

kuando IoT Portal

User Guide

Version 1.0



by **Plenom.com**

plenom

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kuando IoT Infrastructure

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Architecture

Architecture

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

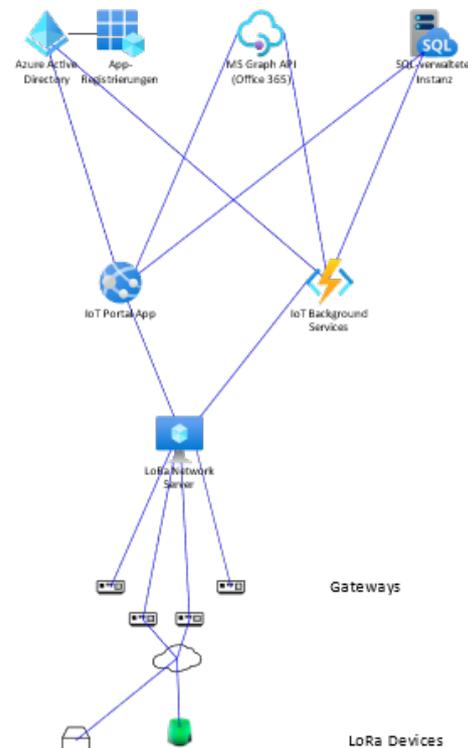
- Show the occupancy status of a Microsoft 365 Meeting Room from the Microsoft 365 Meeting Room calendar
- Show the occupancy status of a flexible (non-bookable) Meeting Room using a PIR motion sensor in the room.

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.

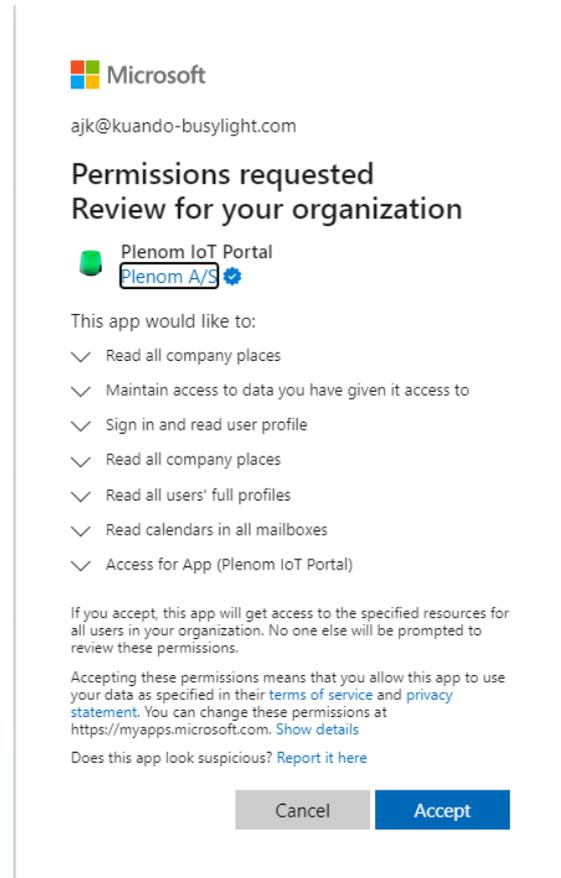


Architecture

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.

