Add-On Products
OfficePlace

Yanzi Sensor Configuration Guide

Document Revision 01

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Terminology

Term	Definition
Yanzi Lifecycle	The tool that manages the entire lifecycle of a sensor deployment and improves Yanzi's market-leading device management capabilities significantly.
Gateway	A device that provides live and historical time-series data, enables secure communication with the Cloud, and has local storage that ensures data loss is kept to a minimum when the Internet connection is not working.
Access Point	A device that enables the communication between the Sensors and the Yanzi Gateway and ensures autonomous operations.
Sensor	An occupancy detection device connected to their respective resources that automatically recognizes occupant’s presence.

CHAPTER 1.

Introduction

Yanzi Overview

Yanzi is a smart working space that allows customers to integrate a single Gateway hardware system applied in the field of telecommunication for the interaction of Sensor device and enables the data flow from Sensor to Yanzi cloud server.

The following diagram describes the overall interaction of Yanzi with other stakeholders.

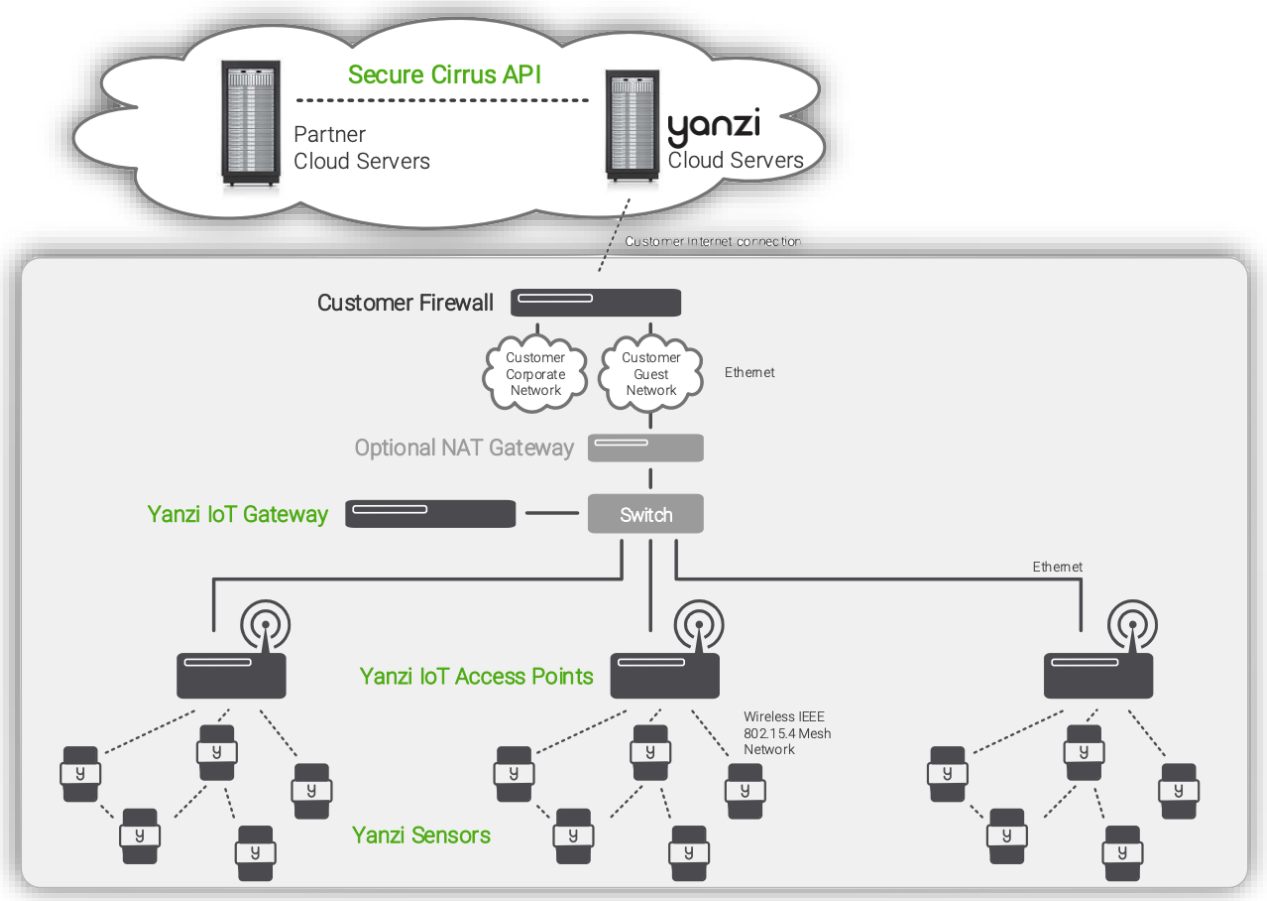


Figure 1. Yanzi networking

Admin users can log in to the Yanzi Cloud and Yanzi Live interface and perform Sensor-related tasks. Their tasks may include, but are not limited to the following:

- Managing your Yanzi infrastructure and sensors throughout the entire lifecycle - from planning to installation, changes, and monitoring of existing systems as well as redeployments.
- Observing the real-time status as well as historical data of integrated infrastructure and sensors.

CHAPTER 2.

Yanzi Cloud Configuration

For this configuration, you need to set up your Yanzi Lifecycle Cloud account, integrate your Yanzi Gateway and set up its connected devices.

Set up your account

Sign up account

Open the browser and navigate to the address of the web server where Yanzi Cloud is hosted. It will display the Login screen of Yanzi as below:

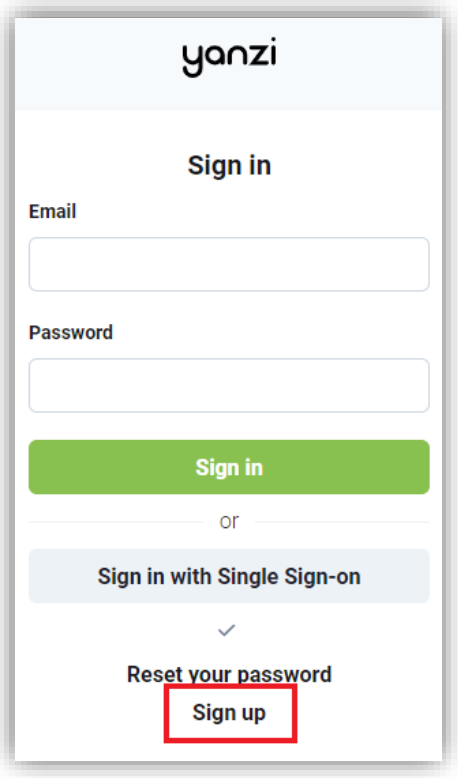


Figure 2. Yanzi Login

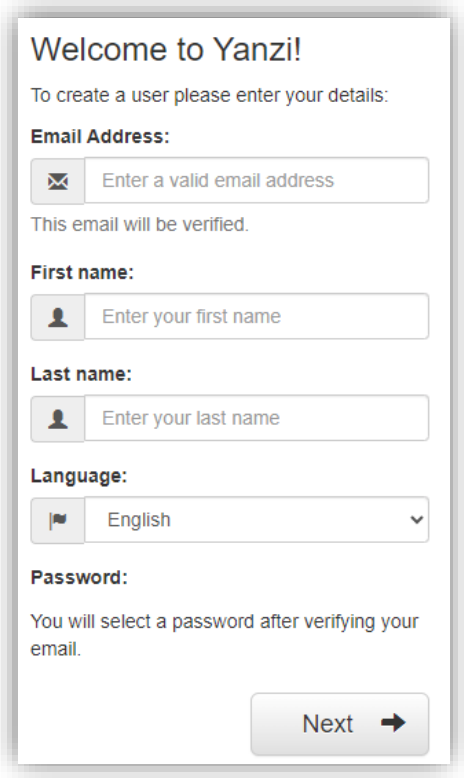


Figure 3. Yanzi Sign Up

In case you have not had an account yet, click [**Sign up**] to register. The fields in *Figure 3* will now be visible in your browser. Fill up your information and click [**Next**]. A confirmation pop-up will request your permission to verify your email:

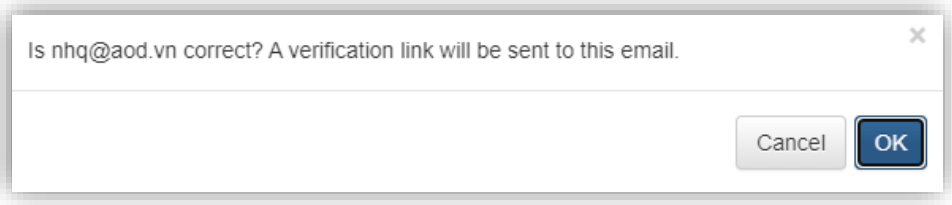


Figure 4. Email Verification

IMPORTANT NOTE: Accounts should not be registered using colleagues' emails, as their emails may become invalid if they resign. This would require you to re-configure your Yanzi Cloud and Yanzi Lifecycle.

