



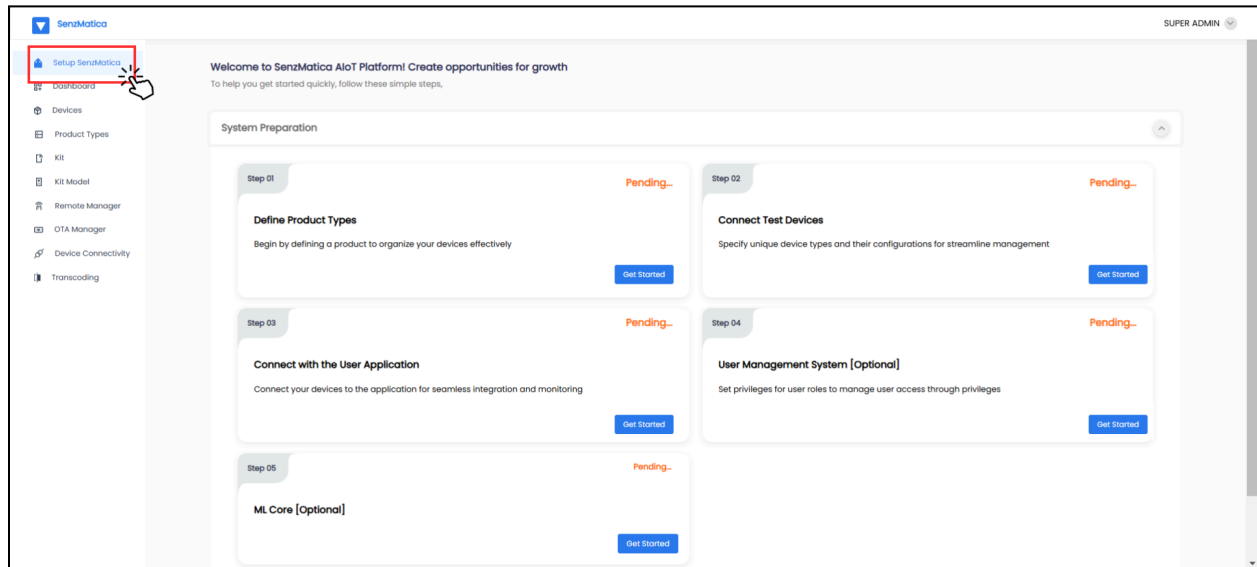
SenzMatica AIoT Platform

User Manual

Onboarding devices to the SenzMatica platform

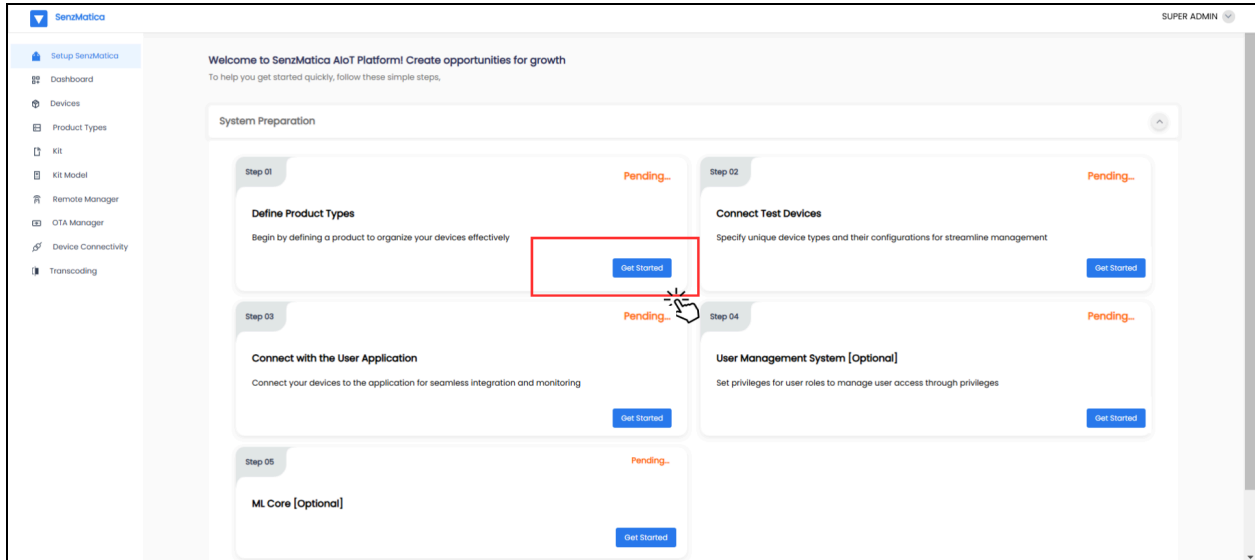
To onboard a device, follow these steps:

- Login to our SenzMatica platform where the Setup Senzmatica module will be prominently displayed upon login as follows.

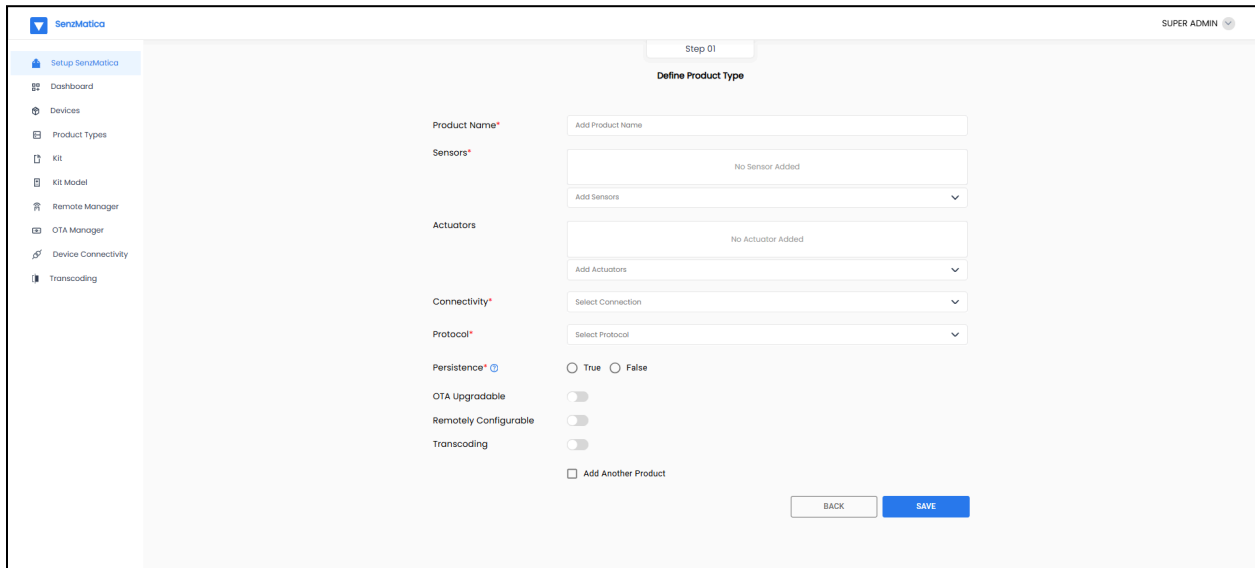


Step 1 – Define product type

- Before onboarding a device, you must first define the product type. To do this, click the '**Get Started**' button to specify the type of device.



- Next, you will see a page where you need to fill in the required details. The fields for product name, sensors, connectivity, protocol, and persistence are mandatory and must be completed.



- OTA upgradable and Remotely Configurable are optional. If your product is OTA upgradable or remotely configurable, and if you wish to do OTA upgrades or configurations remotely via this system you will need to enable the relevant toggle buttons.

- When the OTA upgradable toggle button is enabled, you need to add the data format.

The screenshot shows the 'Define Product Type' configuration page in the SensiMatica dashboard. The page is titled 'Step 01' and 'Define Product Type'. The left sidebar contains navigation options: Setup SensiMatica, Dashboard, Devices, Product Types, Kit, Kit Model, Remote Manager, OTA Manager, Device Connectivity, and Transcoding. The main form area contains the following fields and controls:

- Product Name***: A text input field with the placeholder 'Add Product Name'.
- Sensors***: A dropdown menu showing 'No Sensor Added' and an 'Add Sensors' button.
- Actuators**: A dropdown menu showing 'No Actuator Added' and an 'Add Actuators' button.
- Connectivity***: A dropdown menu with the option 'Select Connection'.
- Protocol***: A dropdown menu with the option 'Select Protocol'.
- Persistence***: Radio buttons for 'True' and 'False'.
- OTA Upgradable**: A toggle switch that is currently turned on (blue).
- Remotely Configurable**: A toggle switch that is currently turned off (grey).
- Data Format***: A dropdown menu with the option 'Select Data Format'.
- Transcoding**: A toggle switch that is currently turned off (grey).
- Add Another Product**: A checkbox that is currently unchecked.

At the bottom right of the form, there are two buttons: 'BACK' and 'SAVE'.

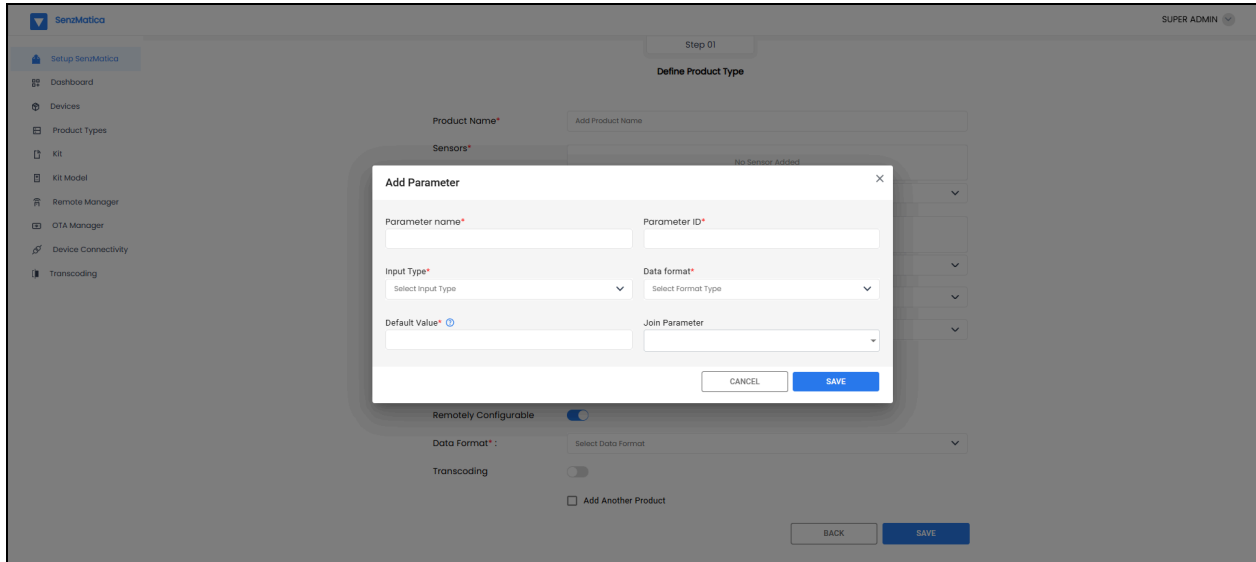
- When the Remotely configurable toggle button is enabled, you need to fill the following fields to add parameters.