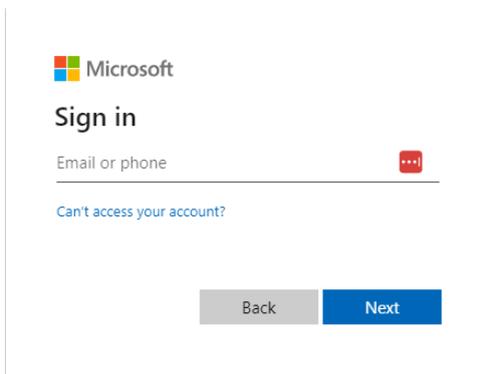
Registration

to kuando IoT Portal

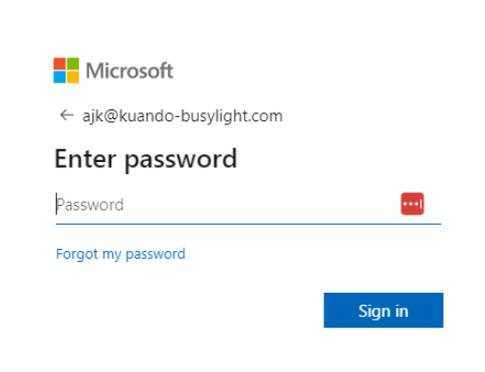
Registration to Plenom IoT Portal

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

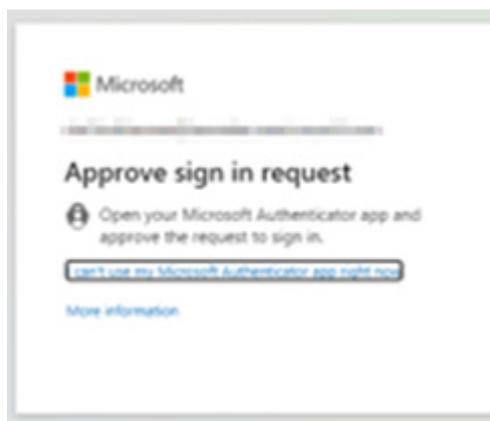
Please login with your Microsoft 365 user. At initial login the user needs to have administrative Rights for your Microsoft 365 Tenant in order to give data consent:



Enter your password:



Eventually, apply your second factor:

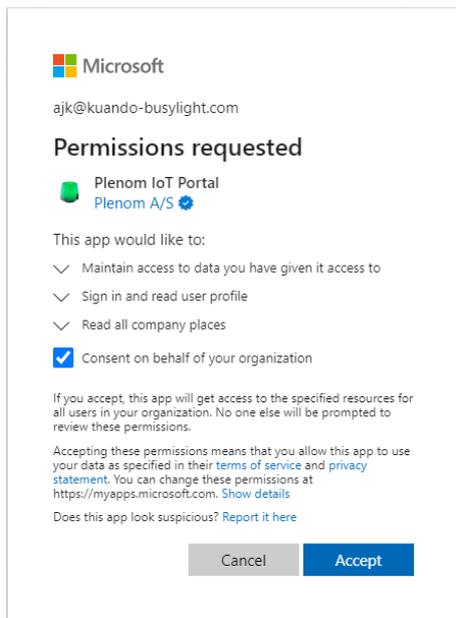


Registration

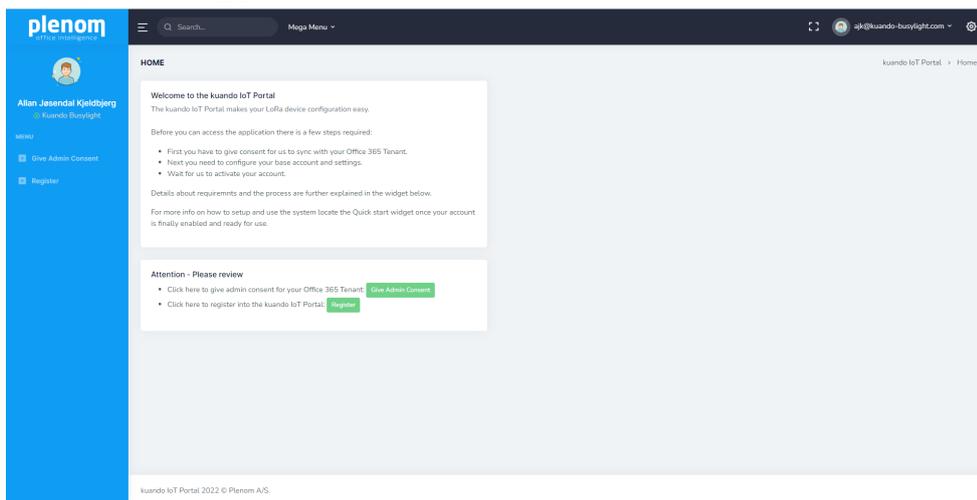
to kuando IoT Portal

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".