You will then receive an email to create your password after clicking [**OK**]. If you do not get the email in your inbox within a few minutes - please verify the mail is not in your spam/junk folder.

Following the link sent in your email will take you to the below screen. Type in the **Password** and **Confirm** it ➔ **Update Password** to finish signing up.

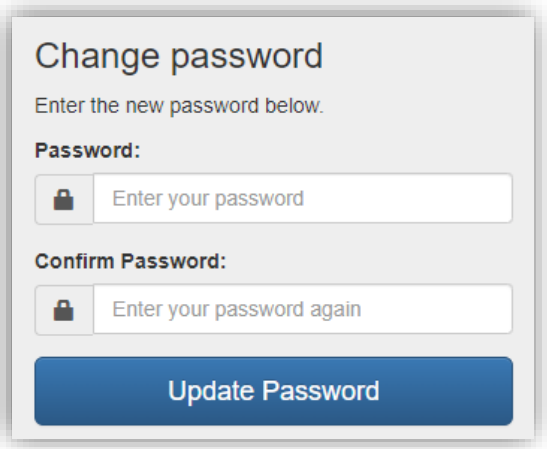


Figure 5. Creating Password

After creating a user successfully, you are now able to login with this account. The first screen will show up as follows:

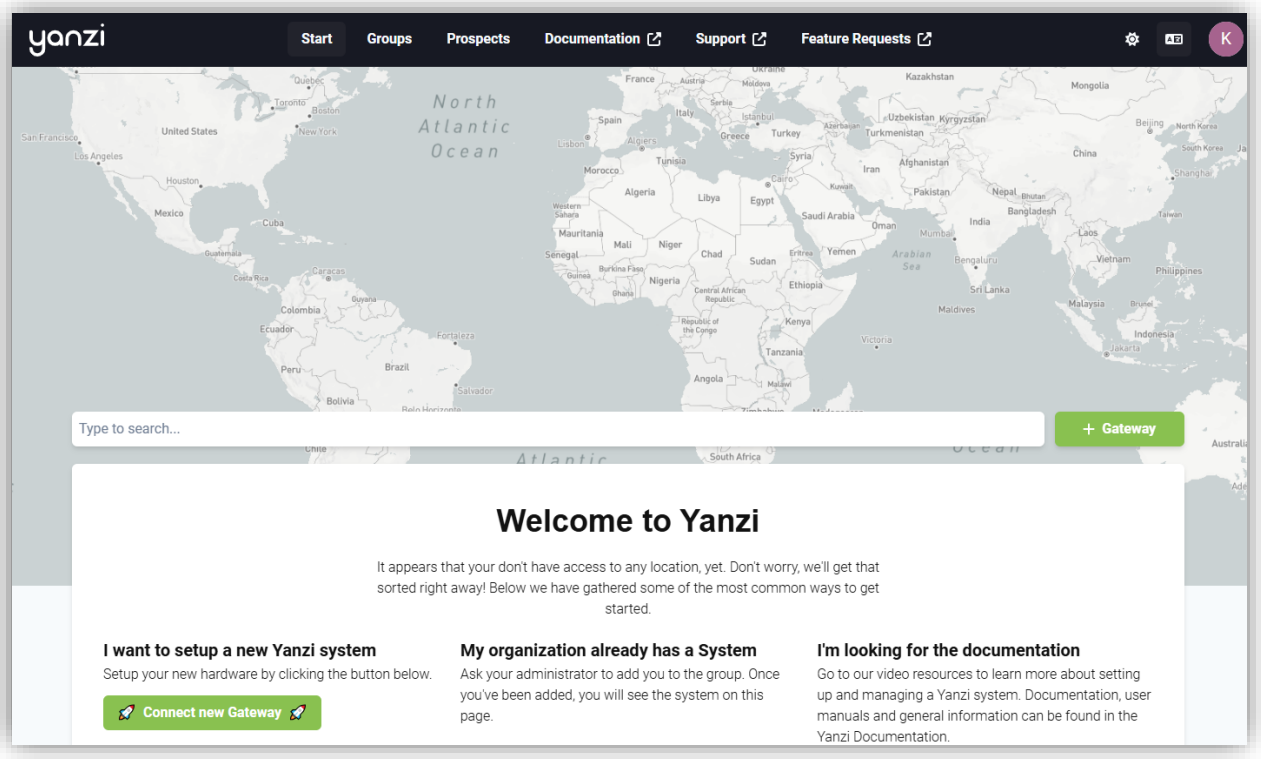


Figure 6. Yanzi Cloud Interface

Create new group

In **Groups** tab, click on the [**+Create new group**] button to create a group, which aggregates Locations and can typically be a way to separate customers.

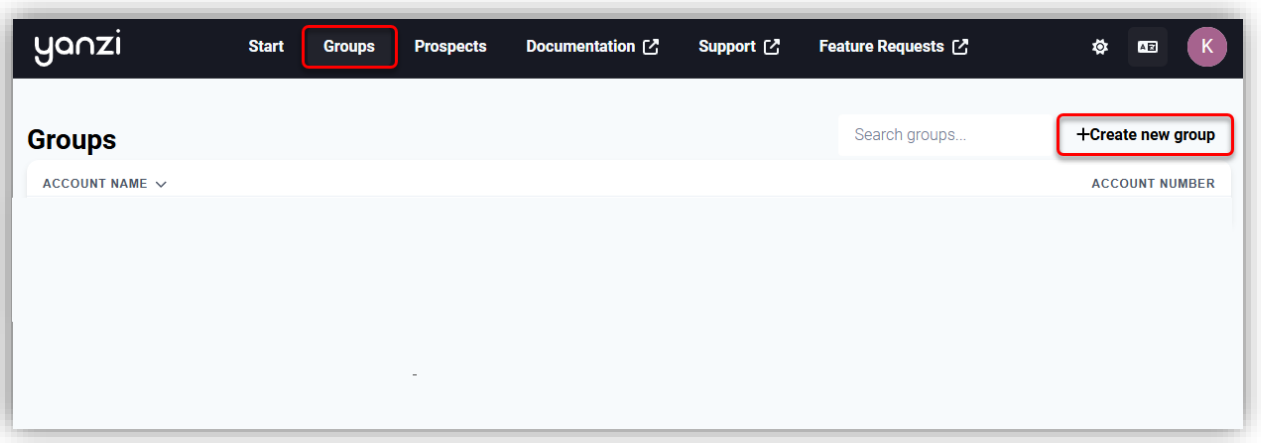
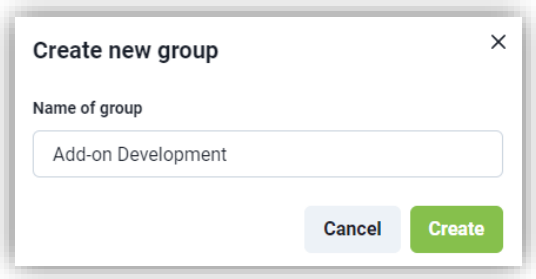


Figure 7. Groups tab



Name the group and select [**Create**] to finish.

Figure 8. Creating new group

Your new group has been added to the **Groups** list below with unique account number:

