRY EVENT 5

ROOM EXIT EVENT 6

SITE LOST EVENT 7

User Properties 8

Revision History 11

INTELLITHINGS

Introduction

RoomMe PRO is a smart phone and watch-based human room-level real time location system (RTLS) for light commercials and home applications.

The RoomMe PRO API is a local and cloud API for integrating RoomMe PRO with 3rd party systems and services. RoomMe PRO enables connected 3rd party systems and services to identify who is in a room for proactive and learning user experiences.

Configuring RoomMe PRO API Integrations

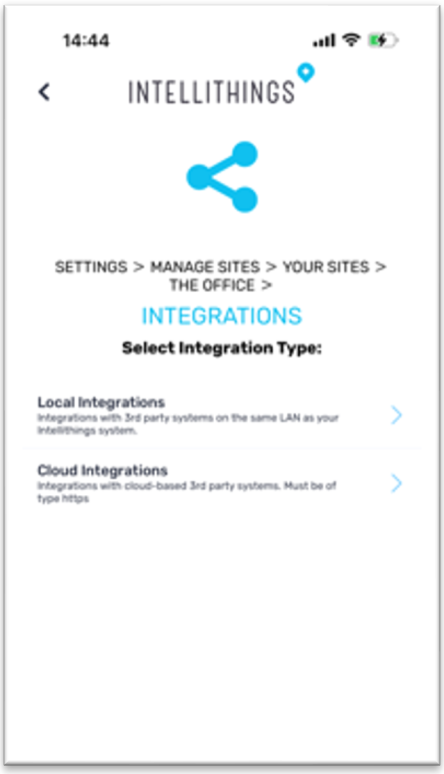
The RoomMe PRO API is enabled by defining an integration in the Intellithings RTLS app. Once the integration is set, the system starts sending HTTP(s) based updates to the configured server endpoint.

You can configure multiple integrations to different systems and endpoints.

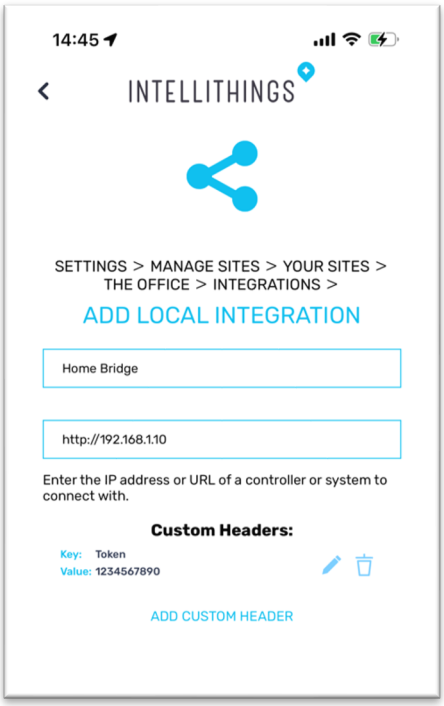
RoomMe Pro supports two types of integrations:

- Local Integration – Messages are sent to a local private endpoint within the LAN network to which the RoomMe PRO Repeater is connected, as **HTTP** post requests. Since the requests are sent from the repeater, it is important to verify that both the destination server and the repeater are on the same network.

- Cloud Integration – Messages are sent cloud to cloud, from the Intellithings cloud directly to the 3rd party system's cloud. Unlike local integrations, cloud integrations are sent over **HTTPS** protocol.



To configure an integration in the Intellithings RTLS app, go to Settings > Manage Sites > Your Sites > Site Name > Integrations and select the integration type (local/cloud).



Enter a name for the integration and the destination's address.

You can add custom headers to the payload such as tokens or any key/value pair as shown below.

Custom headers can help validate and identify the sender origin to filter unwanted requests.

INTELLITHINGS

RoomMe PRO API

RoomMe PRO API is a simple one-way API interface. Each message is sent as an HTTP(S) Post to the address defined in the integration. The payload itself is a json object.

