## kuando IoT Portal

### User Guide

Version 1.0



by Plenom.com

#### plenom

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#### kuando IoT Infrastructure

## kuando IoT Infrastructure

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## Architecture

#### Architecture

The kuando IoT Portal allows the configuration of 2 use cases with Busylight Devices:

- Show the occupancy status of a Microsoft 365 Meeting Room from the Microsoft 365 Meeting Room calendar
- Show the occupancy status of a flexible (non-bookable) Meeting Room using a PIR motion sensor in the room.

#### **Microsoft Graph API**

The Microsoft Graph API is used to access the Microsoft 365 Meeting Room list and their calendars. The application is a Multi-Tenant App and can serve multiple Microsoft Azure/ Microsoft 365 Tenants simultaneously. Configuration data is stored in a SQL database.

The drawing illustrates the system components.

The Plenom application is running in Microsoft Azure, residing in Norway and Ireland computing centers.





## Architecture Access Rights & Functionality

#### **Access Rights**

The list of required access rights which are necessary to let the application work with Plenom customers Microsoft Azure/ Microsoft 365 Tenant can be seen here.



#### Functionality

The Web Application is dedicated to handle various configuration and mapping tasks of the rooms and sensors.

The Microsoft 365 Room calendars are processed by an Azure Function every minute. If a Microsoft 365 room is marked as busy, the configured Busylight will switch to red, otherwise it will remain green.

The Flexible rooms are processed by a webhook triggered Azure http function. The webhook is called when a LoRaWAN uplink with motion detection was received by the Network Server. Registered motion sends a red color to the Busylight. If no motion is detected for 5 minutes a green color is sent.



#### **Registration to Plenom IoT Portal**

Please open this website with your browser: https://iotportal.plenom.com/

Please login with your Microsoft 365 user. At initial login the user needs to have administrative Rights for your Microsoft 365 Tenant in order to give data consent:

	•••1
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Enter your password:



Eventually, apply your second factor:





#### Registration to kuando IoT Portal

Give consent to kuando IoT Portal to access data:



Now you are logged into the kuando IoT Portal and should see this page:



Click on the green button "Give Admin Consent".



#### Registration to kuando IoT Portal

You will need to login again and be a Microsoft 365 administrative user!

Please accept access.



Next step is to click "Register".

Please select the appropriate default frequency plan and click "Save".

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#### Registration to kuando IoT Portal

You are now registered. An email has been sent to Plenom so they can enable your account. Typically, within 1 business day.







#### Adding a gateway

Go to Home in the kuando IoT console, where you should see this picture:

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#### Click on "Add Gateway"

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office intelligence	E Q Search.	Maga Manu V	
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	Specify the below to set	up your new Gateway	
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	647FDAFFFE00A389		
	Name:		
	Frequency Plan:		
	Europe 863-870 MHz	(SF9 for RX2 - recommended)	
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	Кеу	Value	Action
	Add Tag		
	Save × Cancel		
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	kuando loT Portal 2022 © F	Plenom A/S.	

Enter the Device EUI and a descriptive name for your new gateway. Choose the frequency plan for your area.

Press "Save"

Make sure your gateway is powered up and connected to the internet via Ethernet or cellular connection.





#### Adding a gateway

After a few seconds, the gateway status will show, "connected".

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## Setting up devices Adding a Busylight device

#### Adding a Busylight device

Go to Home in the kuando IoT console where you should see this page:

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#### Click on "Add Busylight"

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	kuando loT Portal 2022 © Plenom	A/S.		

Enter the Device EUI (it can be found on the label) and a descriptive name that is related to the room where it will be located. Press "Save", or if you are adding more devices, "Save and add new".



## Setting up devices Adding a Room Sensor device

#### Adding a Room Sensor device

Go to Home in the kuando IoT console where you should see this page:

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#### Click on "Add Room Sensor"

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۲	ROOM SENSOR DETAILS	
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	kuando loT Portal 2022 © Ptenom A/S.	

Enter the Device Parameters and a descriptive Name for the device that is related to the room where it will be located. Press "Save".





#### Microsoft 365 Rooms

Go to Home in the kuando IoT console where you should see this page:

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#### Click on "Microsoft 365 Rooms"

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	Showing 1	to 8 of 8 entries											

Find the Room to configure and click on the "mapping" icon.





#### Microsoft 365 Rooms

Select the Busylight from the device list to map it to the room. It is possible to select multiple devices for a room.

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	MICROSOFT 365 ROOM MAPPING	kuando IoT Portal > Microsoft 365 Room Mapping
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Press "Save".



## Setting up Rooms

#### **Flexible Rooms**

Go to Home in the kuando IoT console where you should see this page:

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#### Click on add Flex Room

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۲	FLEXIBLE ROOM SETUP		
Allan Jasendal Kjeldbjerg © Kuando Busylight	Room Details Configuration of Room: [new re	pe]	
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	<ul> <li>Abd lag</li> </ul>		
	Save × Cancel		

Define and register a name for the flexible room Enter City, Building, Floor and Room Number (not mandatory)



# Setting up Rooms

#### **Flexible Rooms**

Press "Select Sensor" and choose sensor from the device list (only one per room).

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٢	FLEXIBLE ROOM SENSOR SELEC	CTION			
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Press "Save" Press "Select Busylight"

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Select a Busylight from the list and press "Save"



## Setting up Rooms

#### **Flexible Rooms**

After returning to the Flexible Room Setup page – Press "Save".