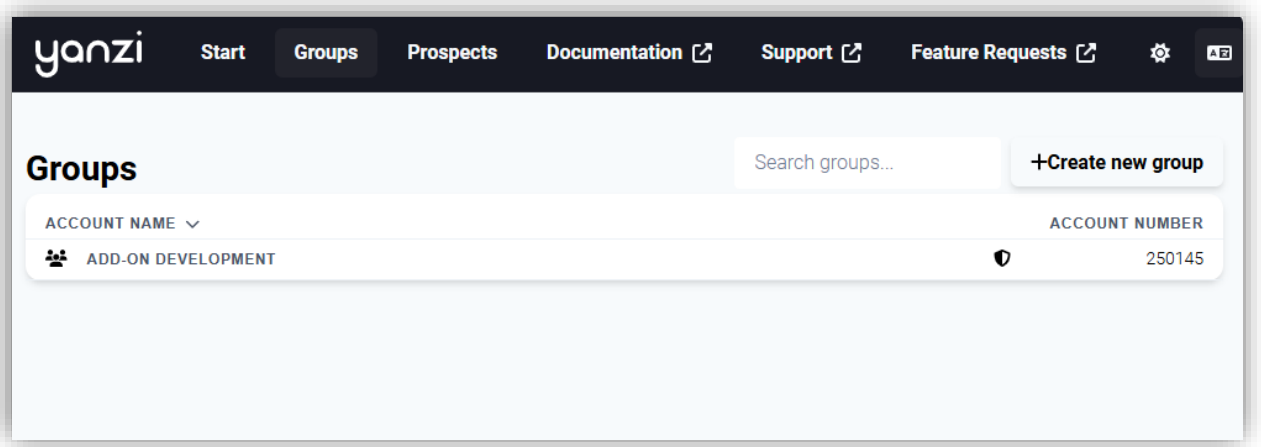


Figure 9. Groups list

Add users and grant users access to a group

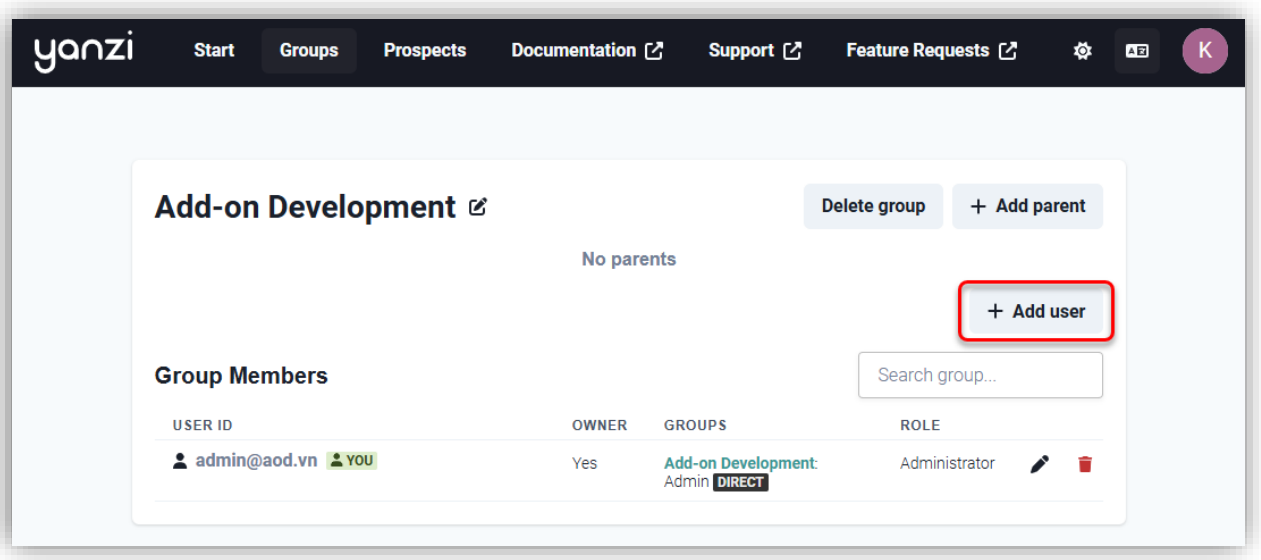


Figure 10. Add Users

Click on a group that you have created, select [**+ Add Users**] to add a user to that group. The below box will now appear. Enter the email of the User you wish to add to the Group and grant an access level for that User ➔ [**Submit**].

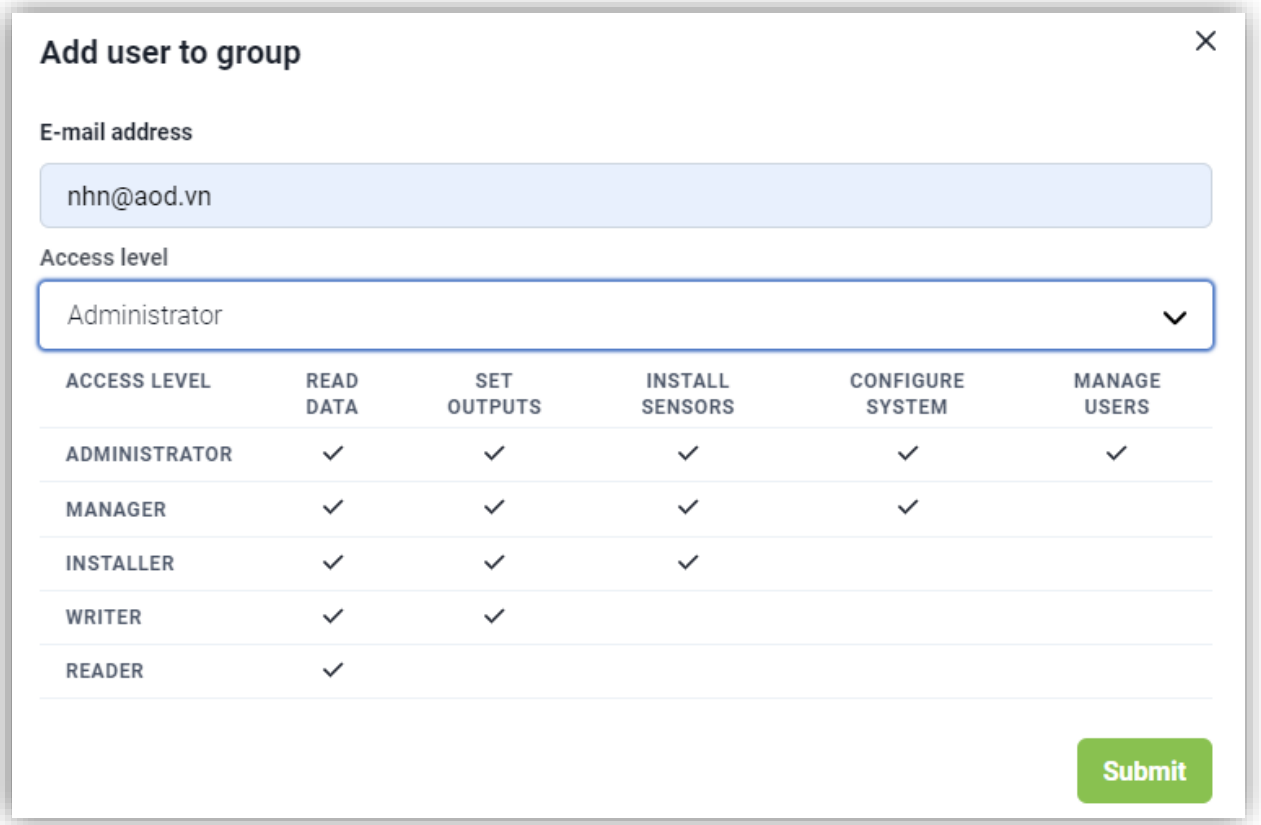


Figure 11. Add user to group

There are five (5) levels of access (as shown in the figure above), each with its own set of permission(s) and function(s).

Function	Description
Read data	A user with read access to a Group can view the sensor data and connectivity for all Locations aggregated in that Group.
Set outputs	A user can can also interact with device functions, e.g. toggle a Yanzi Plug on or off.
Install Sensors	A user can install new sensors and gateways to the system.
Configure system	A user can change configuration in the system, for example by uploading floorplans, creating and deleting assets, and renaming and reconfiguring sensors.
Manage users	A user can add, remove and change the access rights for all users in the specific group.

NOTE: It is recommended that you create 2 accounts and assign them **Administrator** and **Reader** access seperately. These access levels only allow users to configure on Yanzi Cloud. To obtain Sensor data, please refer to Yanzi Live access level for more details.

Integrate your Gateway

When connecting Gateway to monitor screen, you can see the IP of the Gateway but the location would show 'UNKNOWN' as the Gateway has not been linked to a Location yet.