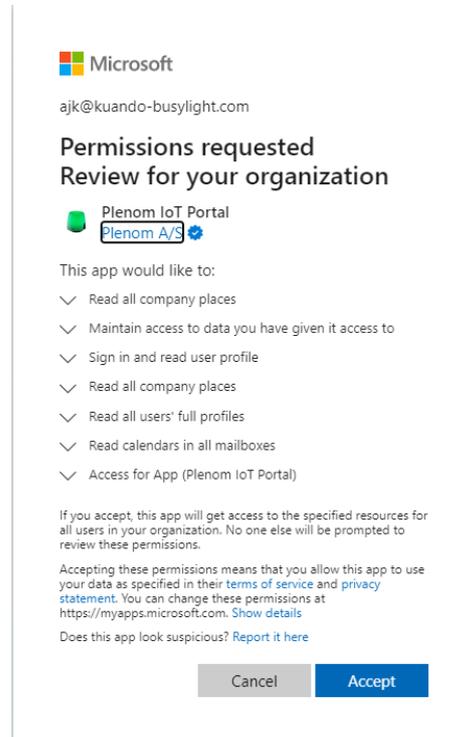
Registration

to kuando IoT Portal

Registration to kuando IoT Portal

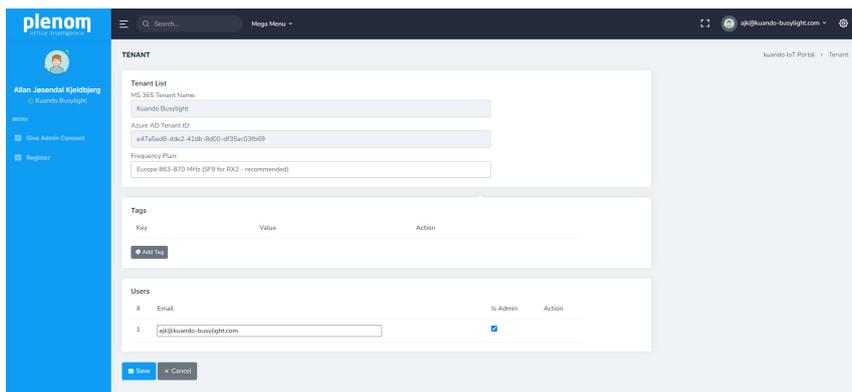
You will need to login again and be a Microsoft 365 administrative user!

Please accept access.



Next step is to click "Register".

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

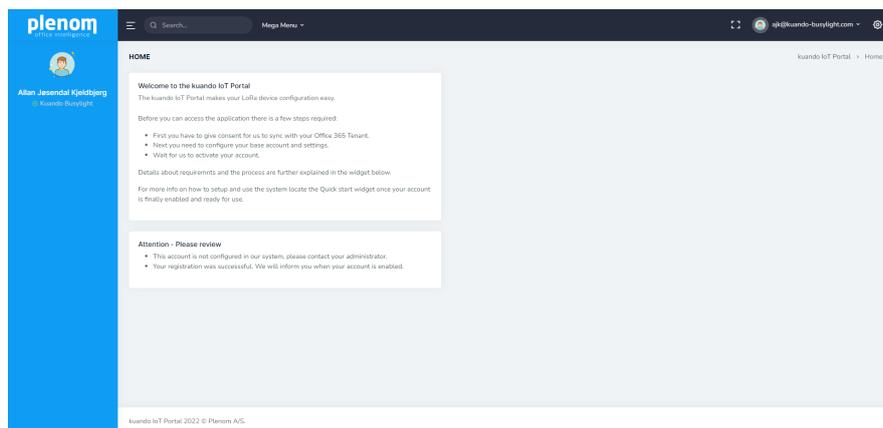


Registration

to kuando IoT Portal

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.