The screenshot shows the 'Define Product Type' configuration page with an 'Add Parameter' modal dialog open. The modal dialog has a title bar with 'Add Parameter' and a close button (X). It contains three sections, each with a '+ ADD' button:

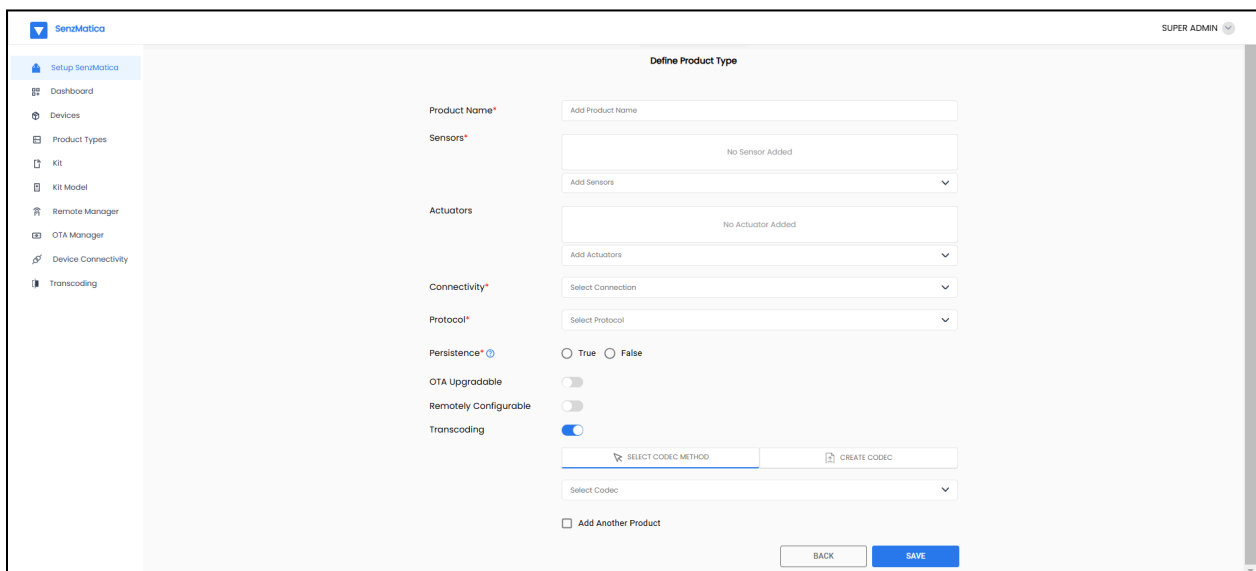
- Network & Communication**: A section for adding network-related parameters.
- Topic Format & Interval**: A section for adding topic format and interval parameters.
- Message Format**: A section for adding message format parameters.

At the bottom of the modal, there are 'CANCEL' and 'DONE' buttons. The background form is dimmed, showing the same fields as the previous screenshot.

- Then click the **Add** button there and fill in the necessary details (Name, ID, Input type, Data format, Default value and Join parameter) relevant to those configurable parameters under each section (Network and Communication, Topic format, and Interval and Message format).



- Transcoding (encoding/decoding) is optional in this system. Data decoding converts encoded data back into a readable original format that can be understood by the device or our SensMatica system. Data encoding converts data collected from the device into a structured format that can be easily transmitted to our SensMatica Platform. To link a product with a codec, first enable the toggle button. You have two options: select an existing codec file via the **'Select Codec Method'** tab or create a new codec file using the **'Create Codec'** tab



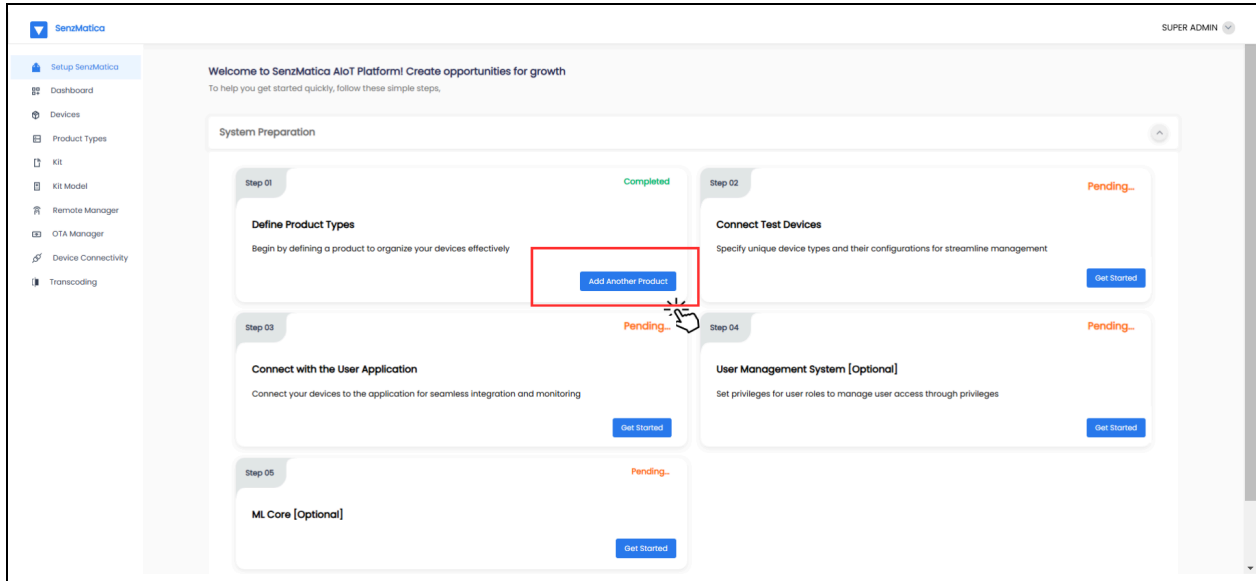
- When selecting the '**Create Codec**' option, you can upload script files for either the encoder or decoder as needed. Begin by providing a name and selecting the data format, then upload the script file and click the '**ADD**' button ([How to create a script file](#))

The screenshot displays the 'Create Codec' interface in SensMatica. The interface includes a sidebar with navigation options: Setup SensMatica, Dashboard, Devices, Product Types, Kit, Kit Model, Remote Manager, OTA Manager, Device Connectivity, and Transcoding. The main content area is titled 'Transcoding' and features a 'Remotely Configurable' toggle (disabled) and a 'Transcoding' toggle (enabled). Below these are two tabs: 'SELECT CODEC METHOD' and 'CREATE CODEC'. The 'CREATE CODEC' tab is active, showing a form with the following elements:

- Codec Name:** A text input field with the placeholder 'Enter codec name'.
- Data Format:** Two radio buttons, 'JSON' (selected) and 'HEX'.
- Encoder:** A dashed box containing an upward arrow icon and the text 'Drag & Drop the Script or Select the file from device'.
- Decoder:** A dashed box containing an upward arrow icon and the text 'Drag & Drop the Script or Select the file from device'.

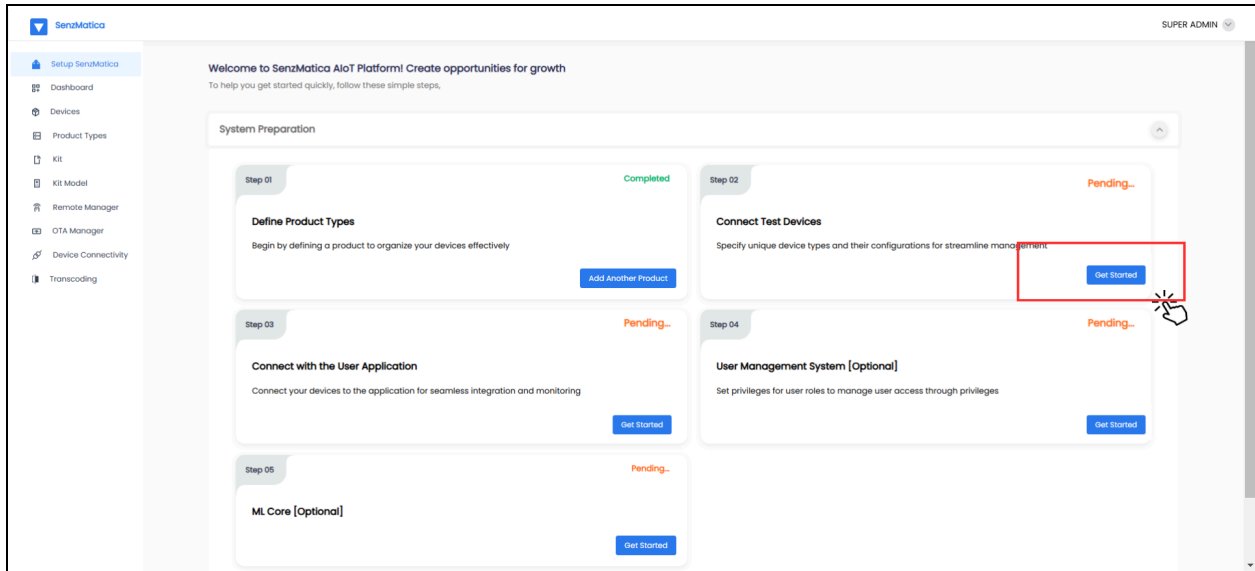
At the bottom of the form are 'CANCEL' and 'ADD' buttons. Below the form is an 'Add Another Product' checkbox. At the very bottom are 'BACK' and 'SAVE' buttons. The top right corner shows 'SUPER ADMIN' with a dropdown arrow.

- If the product type is added successfully, a confirmation message will appear indicating that the product type has been created and if you need to add another product you can click the "**Add Another Product Type**" button and follow the same process.

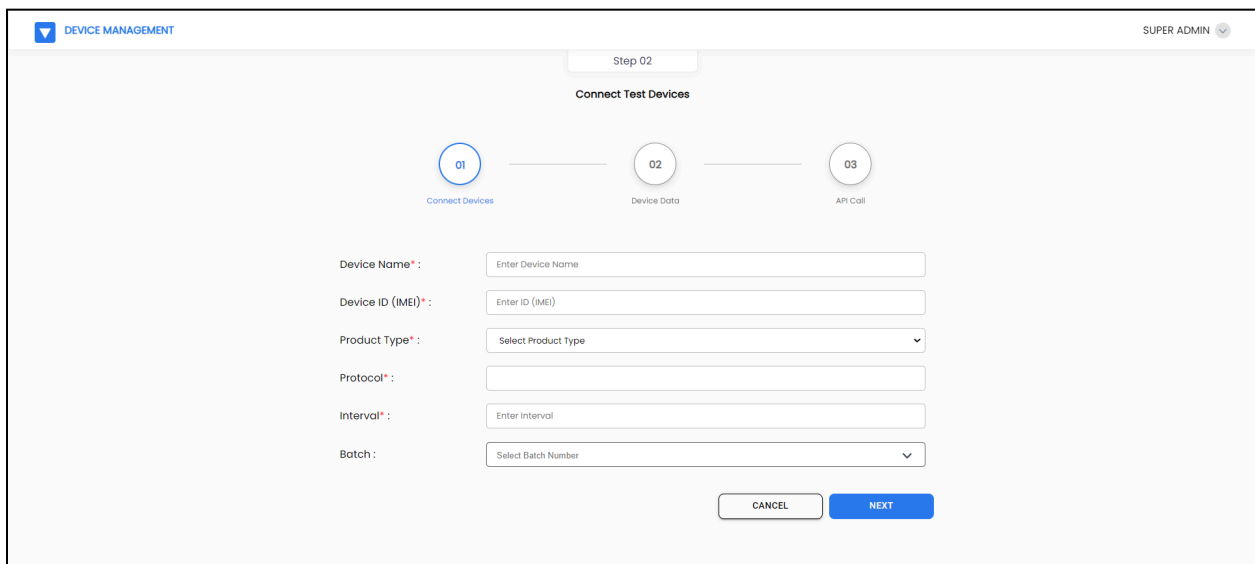


Step 2 – Connect Test Devices

- After defining the product type, step 2 will be enabled. You can then click the **'Get Started'** button to navigate to that page.



- On this page, you need to fill in the device name, device ID, product type, protocol, and interval fields to proceed.



- There, you can add the necessary details and select the predefined product type. If the product type is associated with a specific protocol, you will need to add the corresponding credentials as well. For example, if it is connected to the HTTP/s protocol, you will need to provide the Client ID, Client Secret, and Grant Type, as shown below.

SensuMatica SUPER ADMIN

Step 02

Connect Test Devices

01 Connect Devices | 02 Device Data | 03 API Call

Device Name*

Device ID (MEI)*

Product Type*

Protocol*

Client ID

Client Secret

Grant Type

Interval (minutes)*

Batch

- For Grant type, **Client Credentials** option is automatically selected and then click **Add**.

SensuMatica SUPER ADMIN

Step 02

Connect Test Devices

01 Connect Devices | 02 Device Data | 03 API Call

Device Name*

Device ID (MEI)*

Product Type*

Protocol*

Client ID

Client Secret

Grant Type

Interval (minutes)*

Batch

- It will create an access key there. You can copy that to connect the device properly to this platform.

- If the device is connected to the MQTT protocol you need to add Client ID, Username, Password, Subscribe ACL, and public ACL as shown below.