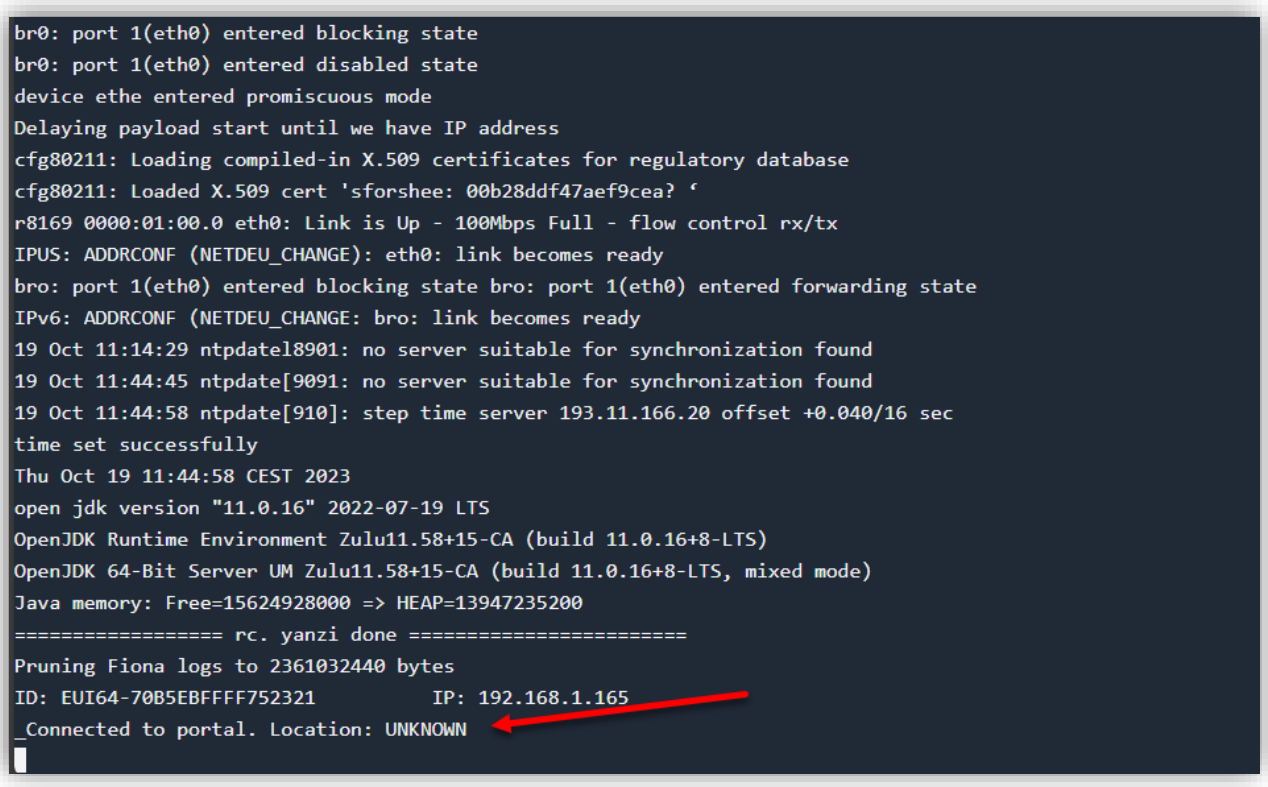


Figure 12. Gateway monitor before linking to a location

After you have finished building Group and adding Users to it, you must proceed with configuring the Gateway. Click on + Gateway button on the Yanzi Cloud **Start** tab, it will switch to a new screen called 'Connect a gateway' that consists of 10 steps as listed in the following figure:

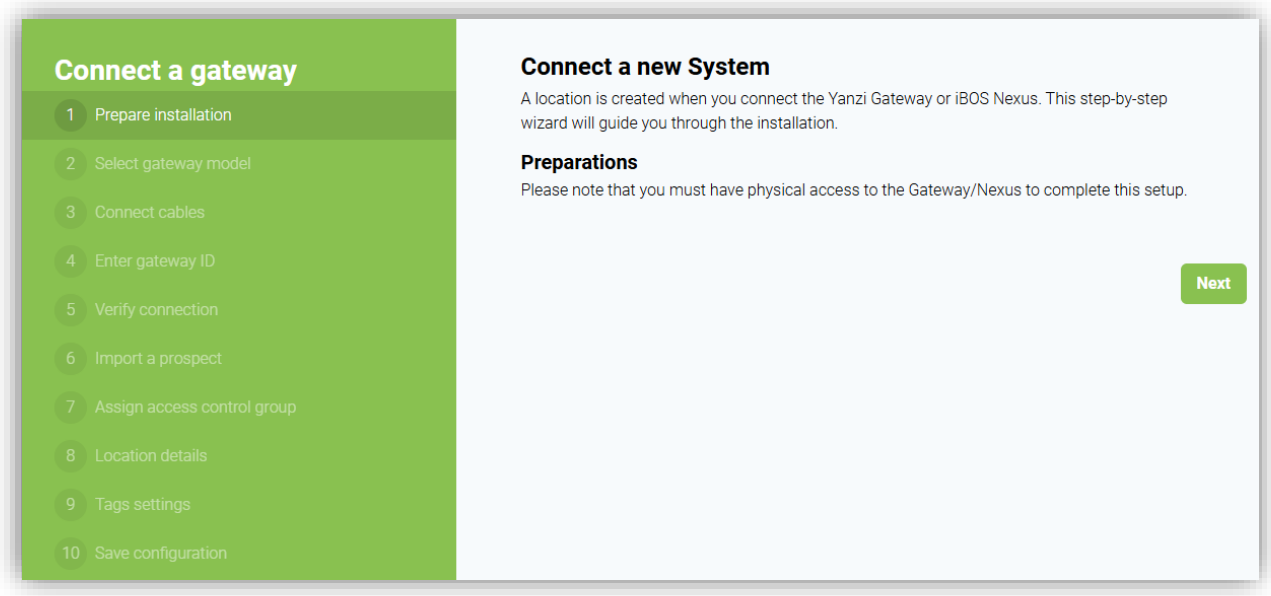
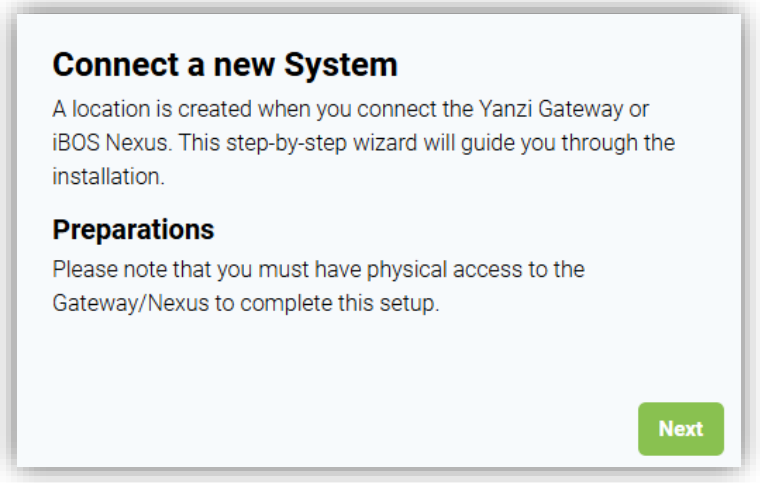


Figure 13. Connect a gateway Interface

Follow these steps to connect a new Yanzi Gateway:

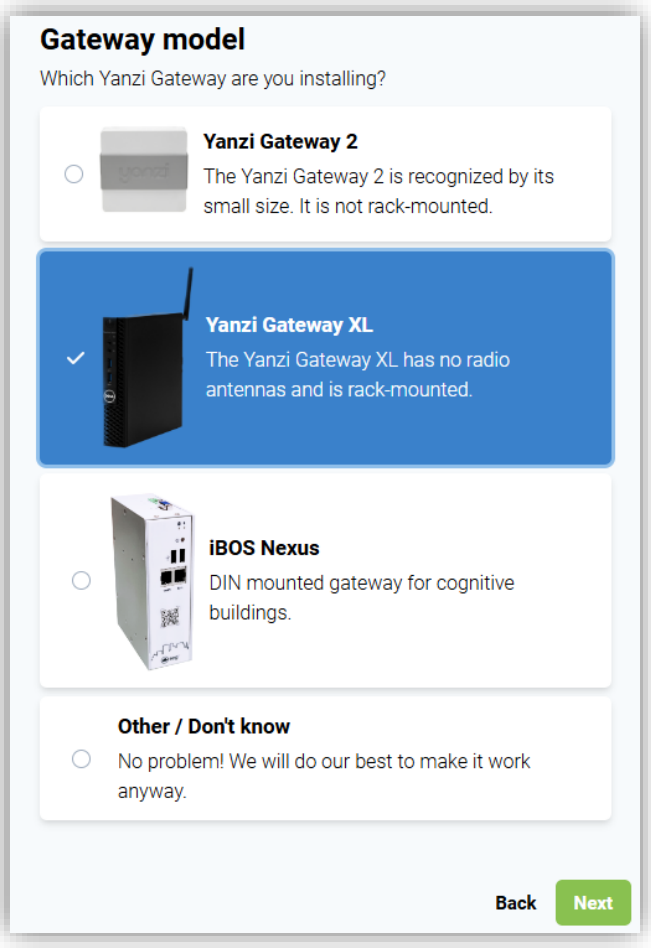
Step 1: Prepare installation



This step is to make sure that you have a Yanzi Gateway available to connect to. If you do, switch to Step 2 by clicking [**Next**].

Figure 14. Prepare installation

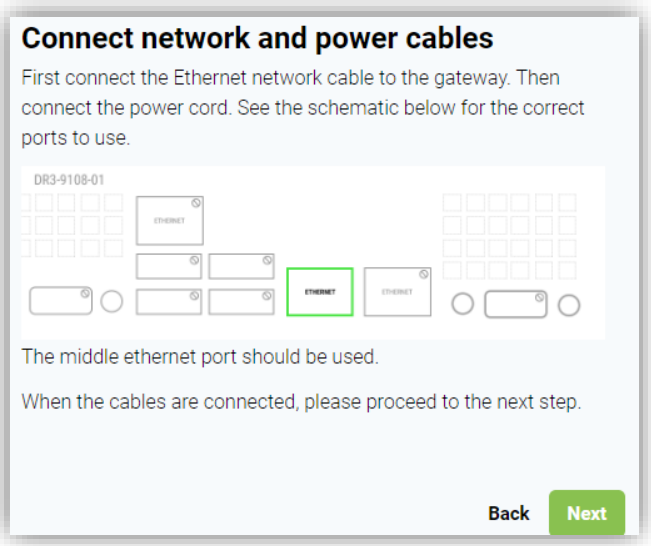
Step 2: Select gateway model



Select the Gateway model for which you are currently supporting ➔ [**Next**].