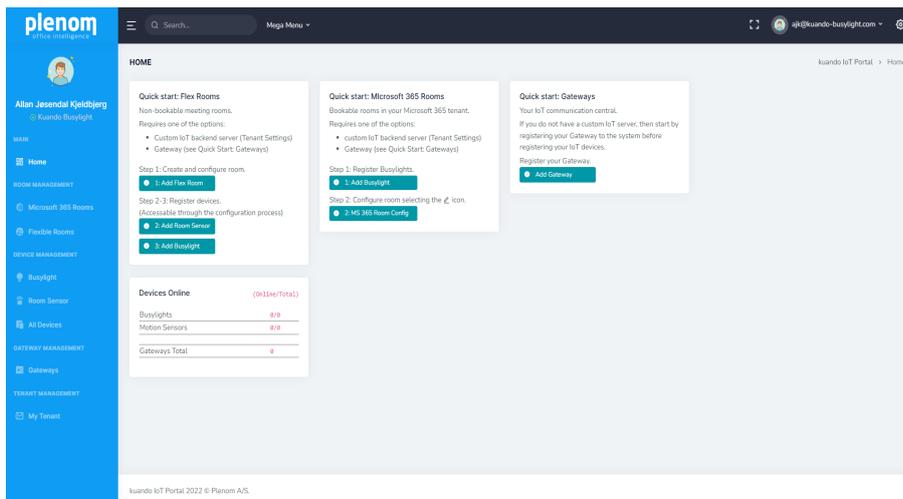


Setting up devices

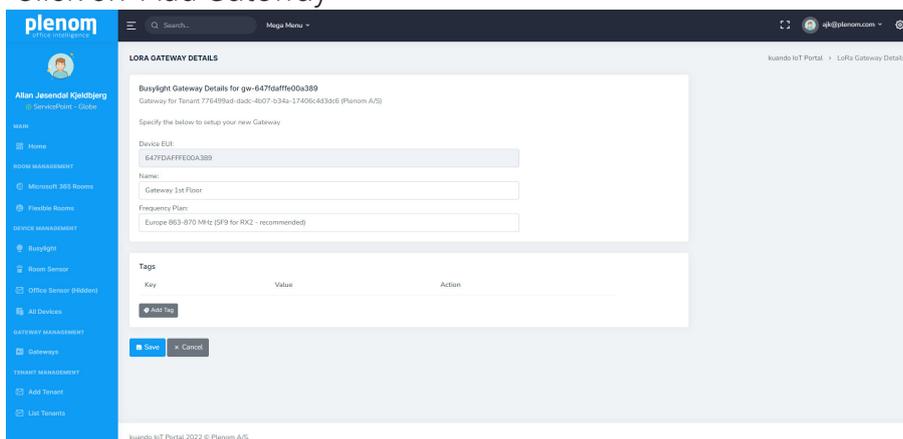
Adding a gateway

Adding a gateway

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



Click on “Add Gateway”



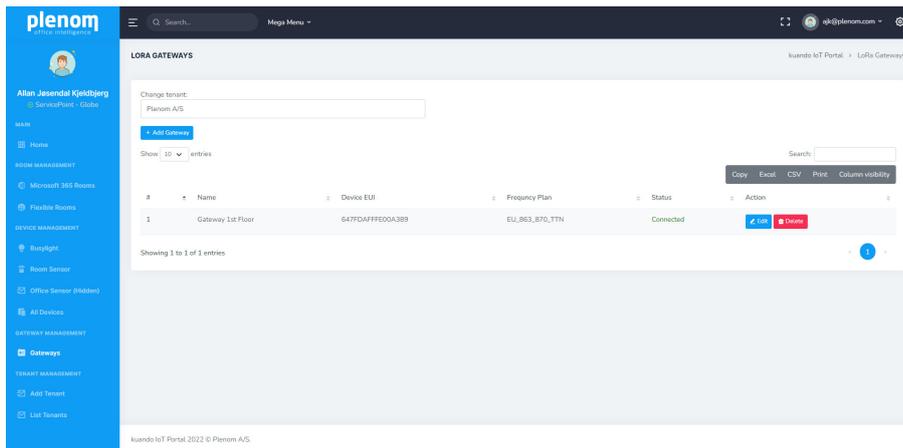
Enter the Device EUI and a descriptive name for your new gateway.
Choose the frequency plan for your area.
Press “Save”
Make sure your gateway is powered up and connected to the internet via Ethernet or cellular connection.