There are 2 types of messages:

1. Events
2. Database Updates

Events

Events are sensor initiated updates that indicate a location change (entry or exit). The payload is a json object. In all events, the type field is “Event”. In addition, the packet holds the User Id and Name, the Room Name and the Sensor Id from which the event was generated.

The field ‘event’ holds the event type and additional information relevant to the event.

ROOM ENTRY EVENT

When a RoomMe PRO sensor detects an entry of a registered phone or watch to the room, a RoomEntry event is triggered:

```
{
    "type": "Event",
    "siteName": "The Office",
    "eventTime": "2023-03-06T11:25:03.971Z",
    "siteId": "1c111712-f911-43fe-846f-cfaaaa555e5e",
    "roomId": "441f6bbf-5824-44aa-8954-a07641b983d6",
    "sensorId": "441f6bbf-5824-44aa-8954-a07641b983d6",
    "userId": 85533493,
    "event": {
      "name": "RoomEntry",
      "inControl": true // OBSOLETE
    },
    "deviceType": "iPhone",
    "personalDevice": "11174a",
    "userName": "Joe",
    "roomName": "Living Room",
}
```

- Type – “Event” – indicates an event.
- siteId, siteName – The name and Id of the site from which the event is triggered.
- userId, userName – The name and Id of the user that entered the room.

- deviceType – The type of hardware (iPhone/Android/Watch) that was detected.
- personalDevice – The identifier of the device. Since users can have more than one personal device, this along with the deviceType help identify the specific device.
- roomId, roomName – The name and Id of the entered location.
- event – an object with property name - RoomEntry

ROOM EXIT EVENT

Room exit events are triggered when a RoomMe PRO sensor identifies that a user has moved to another room with a RoomMe PRO sensor. The "lastInRoom" flag tells if there are no other users in the room that the user has left. You'll want to consider this information when deciding about exit related operations, in case that there should be a different behavior when there are still people in the room vs when the user is the last person in the room.


```
{
    "type": "Event",
    "siteName": "The Office",
    "eventTime": "2023-03-06T11:25:03.971Z",
    "siteId": "1c111712-f911-43fe-846f-cfaaaa555e5e",
    "roomId": "441f6bbf-5824-44aa-8954-a07641b983d6",
    "sensorId": "441f6bbf-5824-44aa-8954-a07641b983d6",
    "userId": 85533493,
    "event": {
      "name": "RoomExit",
      "lastInRoom": true
    },
    "deviceType": "iPhone",
    "personalDevice": "11174a",
    "userName": "Joe",
    "roomName": "Living Room",
}
```


- lastInRoom – Boolean (true/false) was this person (device) the last in the room.

INTELLITHINGS

SITE LOST EVENT

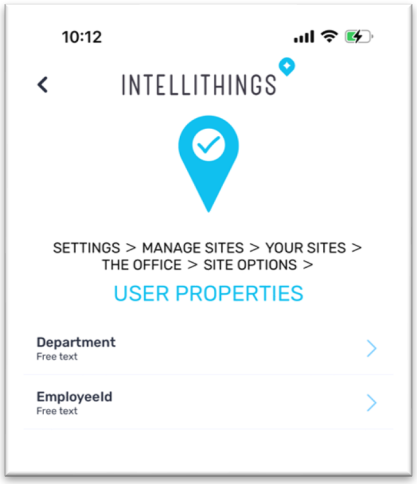
When a RoomMe PRO detects that a user is no longer seen by any of the site's sensors, after a while a LOST event is triggered to indicate that the user is no longer on site:


```
{
    "type": "Event",
    "siteName": "The Office",
    "eventTime": "2023-03-06T11:25:03.971Z",
    "siteId": "1c111712-f911-43fe-846f-cfaaaa555e5e",
    "roomId": "",
    "sensorId": "",
    "userId": 85533493,
    "event": {
      "name": "Lost",
    },
    "deviceType": "iPhone",
    "personalDevice": "11174a",
    "userName": "Joe",
    "roomName": "",
}
```


- Type – "Event" – indicates an event.
- siteId, siteName – The name and Id of the site from which the event is triggered.
- userId, userName – The name and Id of the user that left the site.
- deviceType – The type of hardware (iPhone/Android/Watch) with which the user was previously detected.
- personalDevice – The identifier of the device. Since users can have more than one personal device, this along with the deviceType help identify the specific device.
- event – an object with property name – Lost.