Figure 15. Select gateway model

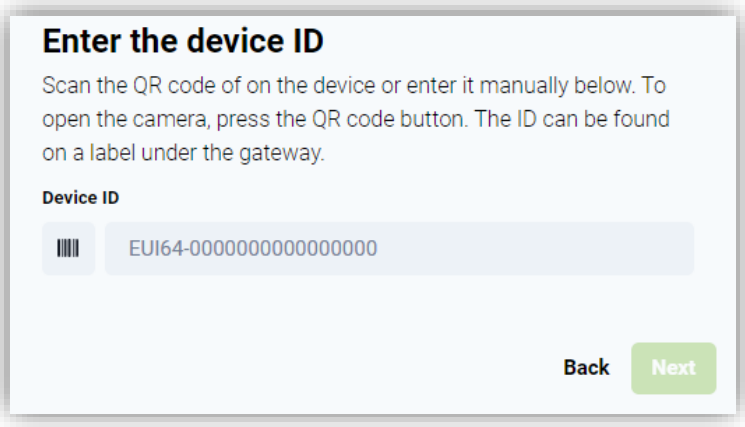
Step 3: Connect cables



This step requires you to connect the Ethernet network cable to the Gateway and connect the power cord in accordance with the given schematic. Once it is complete, click [**Next**].

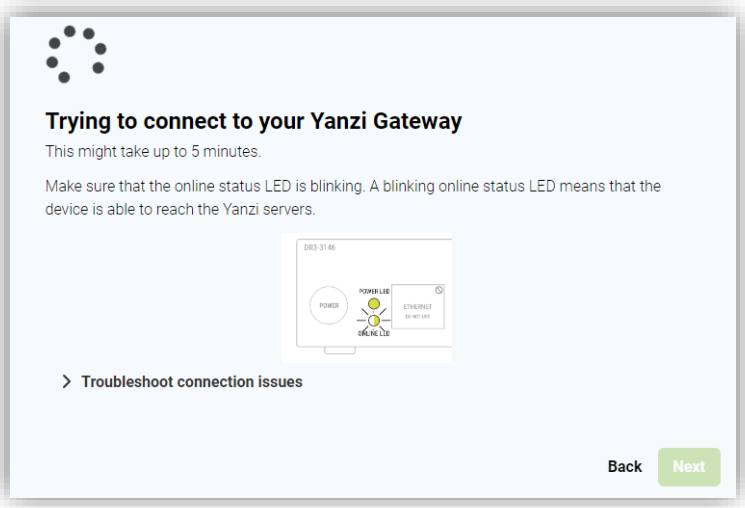
Figure 16. Connect cables

Step 4: Enter gateway ID



Every Gateway device has a label that contains all of its information (including Device ID). In this stage, manually enter the device ID or use the QR code scanner to automatically insert ➔ [**Next**].

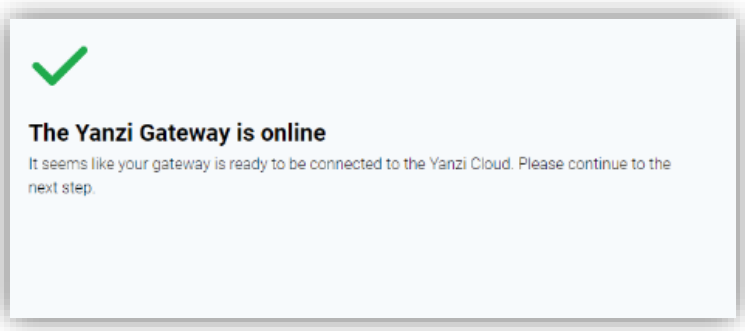
Figure 17. Enter gateway ID



It is possible that the status check will take up to 5 minutes.

Figure 18. Status checking

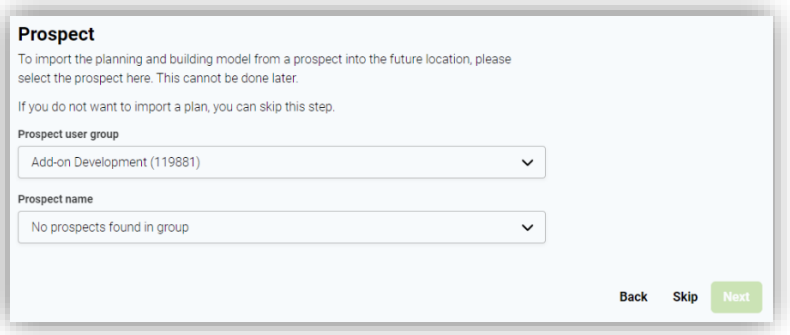
Step 5: Verify connection



If it indicates that the Yanzi Gateway is online after the status checking, it is ready to connect to Yanzi Cloud. If the verification fails, try again.

Figure 19. Verify connection

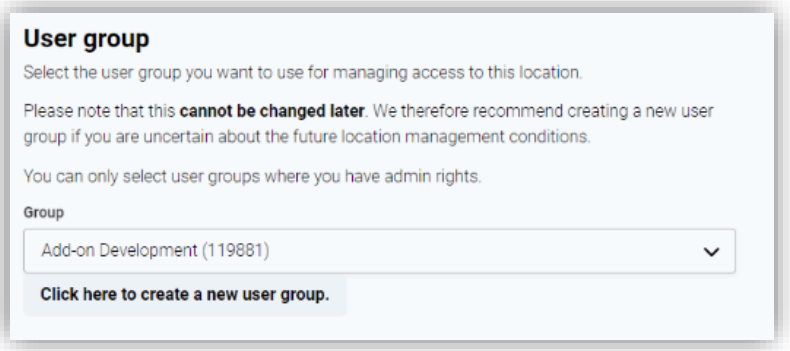
Step 6: Import a prospect



You are advised to [**Skip**] this step.

Figure 20. Import a prospect

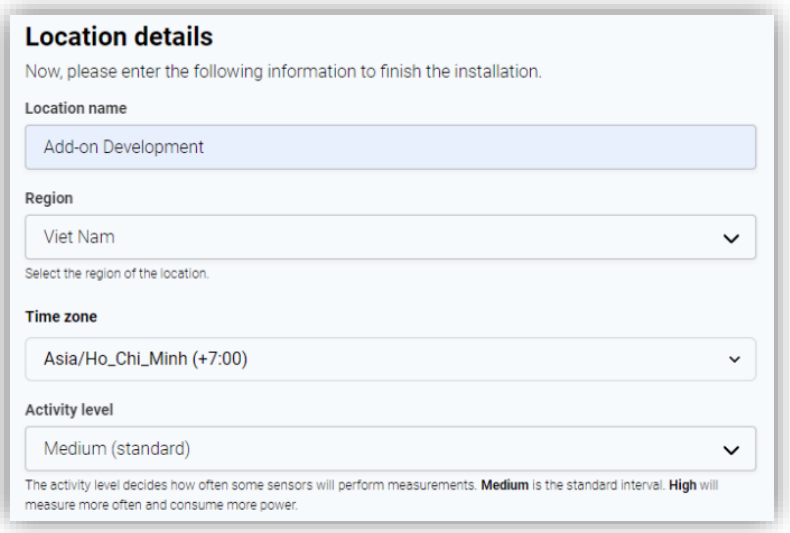
Step 7: Assign access control group



You are able to delegate the permission of access to this location to a user group. In the **Group** section, select a user group to whom you would like to grant access. You can create a new user group by click on [**Click here to create a new user group**] then assign to it ➔ [**Next**].

Figure 21. Assign access control group

Step 8: Insert location details



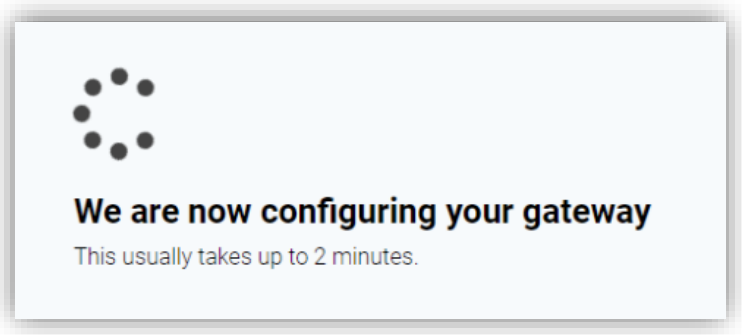
In this step, fill in detailed information about the location (Name, Region, Time zone, Activity level) ➔ [**Next**].

Figure 22. Location details

Step 9: Tags Settings

Please skip this step.