Setting up devices

Adding a gateway

Adding a gateway

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

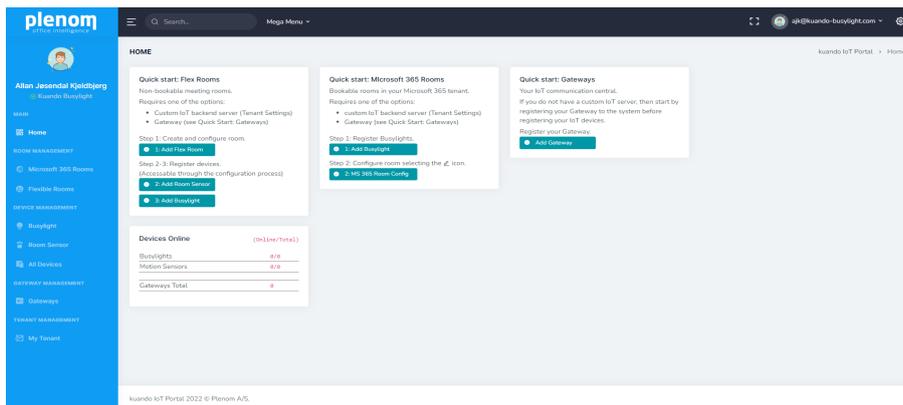


Setting up devices

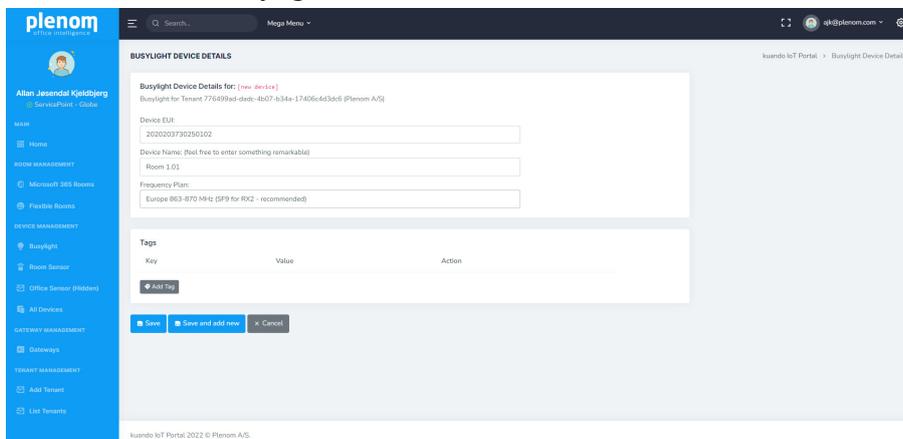
Adding a Busylight device

Adding a Busylight device

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



Click on “Add Busylight”



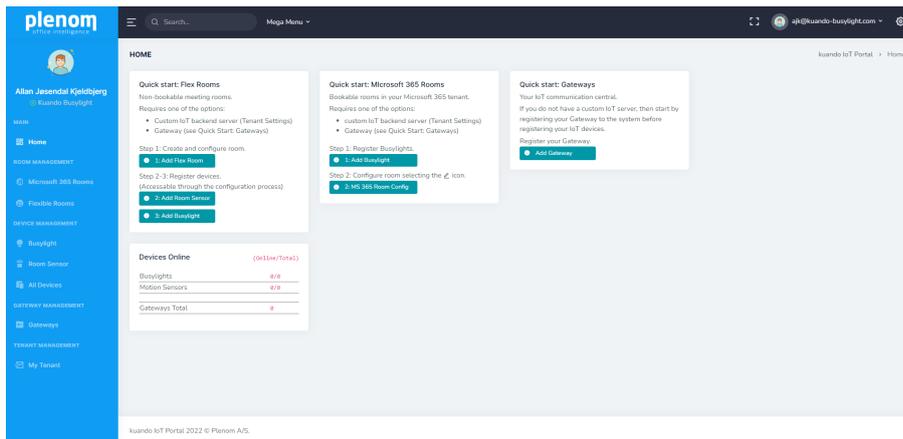
Enter the Device EUI (it can be found on the label) and a descriptive name that is related to the room where it will be located.
Press “Save”, or if you are adding more devices, “Save and add new”.