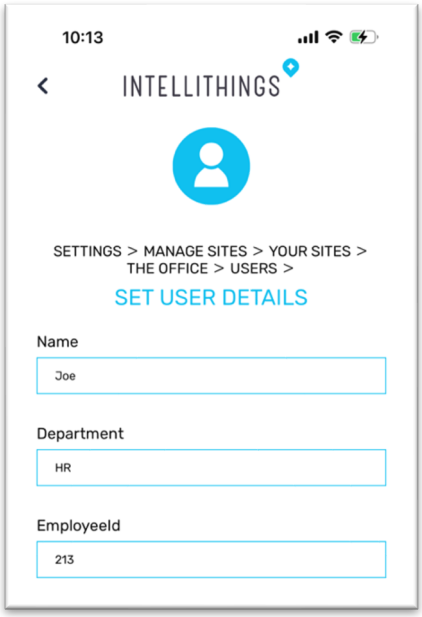
User Properties

RoomMe PRO assigns users with an internal user Id which in most cases won't align with these user Ids on connected systems. By using User Properties, RoomMe PRO enables adding user specific identifiers, such as 3rd party user ids, to triggered events.



User properties can be any additional information you might want to set for a user.

Add site-level user properties from the Intellithings RTLS app by going to Settings > Manage Sites > Your Sites > Site Name > Site Options > User Properties:



Then, in the Intellithings RTLS app, go to Settings > Manage Sites > Your Sites > Site Name > Users > Set Users Details and define user specific values for each user property:

When you define custom user properties, a userFields dictionary is added to events for users that have user properties defined. For example, in the event below, the field employee_id was added to the event payload:

```
{
    "type": "Event",
    "siteId": "72215159-dccb-46cd-bf3f-cdb7d05c6dc3",
    "siteName": "INTL Office",
    "eventTime": "2023-03-06T08:31:58.681Z",
    "roomId": "479d26d6-accf-448f-9561-8aafd6169bf2",
    "sensorId": "479d26d6-accf-448f-9561-8aafd6169bf2",
    "userId": 248439916,
    "event": {
        "name": "RoomEntry",
        "inControl": true
    },
    "personalDevice": "ed32dd",
    "userName": "Joe",
    "roomName": "Joe's Office",
    "userFields": {
        "employee_id": "100"
    }
}
```


Database Updates

Database updates provide a full picture about users, rooms and sensors as they are defined in a RoomMe PRO system.

Database updates occur when a RoomMe PRO system admin changes users / rooms / sensors aspects and triggers a Sensor Update is from the Intellithings RTLS app.

Database update has a type "Database". It includes an array of users and an array of rooms. Each user has User Id, Name and Type (owner/admin/member).
Rooms have Name and Sensor Id.

INTELLITHINGS

```
{
    "type": "Database",
    "users": [{
        "userId": 114662810,
        "name": "Joe",
        "userType": "owner"
    }, {
        "userId": 219227042,
        "name": "Jack",
        "userType": "member"
    }],
    "rooms": [{
        "name": "Living Room",
        "sensorId": "b1286486-0e27-44d8-8ad9-f06262ec6936",
        "roomMaster": -1 // OBSOLETE
    }]
}
```

userType can be one of the following:

- Owner – The user that created the site.
- Admin – A user with admin rights.
- Member – A regular user.

roomMaster is not used anymore and kept for backward compatibility.

INTELLITHINGS

Revision History

26/6/2019	Initial version	Avner
1/7/2019	Added field description	Avner
28/8/2019	Initial release to market	Oren
6/3/2023	Added Intellithings RoomMe Pro payload	Avner
13/3/2023	Added Lost event documentation	Oren