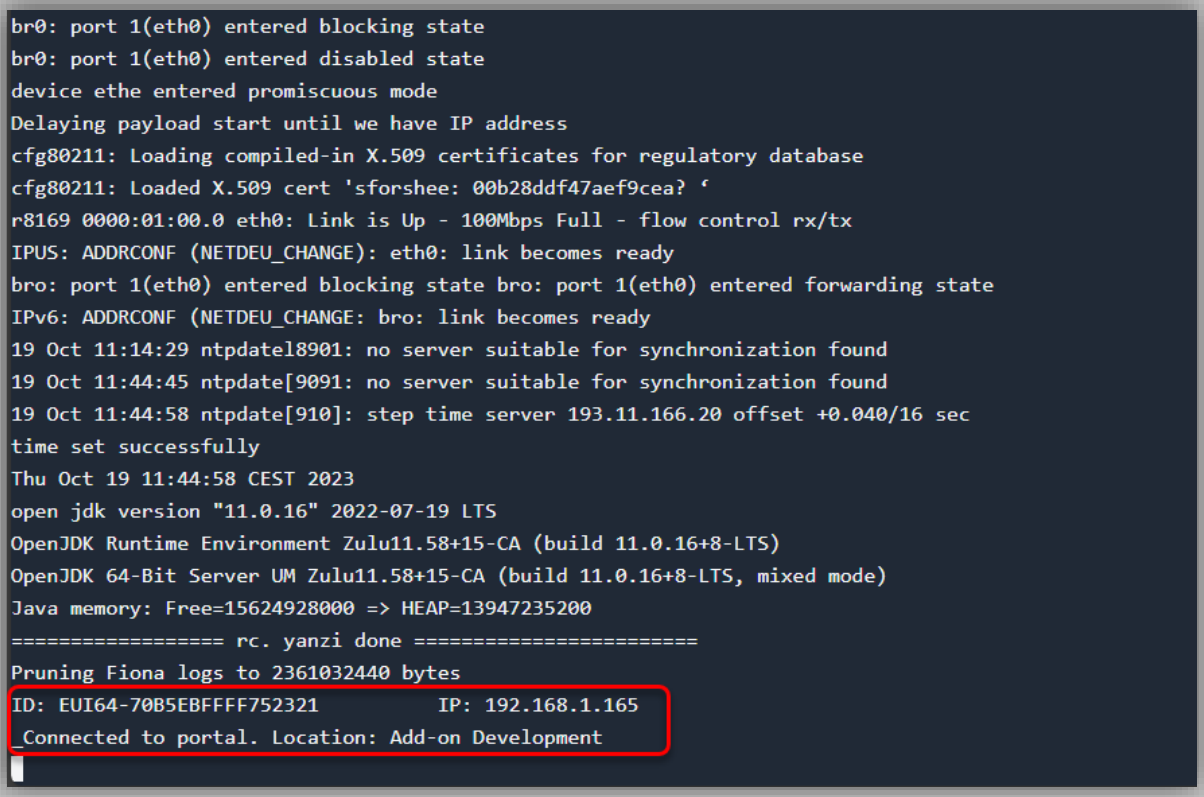
Step 10: Save configuration



The system then saves your configuration and integrates your Gateway.

Figure 23. Save configuration

NOTE: Please connect your Gateway model to a computer screen to determine whether it is properly set up. If the screen displays the IP and the Location name that you specified in Step 8, the configuration is completed.



Go back to Yanzi Cloud, the location that you just added will be displayed. Turn on the ⓘ [**Technical information**] button to show the Location ID under the Location name.

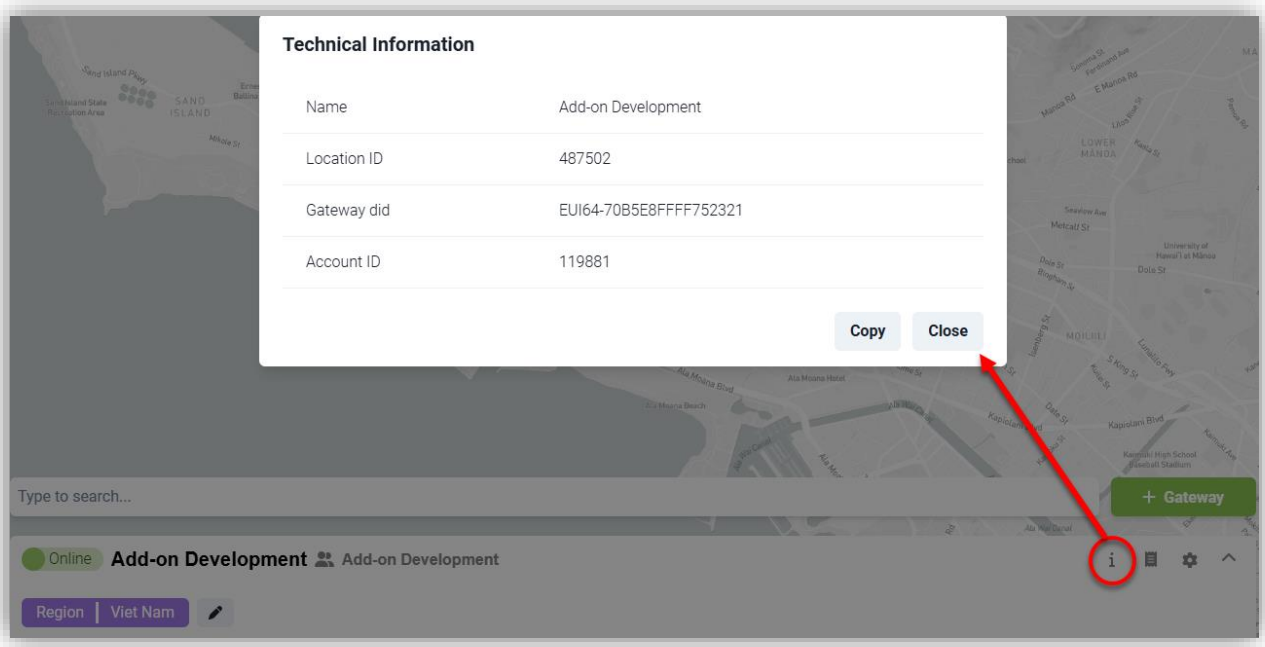


Figure 24. Location ID

Set up Yanzi devices

After the configuration is saved successfully, the screen with a toolbar on the left will automatically appear:

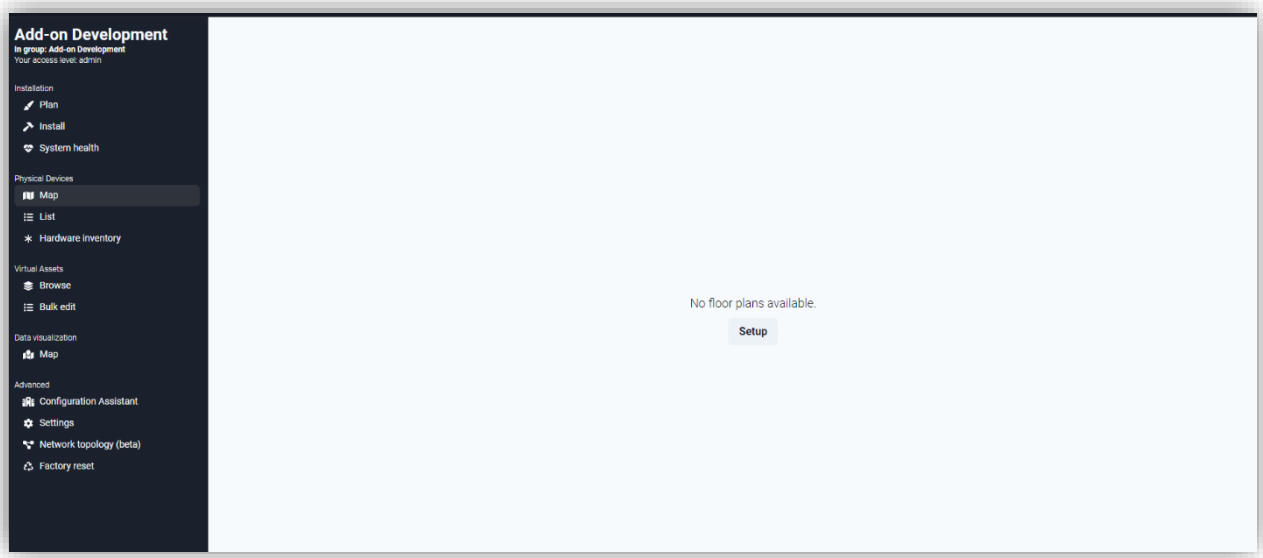


Figure 25. First interface

You can also open this screen by clicking on the ⚙ [**Settings**] button on the right side of Group name:

Follow these steps to set up Yanzi devices:

Step 1: Add Floor Plan

To add Floor plan, click [**Setup**] button on the first interface, you would be navigated to *Floor plans* under 'Settings' category to configure.