- After generating credentials for any of the protocols, if you need to edit the credentials, you can click this **Edit** icon and edit those credentials.

DEVICE MANAGEMENT

Setup SenzMatica

Devices

Product Types

Device Connectivity

Transcoding

Step 02

Connect Test Devices

01 Connect Devices

02 Device Data

03 API Call

Device Name* : Enter Device Name

Device ID (IMEI)* : Enter ID (IMEI)

Product Type* : DIGI_Plant

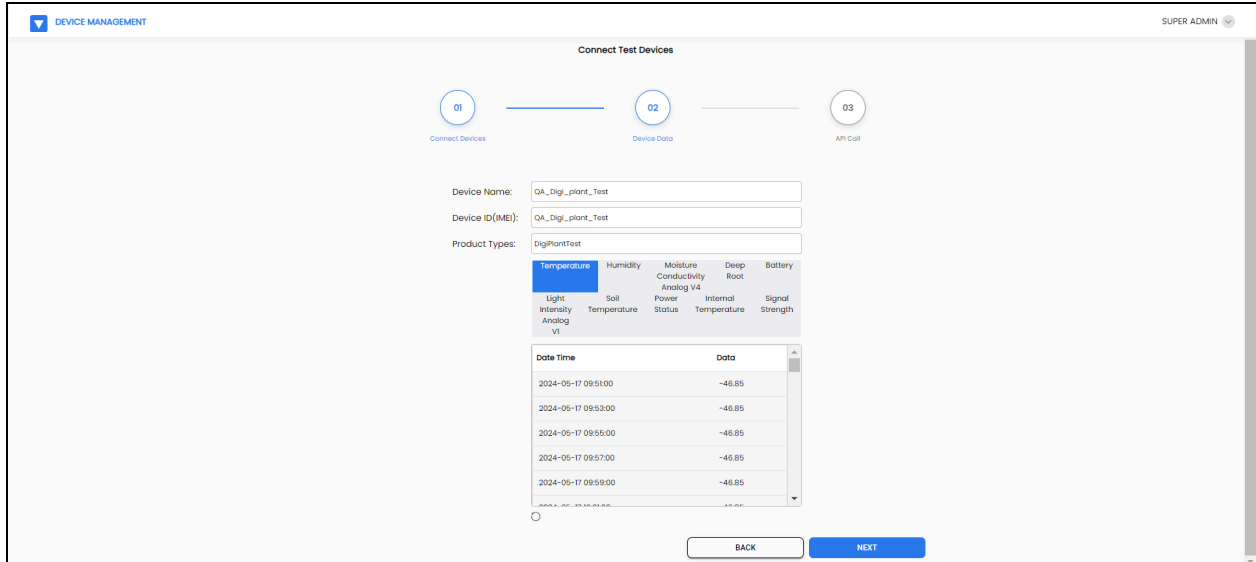
Protocol* : MQTT

Interval* : Enter Interval

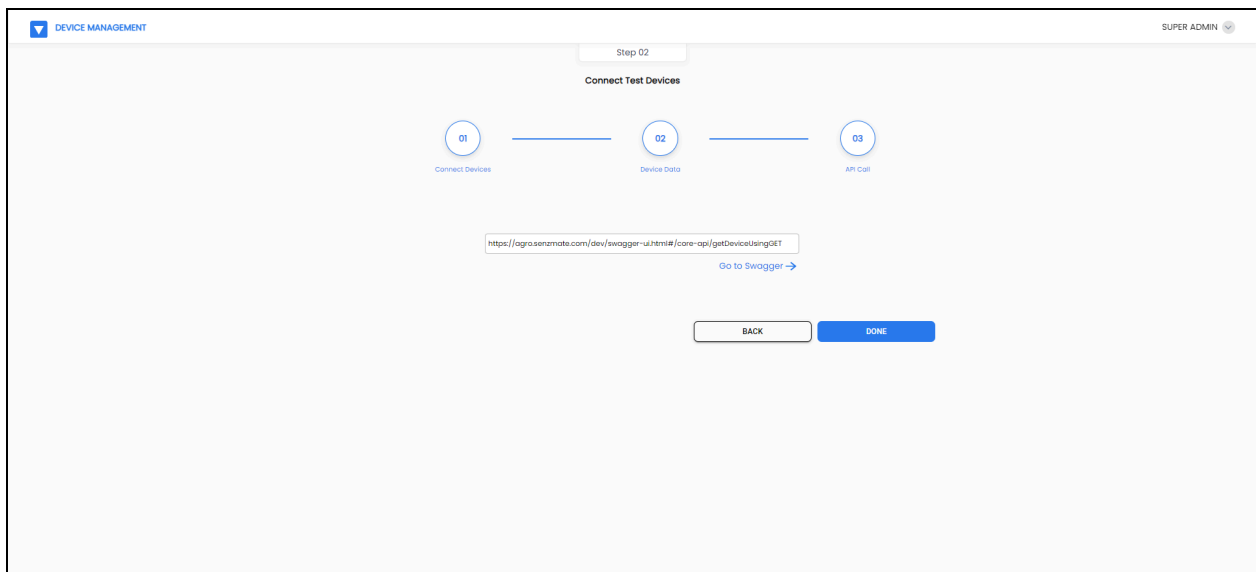
Batch : Select Batch Number

CANCEL NEXT

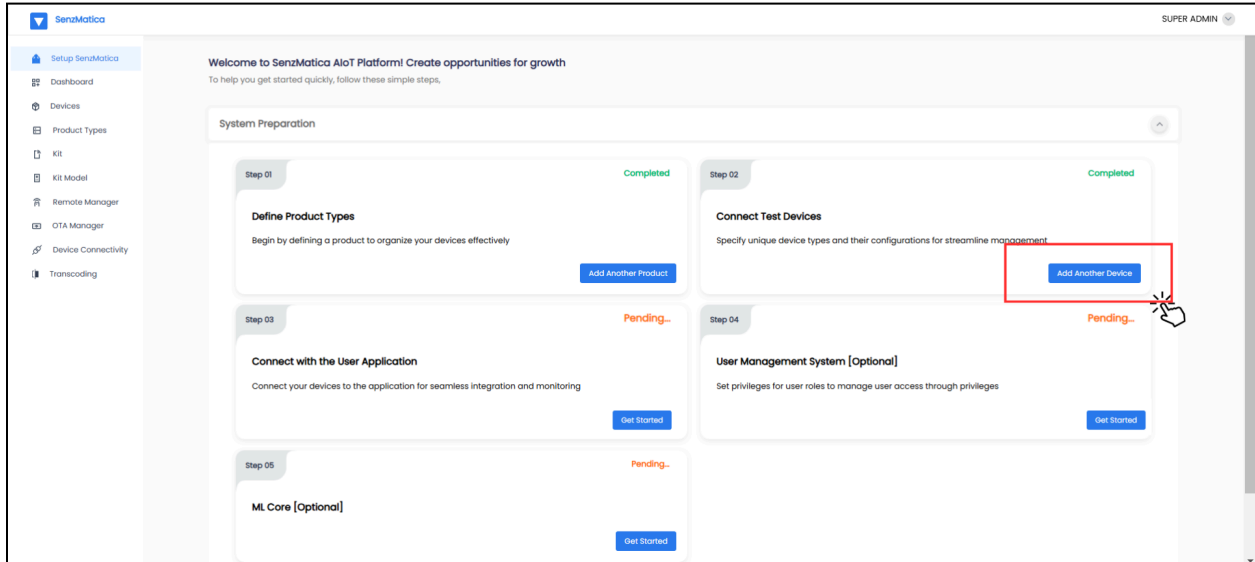
- After filling all the details click **Next**. There you can load the data.



- To view the direct API, Click **next**. It will navigate to the following page. There click **GO to Swagger**, then it will navigate to the exact API in Swagger.

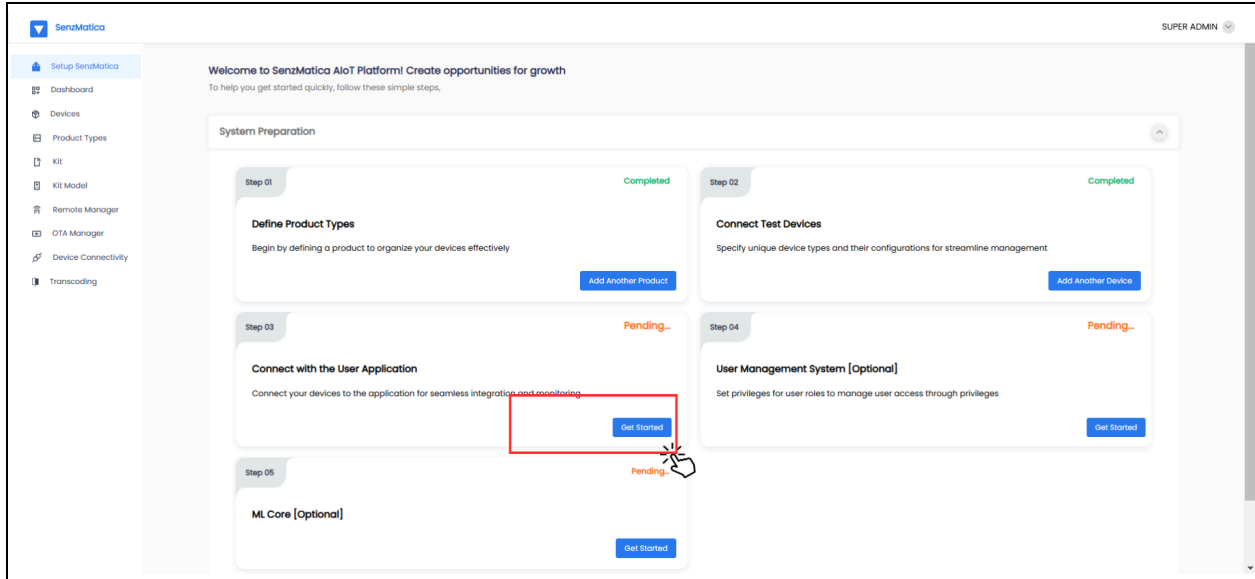


- Click **Done** on the above page, it will navigate to the main overview and it will show as follows with the “completed” status. As well if any user needs to “**Add Another Device**” button and follow the same process.

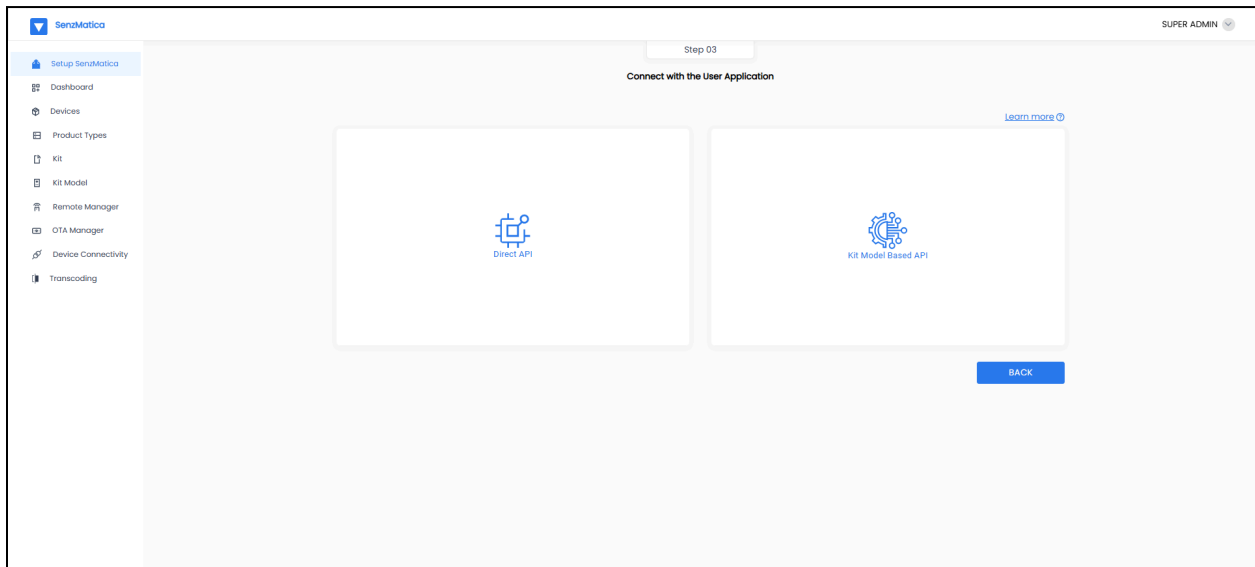


Step 3 – Connect with the user application

- This step will be enabled after you completed the second steps. To connect with the user application, click **Get started** in step 3.