Setting up devices

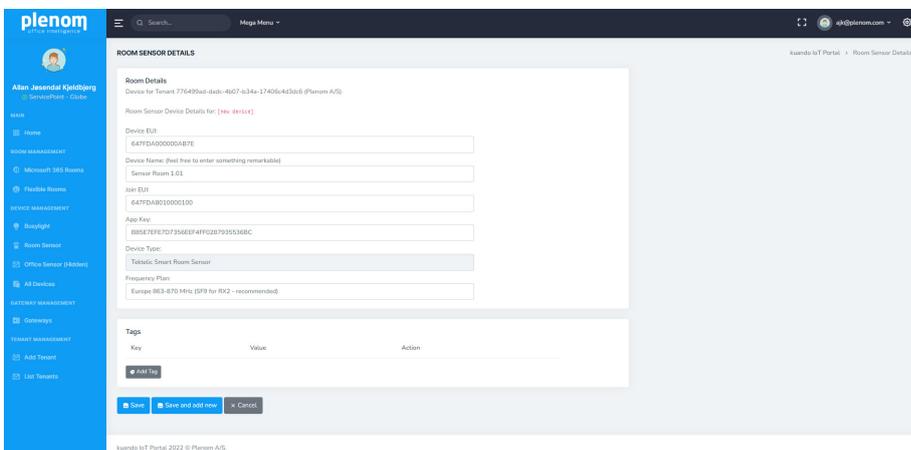
Adding a Room Sensor device

Adding a Room Sensor device

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



Click on “Add Room Sensor”



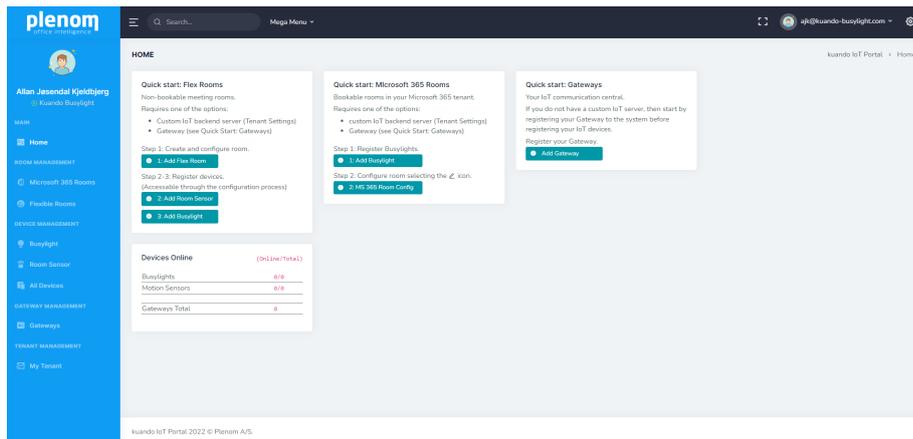
Enter the Device Parameters and a descriptive Name for the device that is related to the room where it will be located.
Press “Save”.