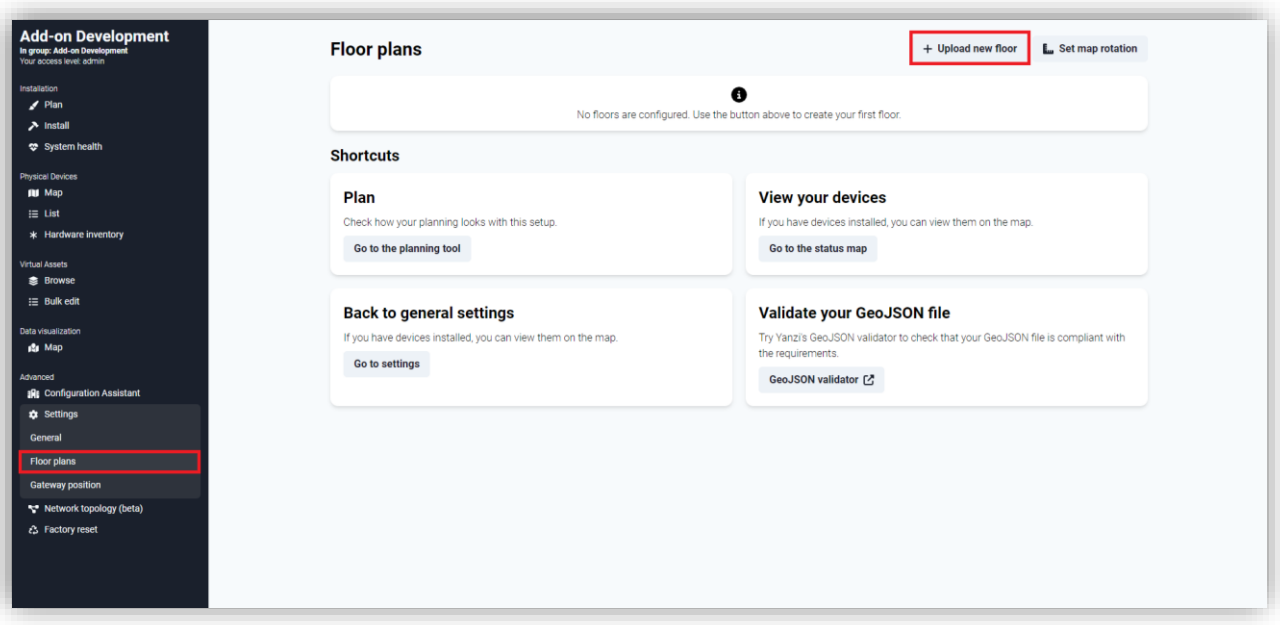
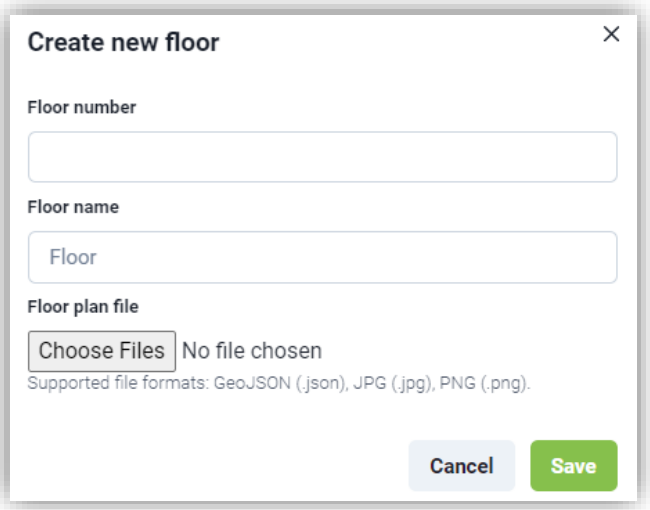


Figure 26. Upload new floor

In the top right corner, click [**Upload new floor**], a pop-up screen of '**Create new floor**' will appear as the figure below:



You must fill in the floorplan number, floorplan name, and add floorplan file ➔ [**Save**]

NOTE: The floorplan file must be GeoJSON file (.json) to set up asset.

Figure 27. Create new floor

After creating a new floor, all of its information will be displayed as shown below:

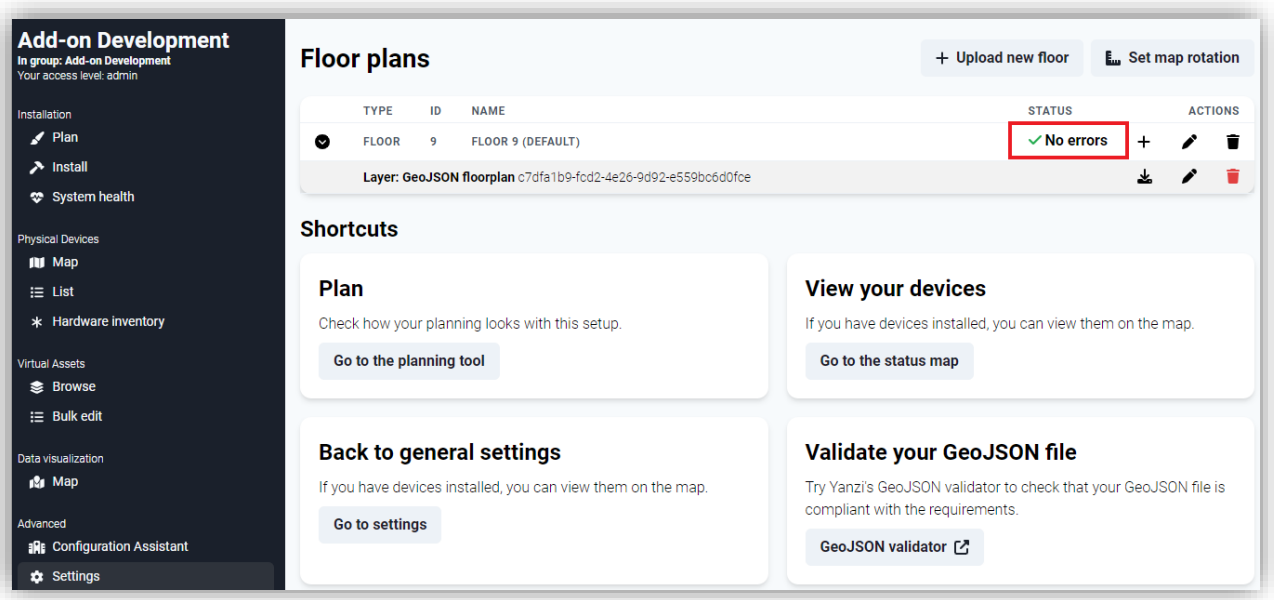


Figure 28. Floor plan status

The **Status** field validates the format as well as the compatibility of the uploaded file to the Yanzi system. If it is compatible with Yanzi system, the status will show '**No errors**' and vice versa.
Three (3) shortcuts are available in the **Actions** filed to assist you Add a file - Edit the floor's details - Delete the floor.

After uploading the Floor plan successfully, it will be displayed on *Draw* under 'Plan' category.