- Then you can see the following page.

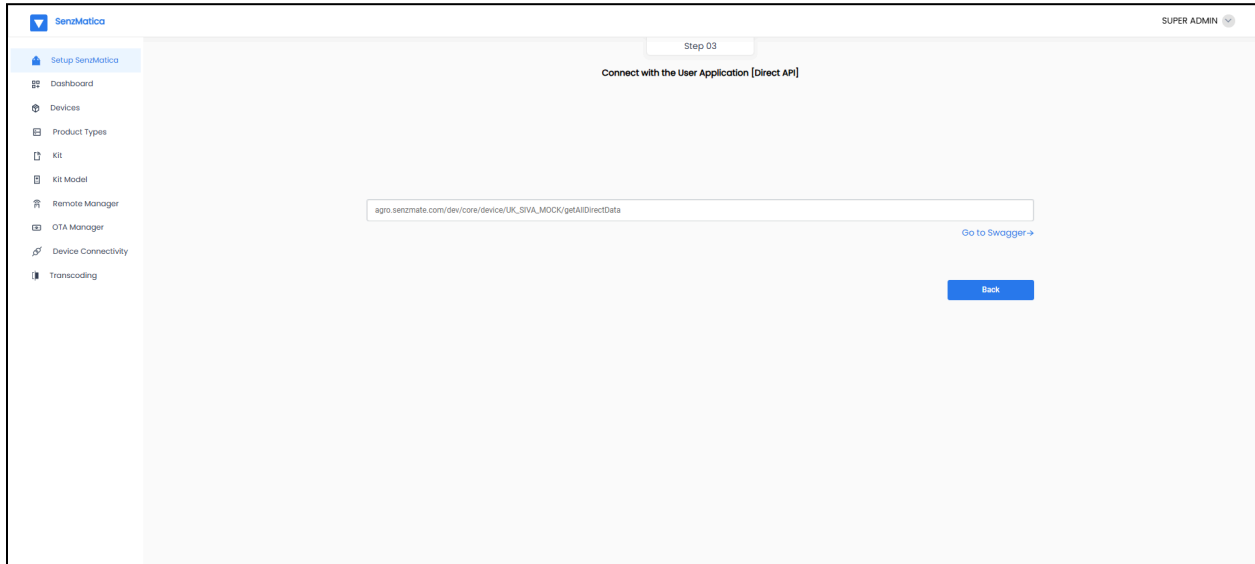


There are two methods you can use with your user application.

1. Through direct API
2. Through Kit model based API

Method 1 - Through direct API

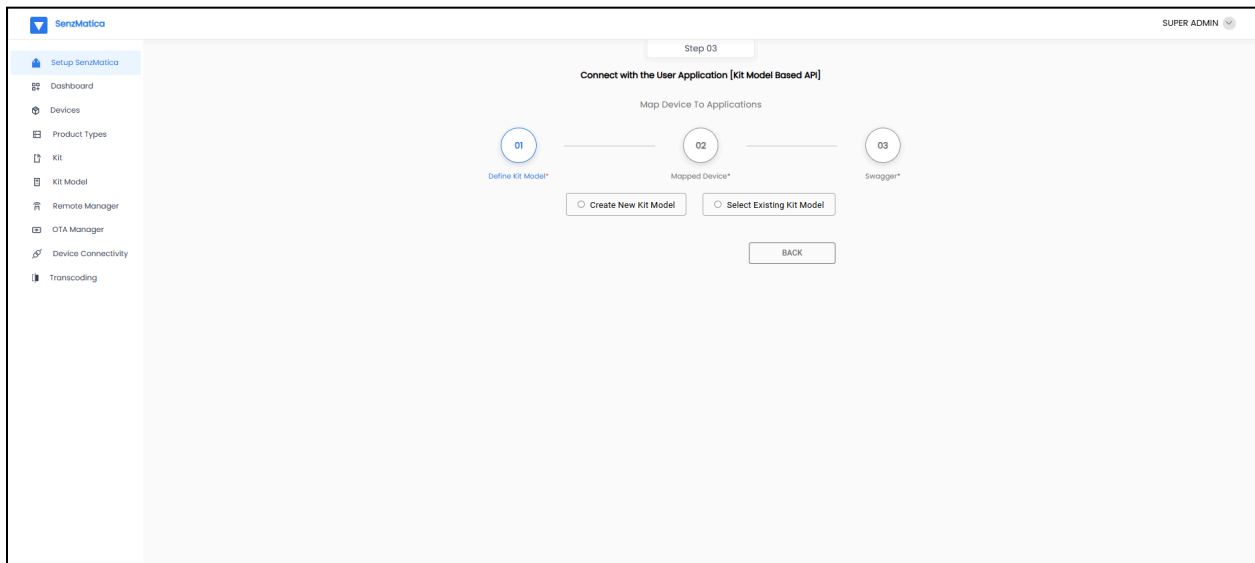
- You can add the API and then click **Go to Swagger** ,it will redirect to swagger account.



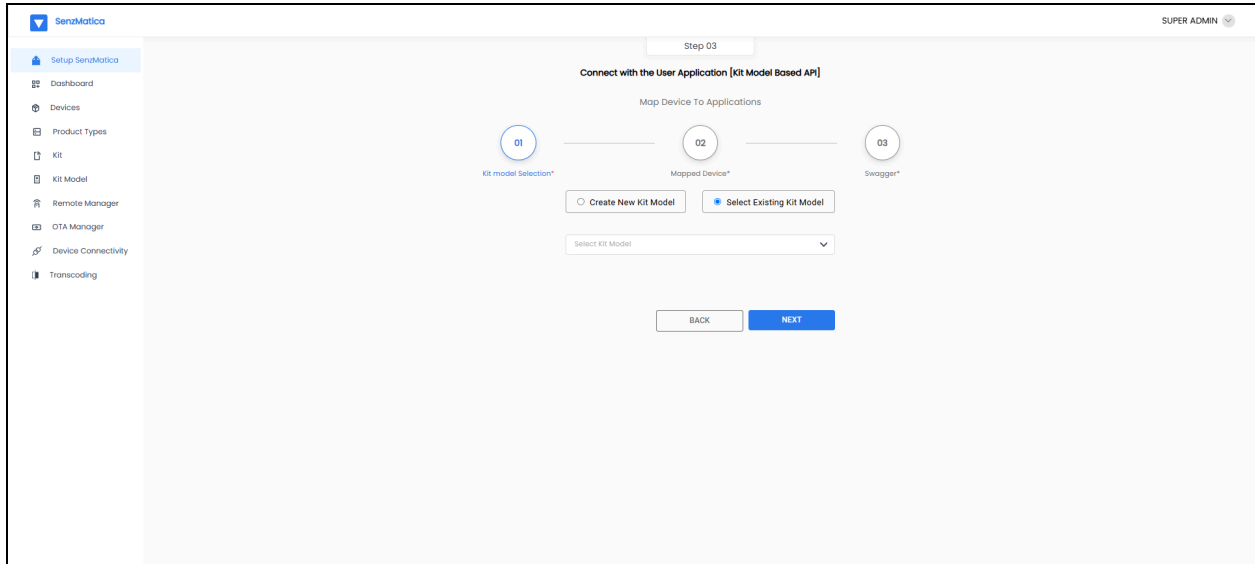
Method 2 - Through Kit model based API

1. What is Kit model based theory? [Kit and kit model](#)

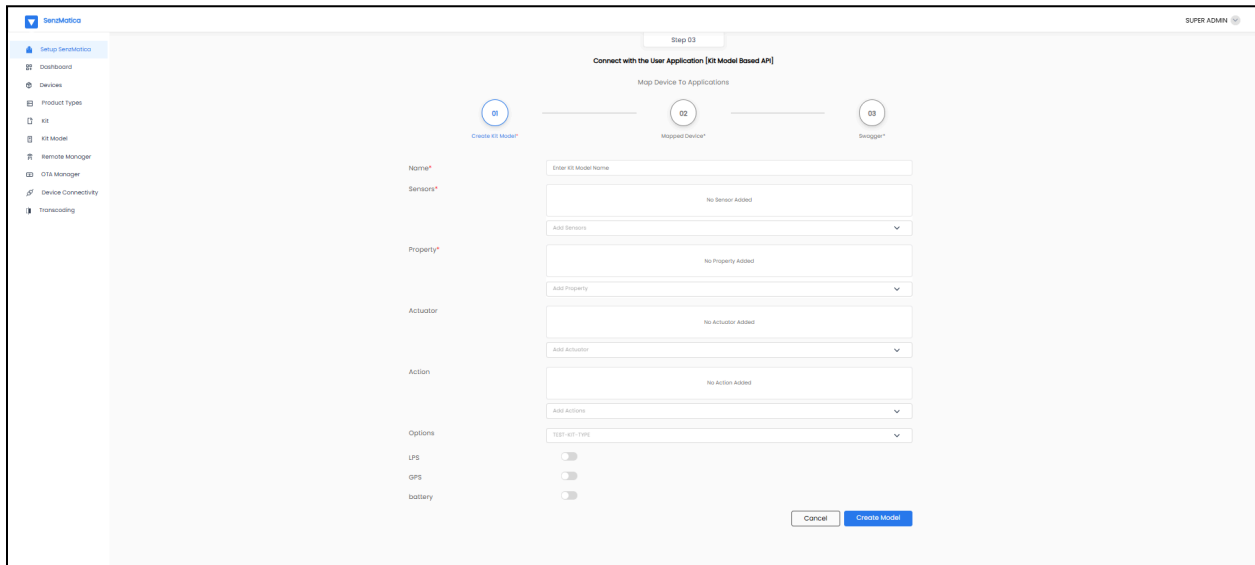
- If you go with Kit model based API option,first you need to define the kit model.For that you can create a new model or select an existing kit model.



- When you choose the option of **Select existing kit model**, you can see all the available kit models in the dropdown as follows.



- If you wish to choose the **Create new kit model** option, you will see the form as follows. After filling the required fields and necessary fields you can click **Create** button.



- If the kit model is created successfully ,you will see the success message as follows.

Step 03

Connect with the User Application [Kit Model Based AP]

Map Device To Applications

01 Create Kit Model* | 02 Mapped Device* | 03 Scanner*

KIT ID*
KIT Name*
KIT Model*
Alert Level*
Interval
Devices*
Persistence
Maintenance
Input Method
Advance Option

Enter KIT ID
Enter KIT Name
Enter KIT Model
Enter Alert Level
Enter Interval
No Devices Added
Add Devices
True False
True False
Device

View Kit Model

Cancel Next

Kit Model Created Successfully

- Then you will redirect to second sub section, **Mapped Device**. There you will see the following screen and you need to fill the required and necessary fields. Here you can select the devices which you need to connect with the kit model.

Step 03

Connect with the User Application [Kit Model Based API]

Map Device To Applications

01 Create Kit Model

02 Mapped Device

03 Debugger

Kit ID*

Kit Name*

Kit Model* [View Kit Model](#)

Alert Level*

Interval

Devices*

ADD Devices

Persistence True False

Maintenance True False

Input Method

Advance Option

Property Mapping

Shift Mapping

Add Another Kit

CANCEL NEXT

- If you need to view the details of selected kit model, you need to click **View kit model** option, then you can see the details as follows.