Setting up Rooms

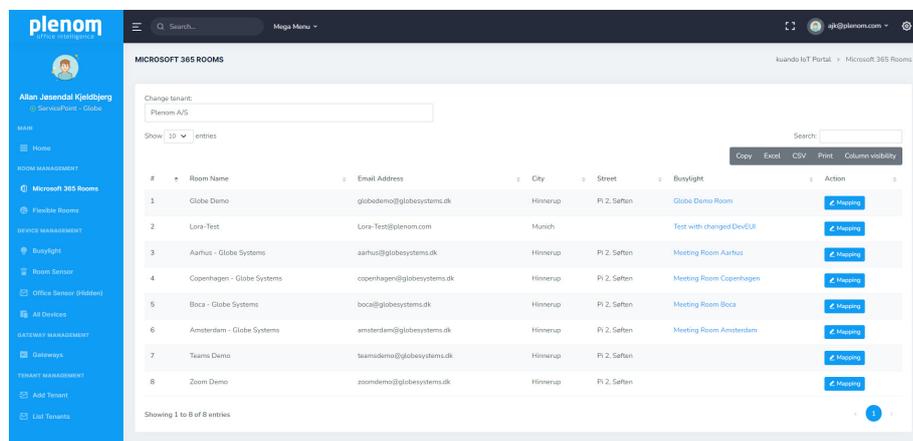
Microsoft 365 Rooms

Microsoft 365 Rooms

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



Click on “Microsoft 365 Rooms”



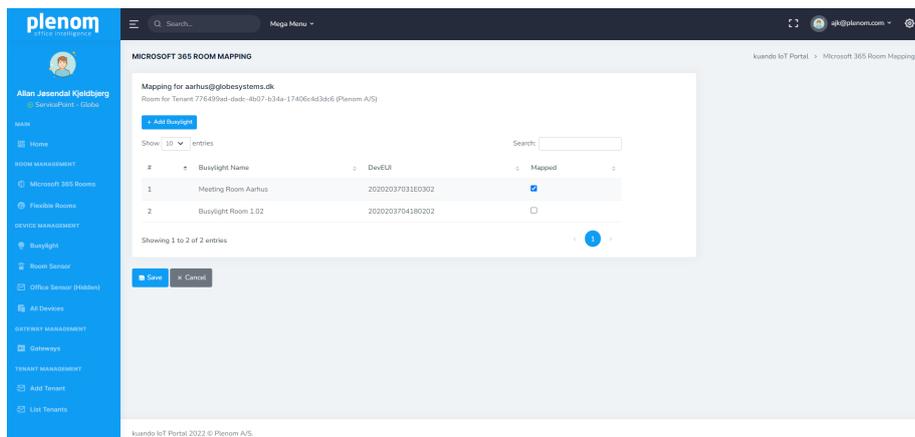
Find the Room to configure and click on the “mapping” icon.

Setting up Rooms

Microsoft 365 Rooms

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.



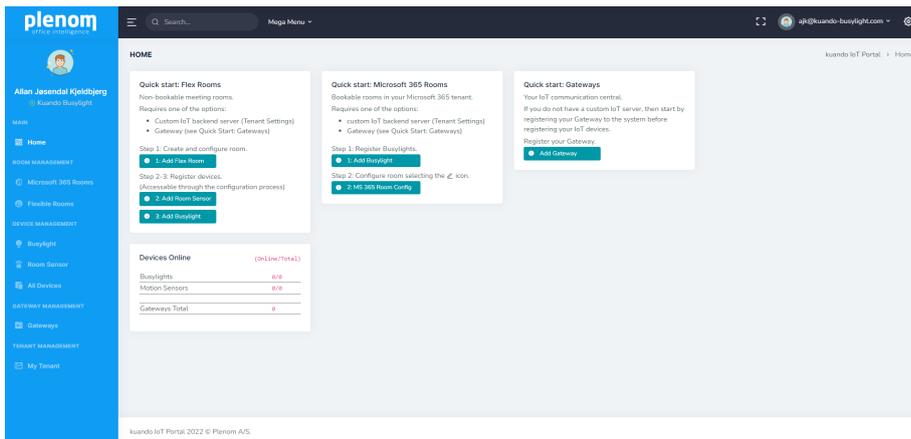
Press "Save".