Step 03

Connect with the User Application [Kit Model Based API]

Map Device To Applications

01 Create Kit Model

02 Mapped Device

03 Debugger

Kit ID*

Kit Name*

Kit Model* [View Kit Model](#)

Alert Level*

Interval

Devices*

ADD Devices

Persistence True False

Maintenance True False

Input Method

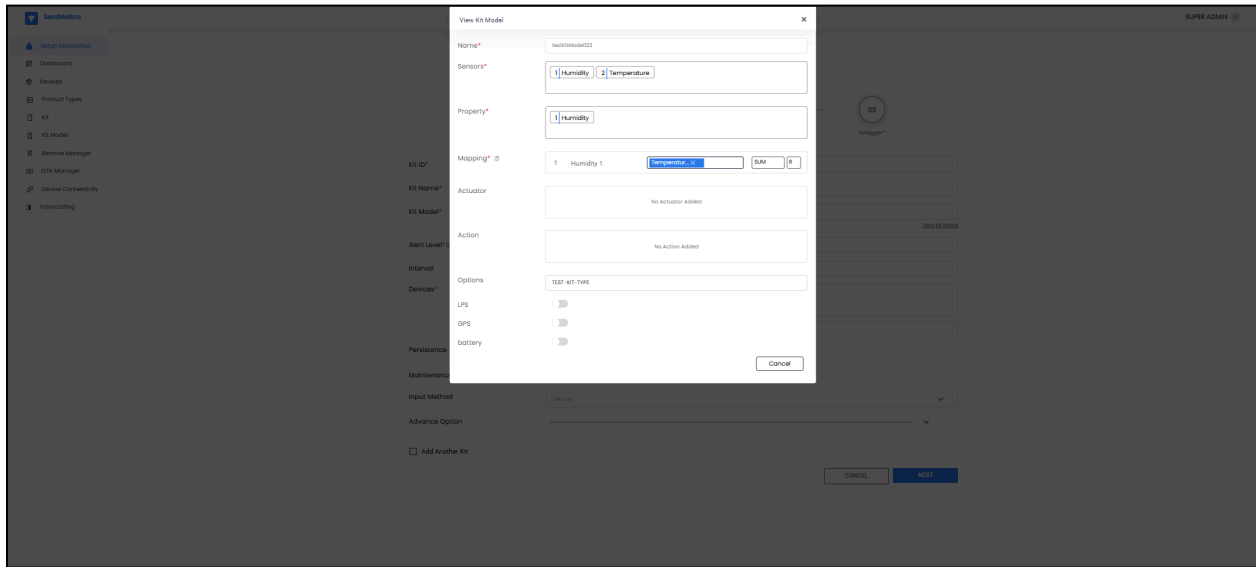
Advance Option

Property Mapping

Shift Mapping

Add Another Kit

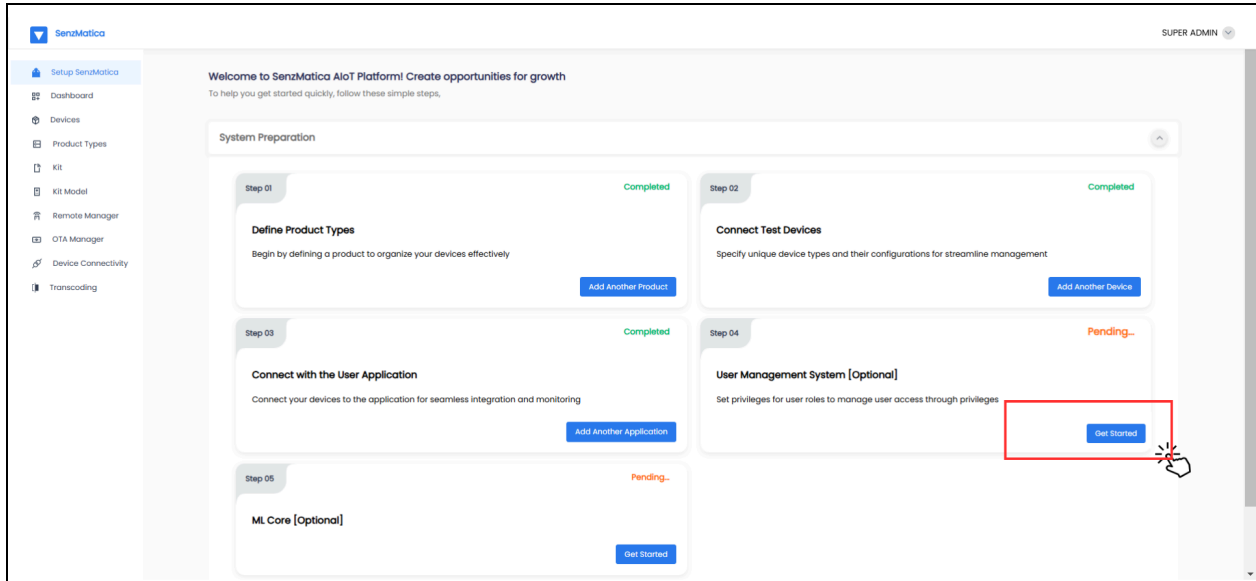
CANCEL NEXT



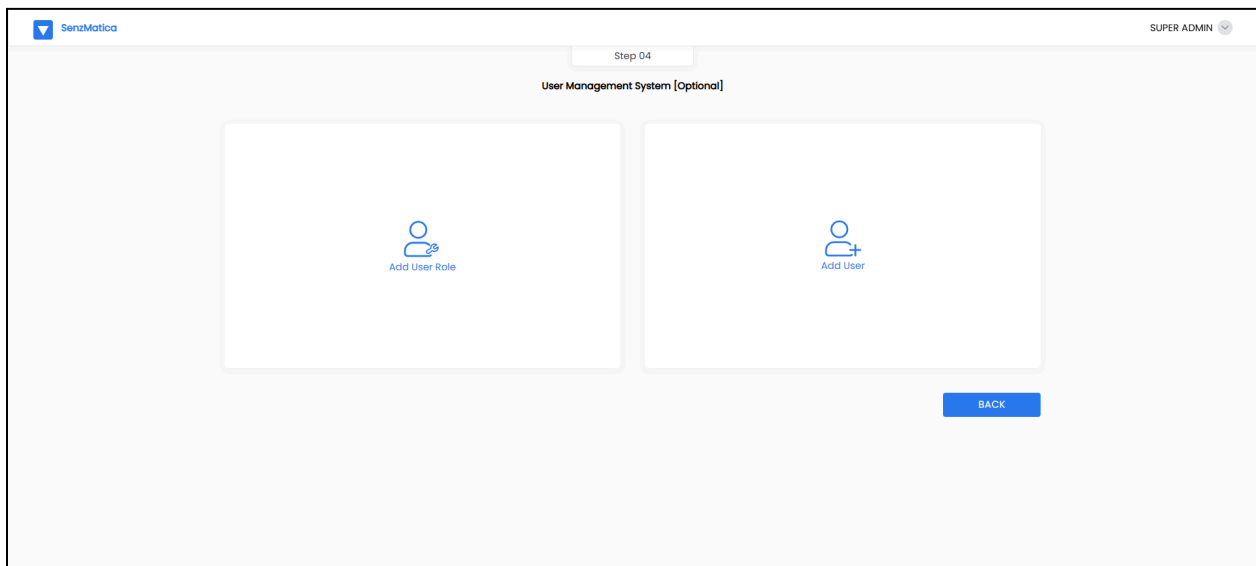
Step 4 - User Management System (Optional)

This step will be enabled after you complete all the three steps. This step is an optional one. If you wish to add users for specific user roles with privileges you need to follow this step.

- Click **Get started** button in the following screen.



- Then you can see the following two options. Before adding a user, you need to define the user role first. For that select the **Add User Role** option below. If you already created the user role then you can add users for that specific user role. To add a user, select the **Add User** option.



To define a user role,

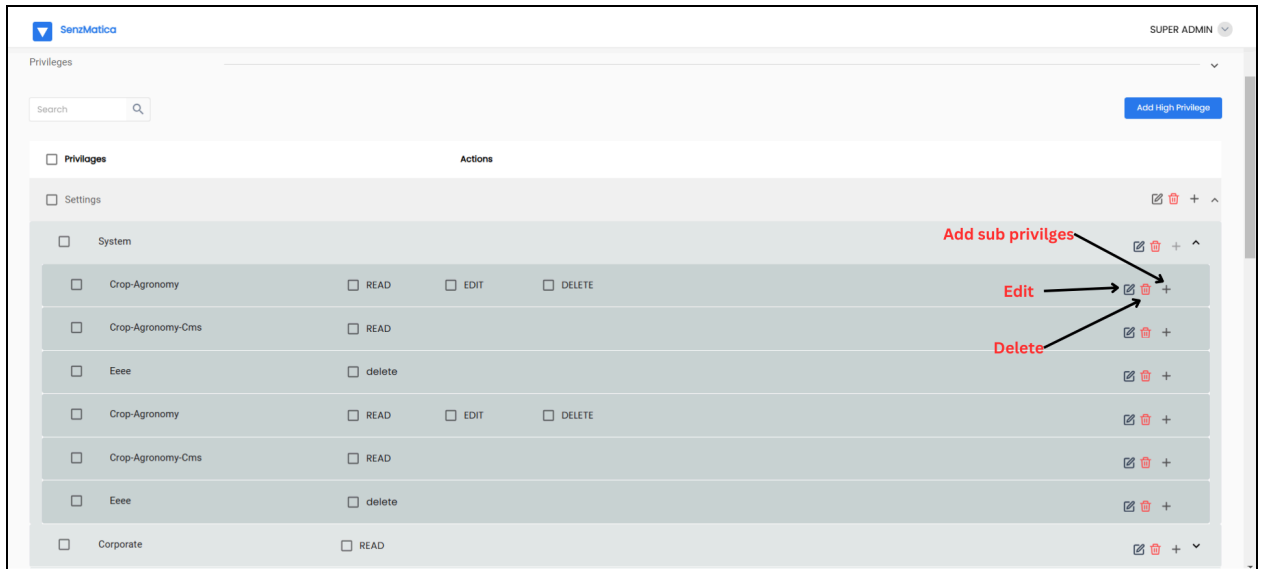
- Select the **Add User Role** option, you will see the following page. To define a user role you need to add a ID,role name,description and you need to select one or many privileges as you wish.(Description is not a required field)

The screenshot shows the 'Add User Role' form in the SensiMatica User Management System. The form is titled 'Step 04' and 'User Management System [Optional]'. It has three input fields: 'Enter ID', 'Enter Role Name', and 'Enter Description'. Below these is a 'Privileges' section with a search bar and a list of privileges. A 'CANCEL' button and an 'ADD' button are at the bottom right.

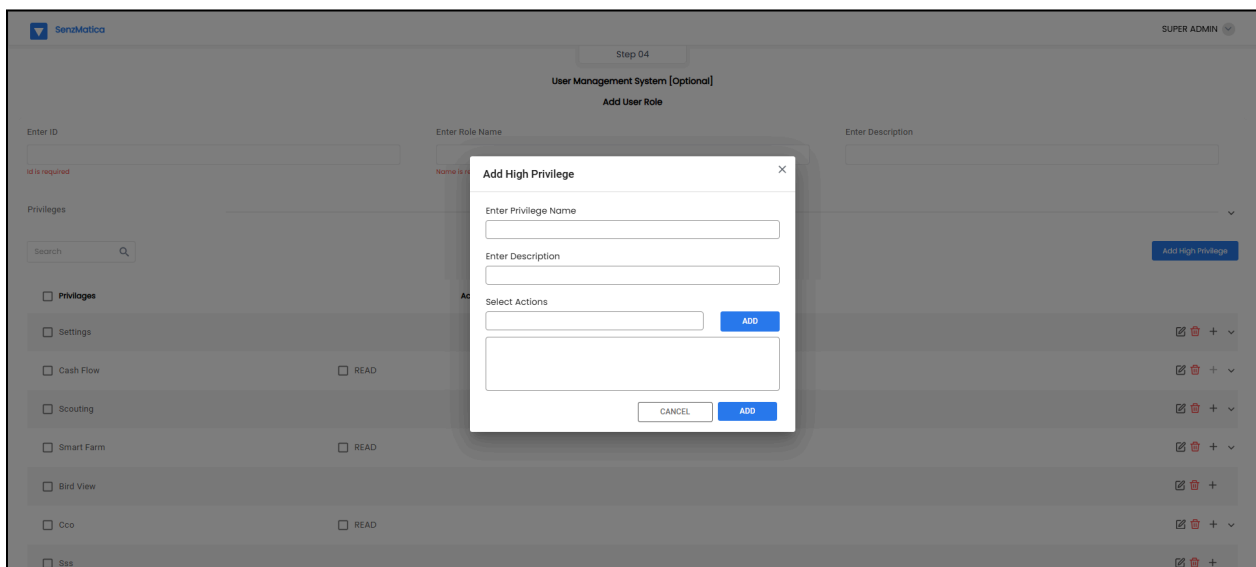
- Click the dropdown icon of Privileges ,there you can see all the existing high privileges and sub privileges .If you need to edit or delete high or sub privileges ,click those necessary icons as shown below.

The screenshot shows the 'Add User Role' form with the 'Privileges' dropdown menu open. The menu lists various privileges: 'Privileges', 'Settings', 'Cash Flow', 'Scouting', 'Smart Farm', and 'Bird View'. Each privilege has a checkbox and an 'Actions' column with icons for 'Edit', 'Delete', and 'View sub privileges'. A blue 'Add High Privilege' button is also visible.

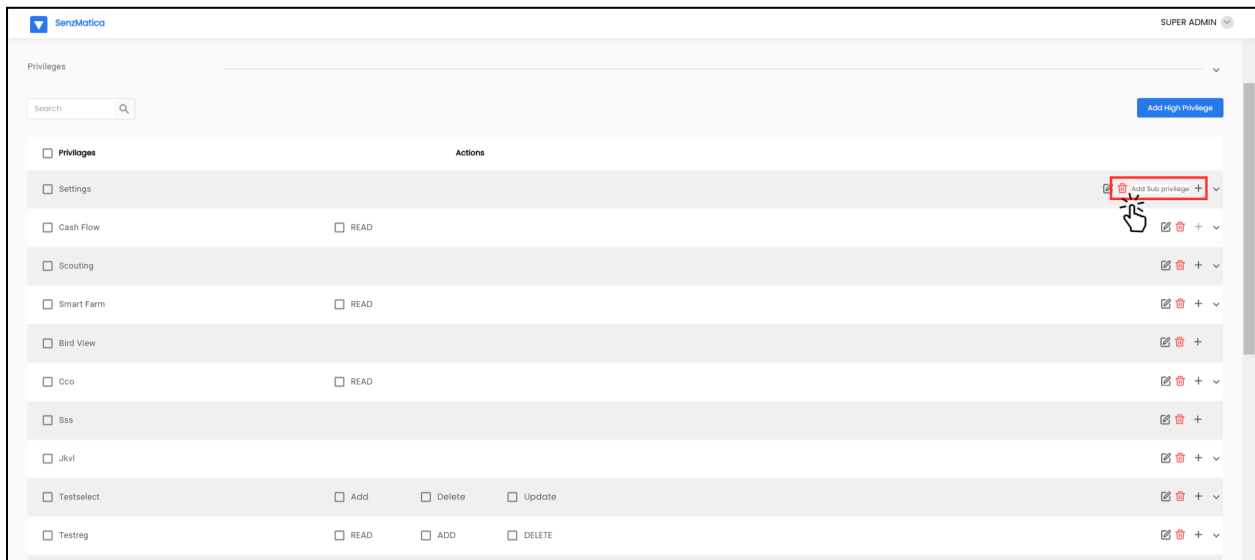
- After clicking the drop down icon to view the sub privileges,it will show as follows and if you need to edit,delete of add sub privileges ,click the necessary icons.



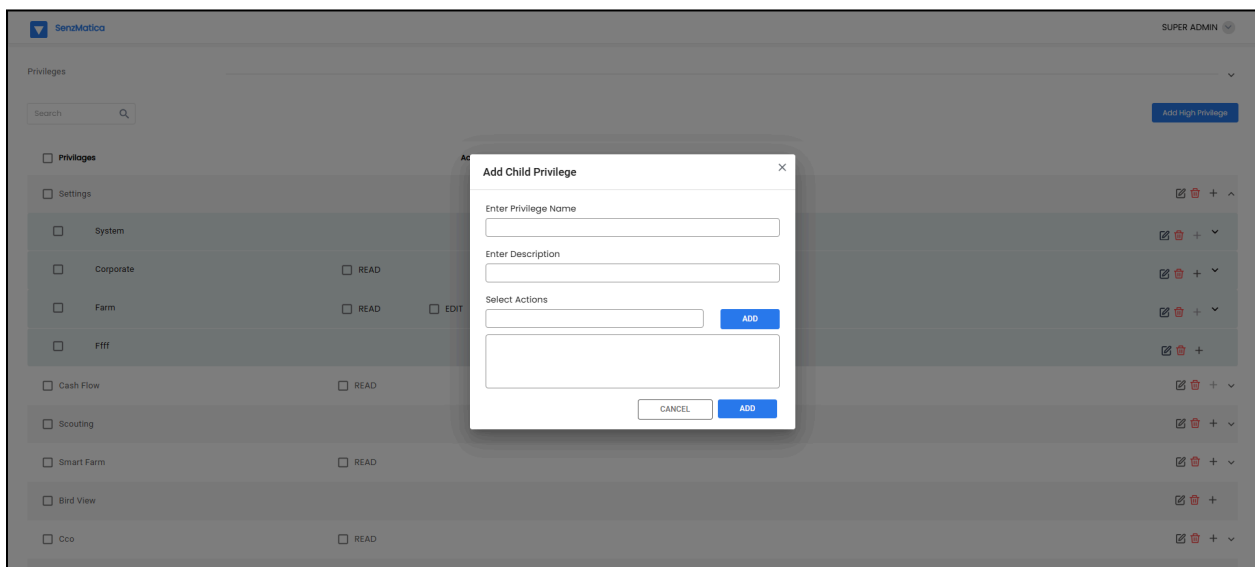
- When selecting privileges you can select an existing privileges or if you wish to create a new privilege , click **Add High Priviledge** and then you will see the following popup. Add relevant details and click the **Add** button.Then it will be displayed under high privileges list.Finally you can select the necessary privilege and add user roles accordingly.



- If you need to define sub privileges , click the Plus button as shown below.



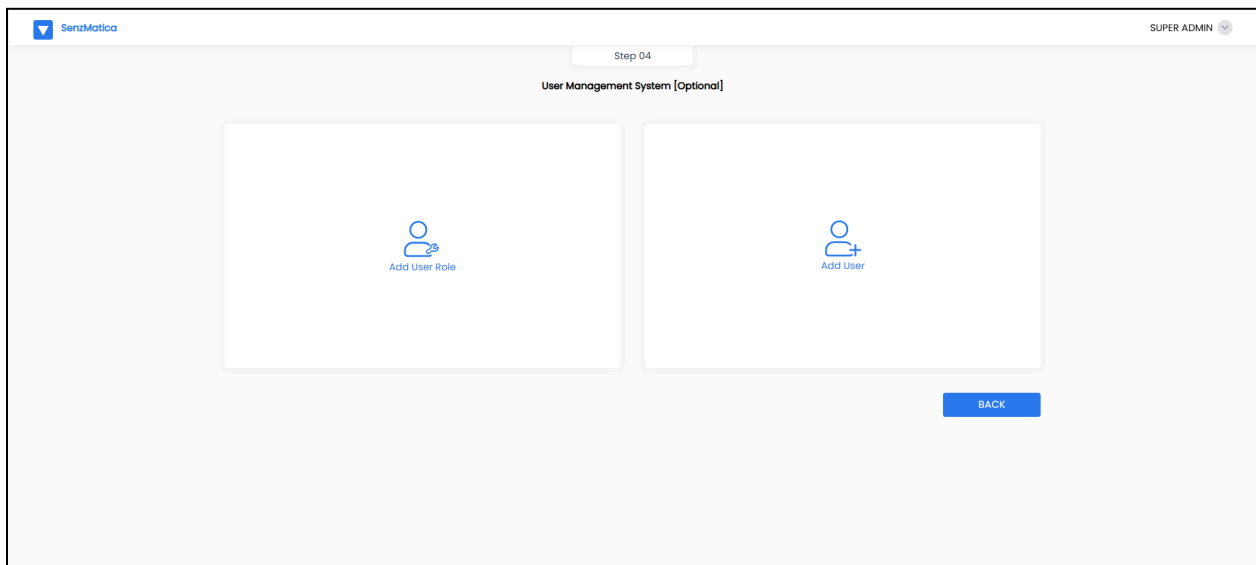
- Then you will see the following screen. Then fill the relevant details and click **Add** button. It will be added under high privilege.



- After filling and choosing all the relevant details to create a user role, you can click the Add button at the bottom of the page.

To add a user for a specific user role,

- Click **Add user** option in below screen.



- You will redirect to the following page, there fill the relevant details and click **Create User** button.

SenzMatica SUPER ADMIN

Step 04

User Management System [Optional]
Add Users

Name*	<input type="text" value="Enter Your Name"/>
Email*	<input type="text" value="Enter Your Email"/>
Mobile*	<input type="text" value="Enter Your Mobile Number"/>
Role*	<input type="text" value="Hirunat (17)"/>
User References*	<input type="text" value="Select References"/>
Advance Option	<input type="text"/>
Username*	<input type="text" value="Enter Your Username"/>
Password*	<input type="password" value="Enter Your Password"/>
Confirm Password*	<input type="password" value="Please Confirm Your Password"/>

Add Another User

- If the user creation process is successful, a success message will be displayed as shown below. The newly created user can then log into the system using the provided credentials. Upon logging in, they will have access to specific features based on their defined privileges.

SenzMatica SUPER ADMIN

Step 04

User Management System [Optional]
Add Users

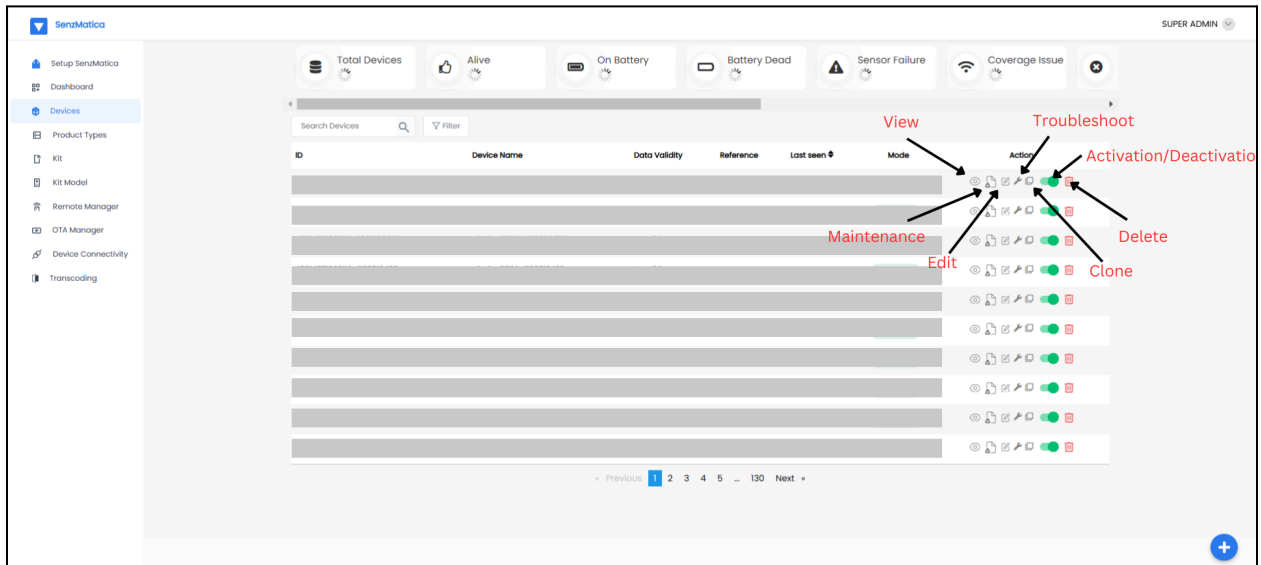
Name*	<input type="text" value="Enter Your Name"/>
Email*	<input type="text" value="Enter Your Email"/>
Mobile*	<input type="text" value="Enter Your Mobile Number"/>
Role*	<input type="text" value="mhinyi khnh (35)"/>
User References*	<input type="text" value="Select References"/>
Advance Option	<input type="text"/>