Setting up Rooms

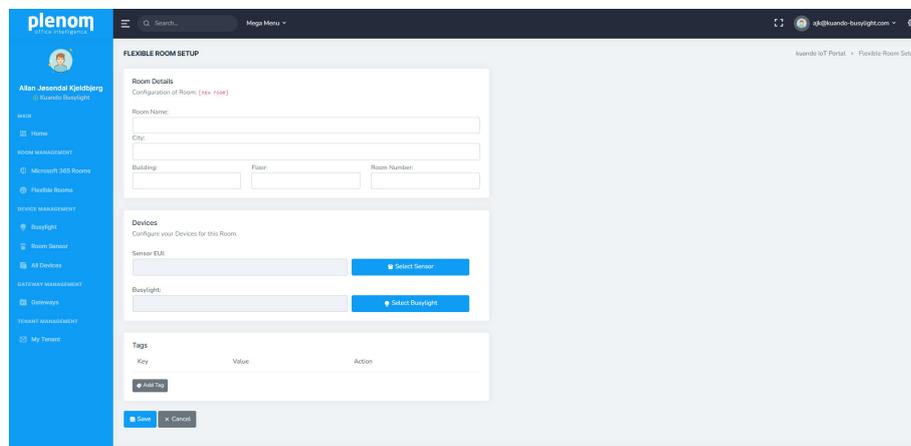
Flexible Rooms

Flexible Rooms

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



Click on add Flex Room



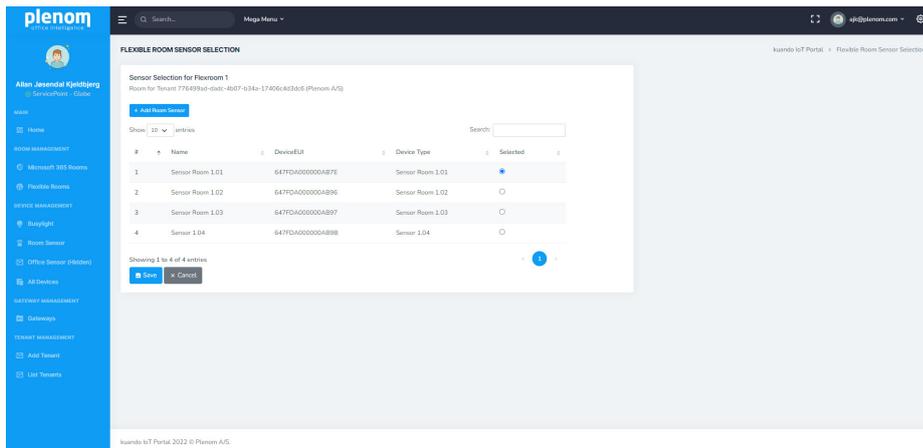
Define and register a name for the flexible room
Enter City, Building, Floor and Room Number (not mandatory)

Setting up Rooms

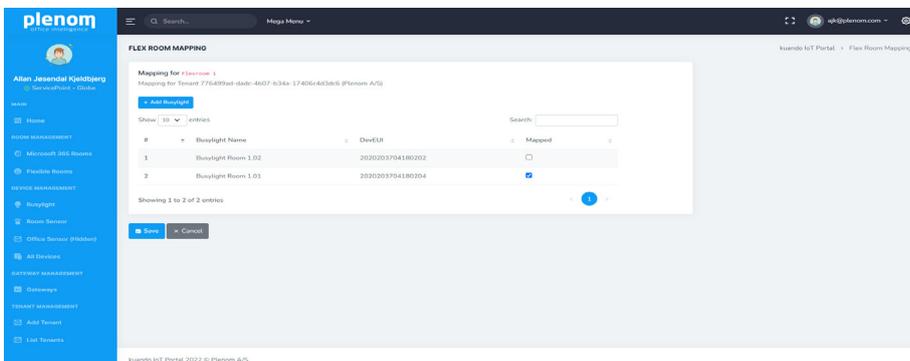
Flexible Rooms

Flexible Rooms

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



Press "Save"
Press "Select Busylight"



Select a Busylight from the list and press "Save"

Setting up Rooms

Flexible Rooms

Flexible Rooms

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