Add Another User

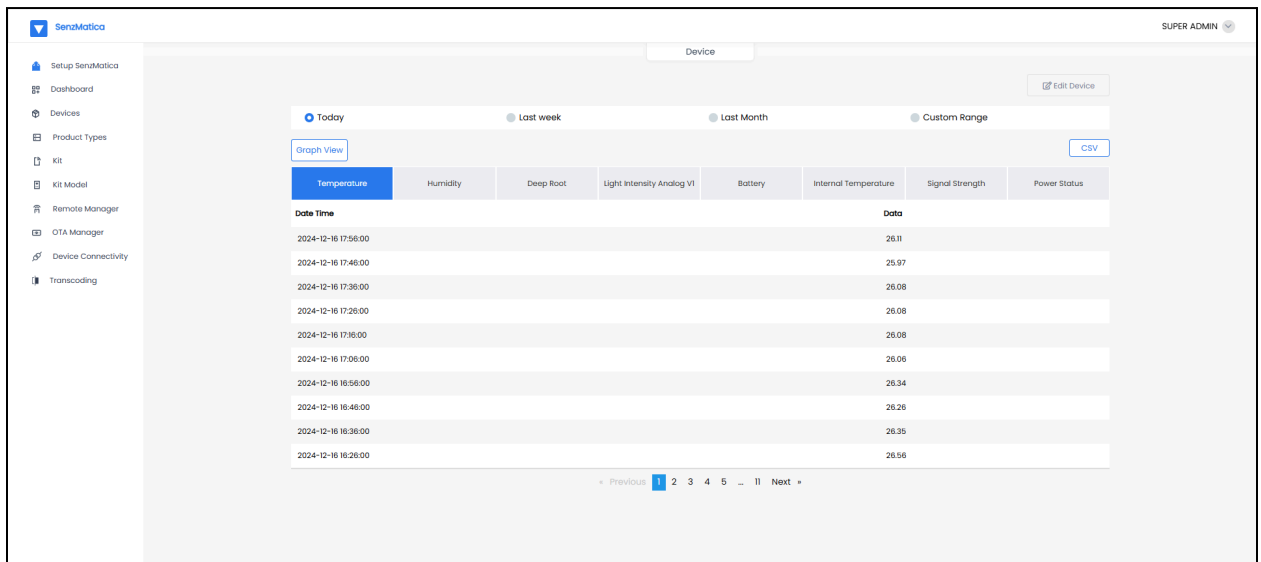
✔ **Success**
User added successfully. Please go to the Dashboard to activate the user

Accessing the Devices List

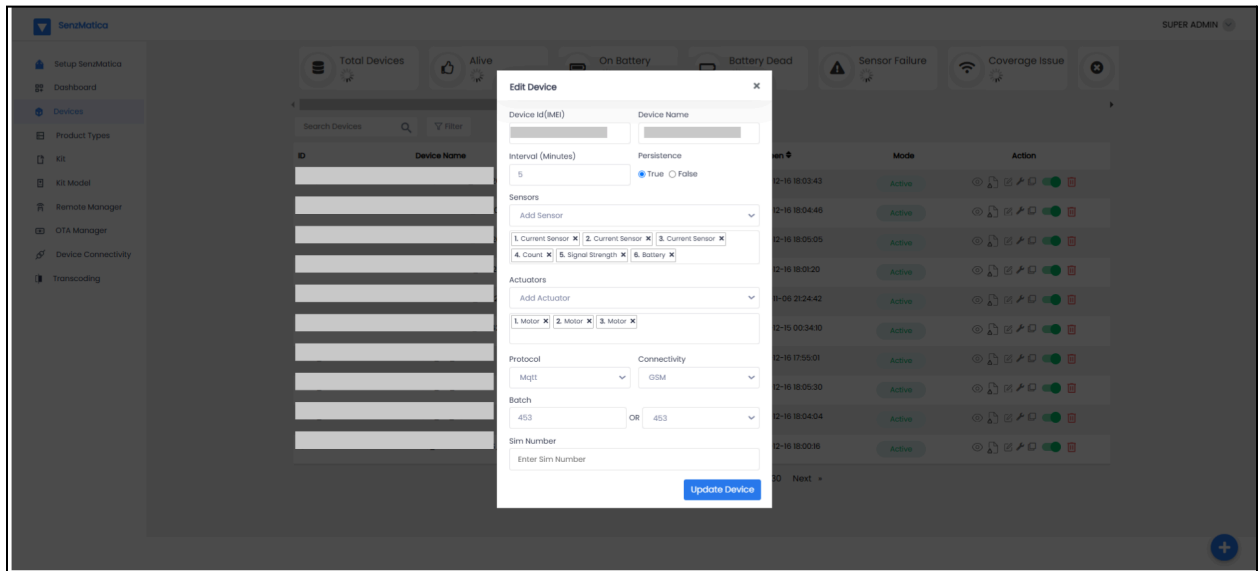
- Go to the **Devices** section in the left-side menu bar. There you will see all the details as follows. The latest onboarded devices will be in the last page with different actions such as view, edit, clone and delete options.



- By clicking the **view** icon, you will see all the current and historical data of the specific device



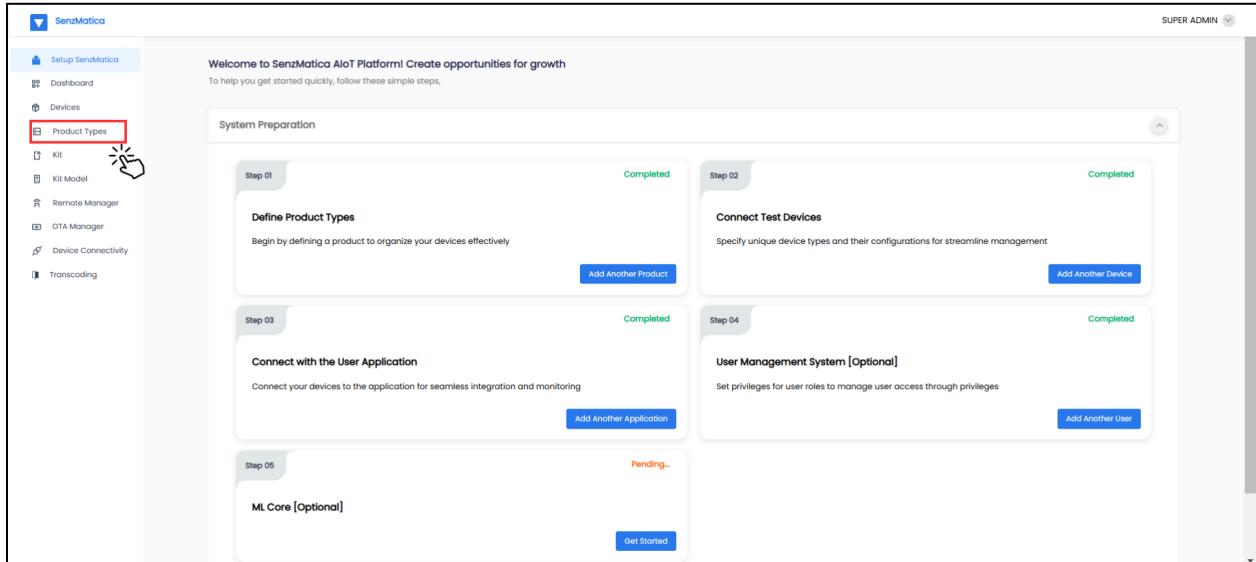
- By clicking the **Edit** icon all the details can be edited related to the device as shown below.



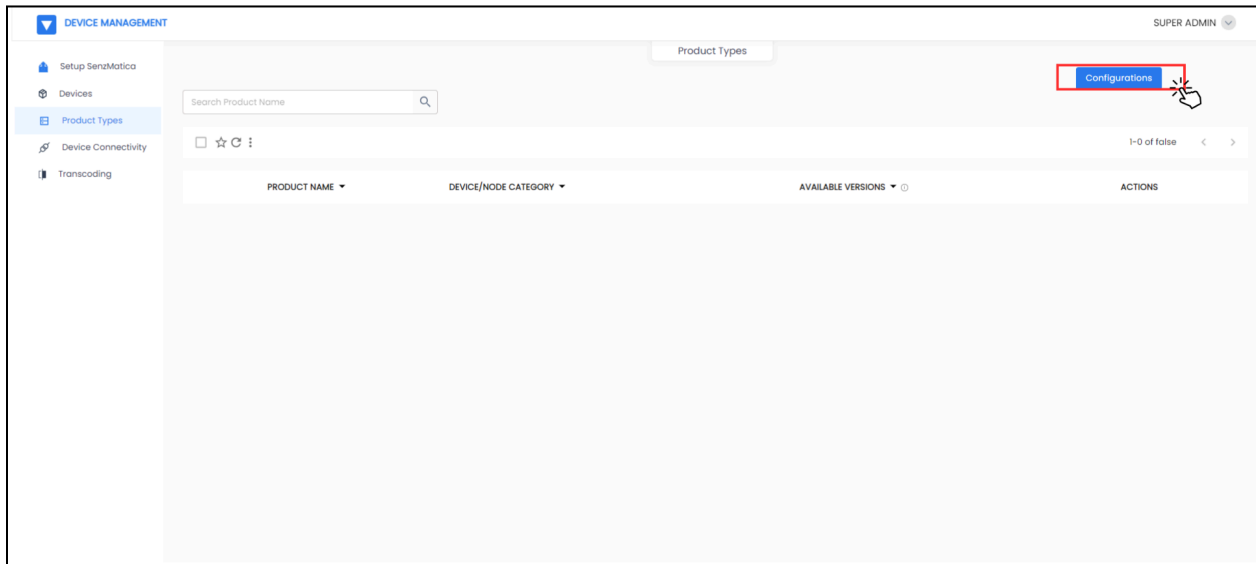
- By clicking the **clone** option you can create another same device for that specific device only changing its ID and by clicking the **delete** icon you can delete that specific device.

Accessing the product types list

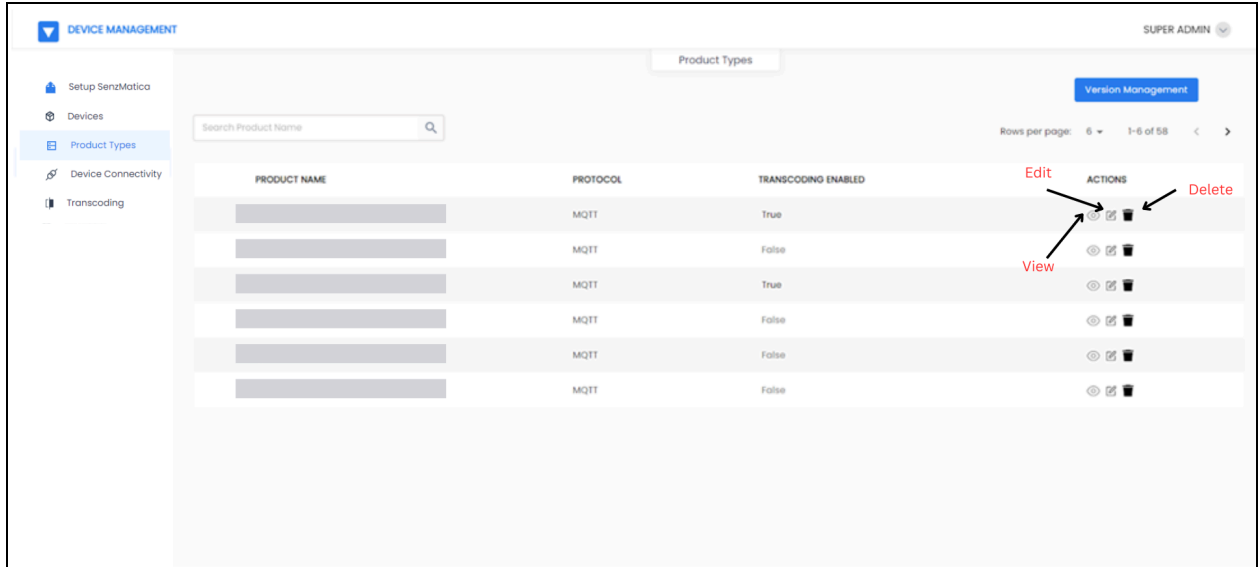
- To view the product types, first go to Product Types section which is in the left-side menu bar.



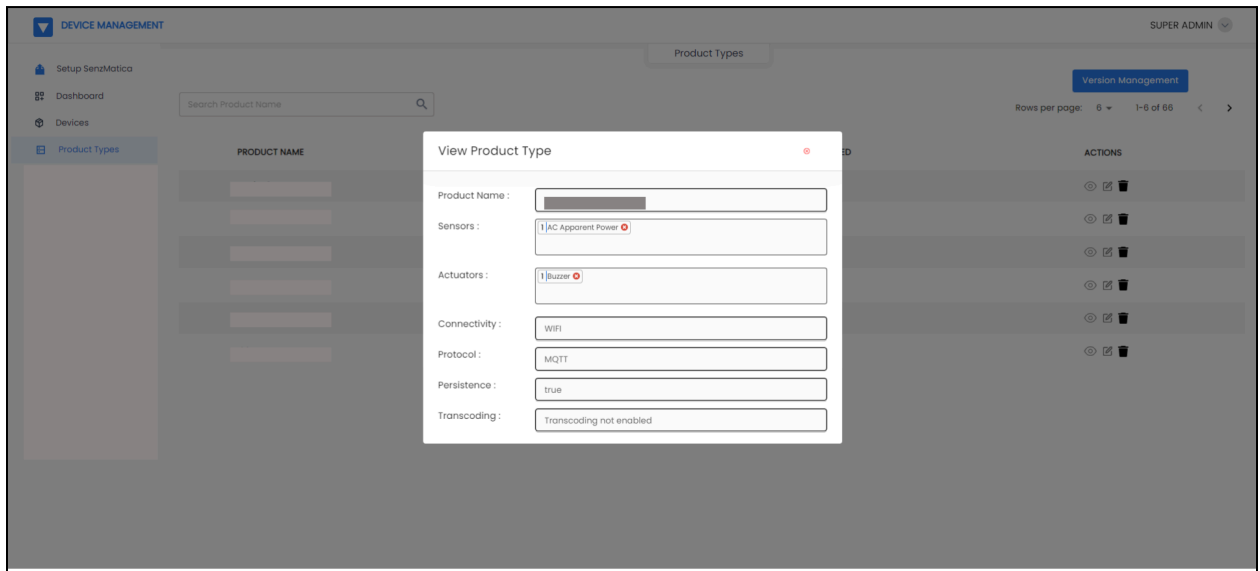
- There click the **Configuration** button.



- Then it will show the list of all the product types as shown below.



- There also you can view,edit, and delete product types by clicking **View, Edit,** and **Delete** icons under actions.



DEVICE MANAGEMENT SUPER ADMIN

Product Types

Setup SenzMatica
Dashboard
Devices
Product Types

Search Product Name

Edit Product Type

Product Name :

Sensors : ✖

Actuators :

Connectivity :

Protocol :

Persistence : True False

Transcoding :

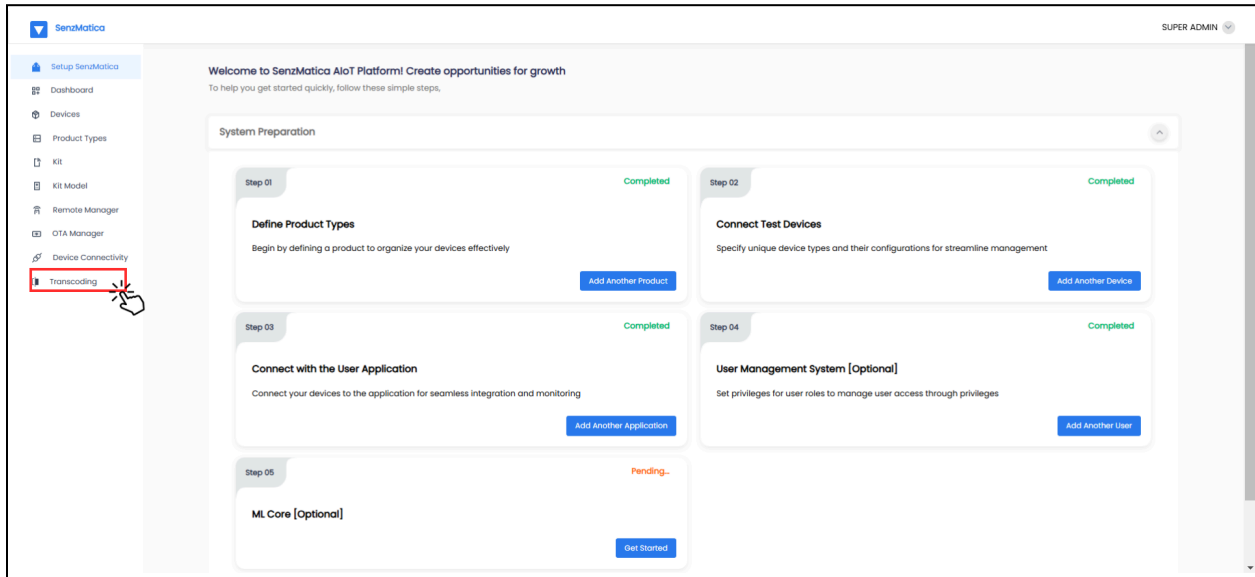
Version Management

Rows per page: 6 1-6 of 66

PRODUCT NAME	ACTIONS
	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

Accessing the codec files list

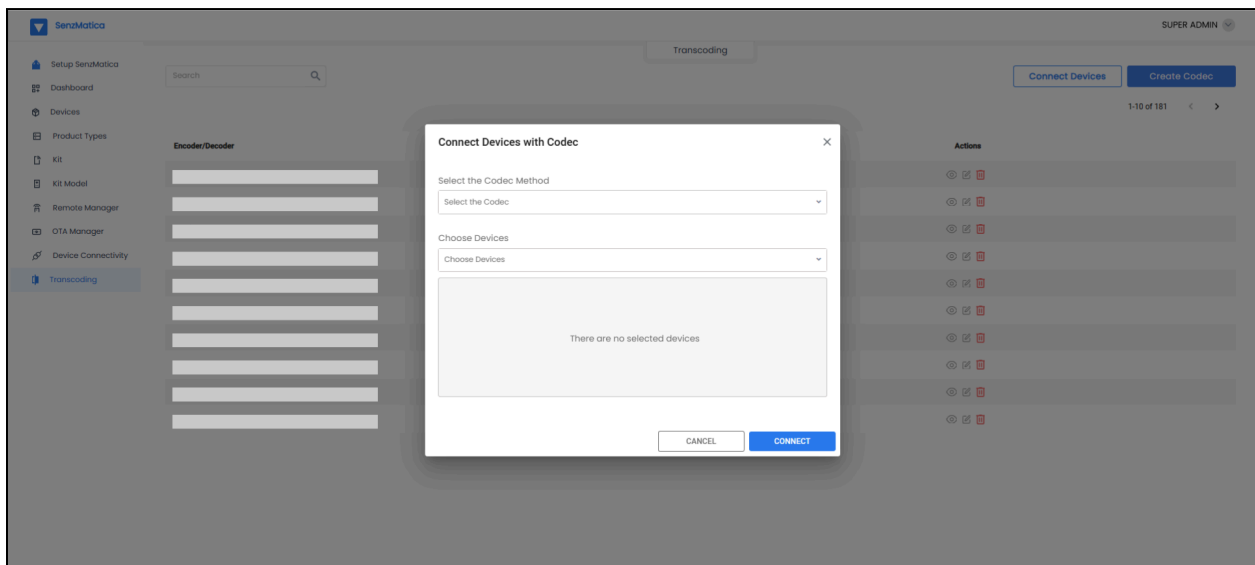
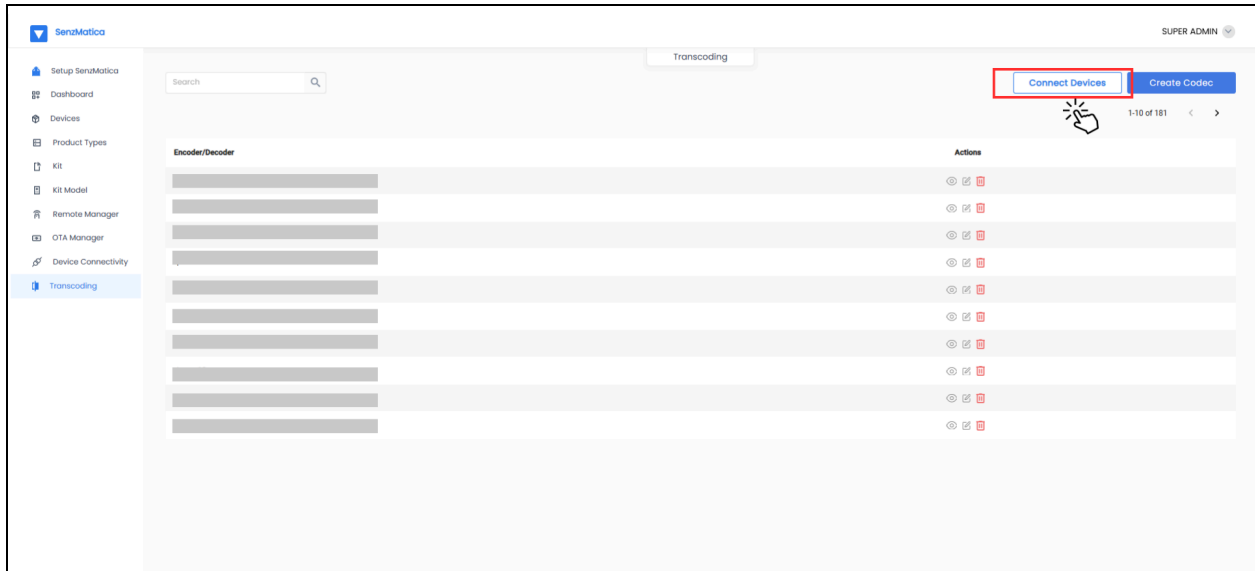
- To access the codec list , Choose **Transcoding** option in the left side menu.



- There you can see all the codec files, its status and actions such as view , edit and delete as shown below.

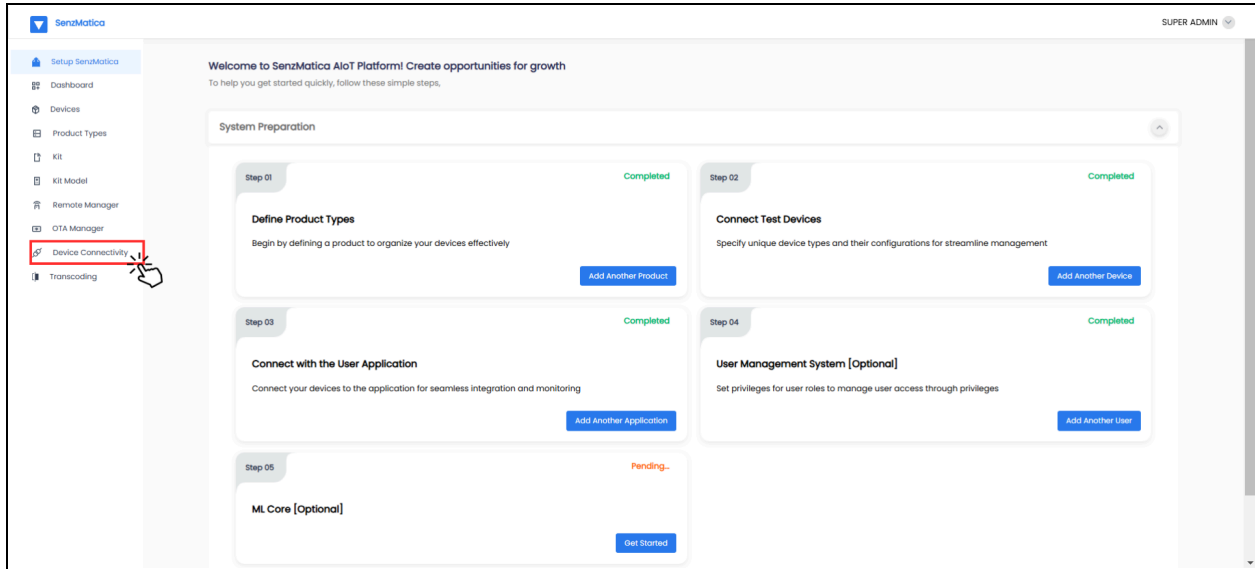


To connect devices with codec files, click **Connect Devices** button.



Accessing the devices with their specific connected protocol

- To view all the devices with their connected protocols , go to **Device connectivity** option in the left side menu.



- It will show all the devices with their connected protocol and the number of devices connected to each protocol. Under actions you can view ,edit, delete ,enable/disable and protect the connection details.