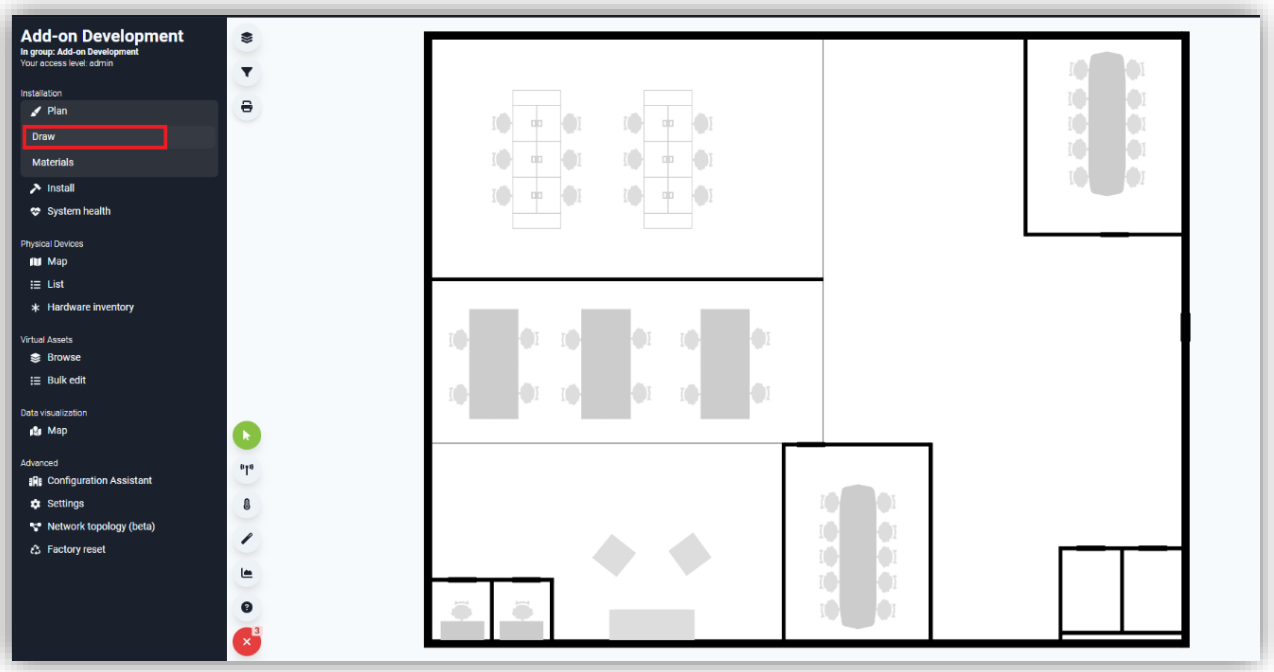
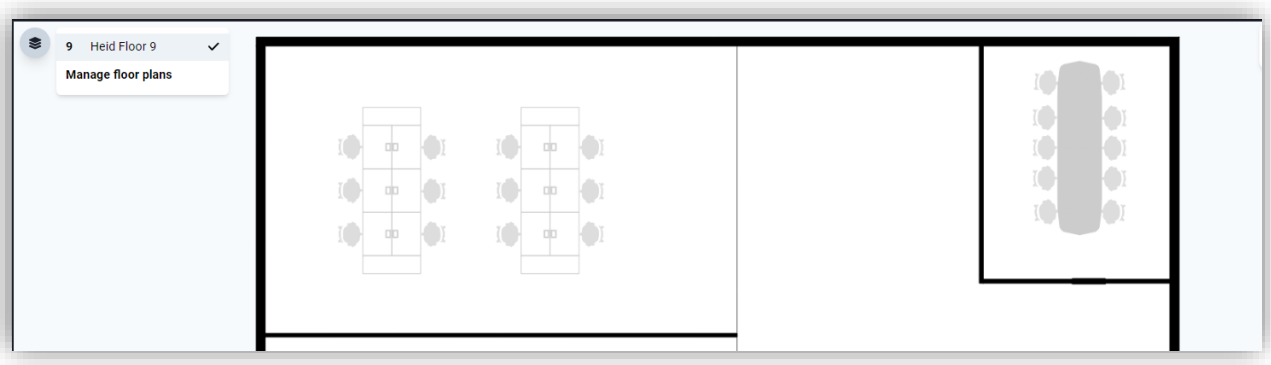


Figure 29. Draw interface

On the upper-left side, you can click on  in order to open your list of floor plans. Choose the floor plan that you would like to configure.



Step 2: Assign a place for the devices

In this plain floor plan, you must select the place where the devices will be located.

To pick a location for the Gateway device, click the button on the bottom left of the screen. A list of infrastructure devices would then be shown. You should click on the Gateway you want to add, then drag the mouse pointer to the location where you want to place it, then click to locate it.

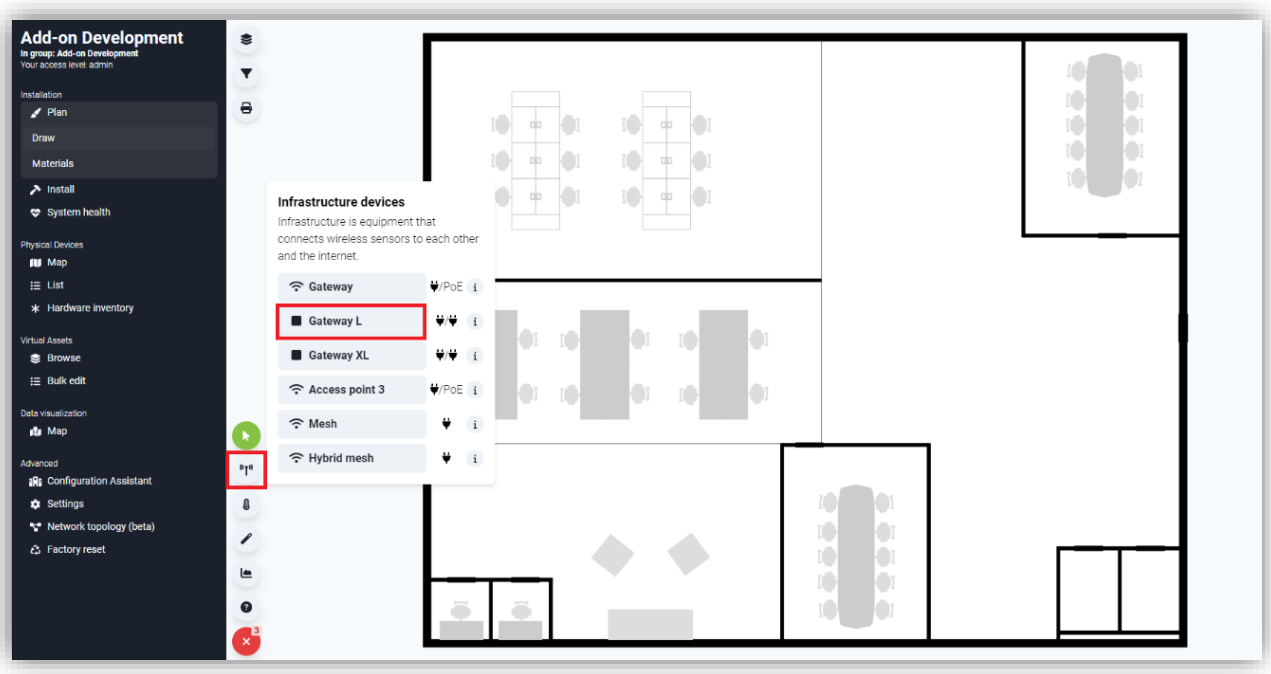


Figure 30. Set place for Gateway

Proceed to draw Access Point on the floor plan in the same way as Gateway. The result should assemble the below figure:

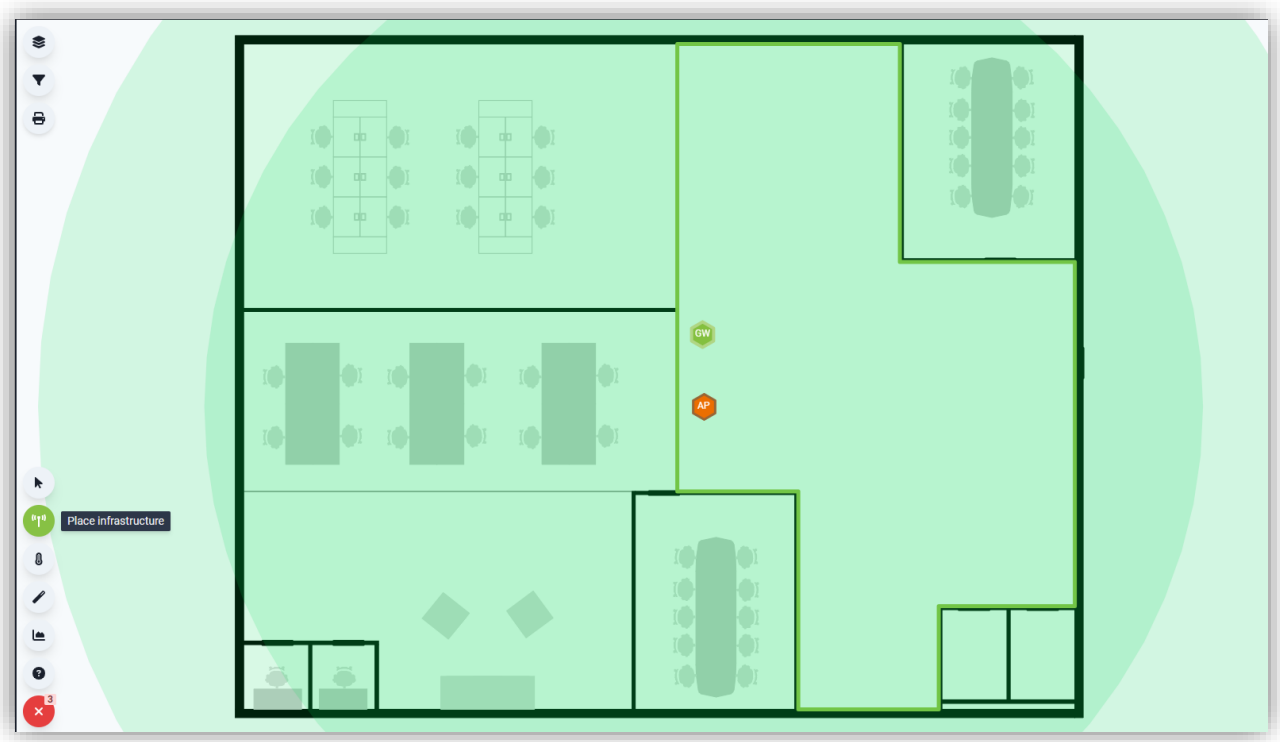


Figure 31. Set place for Access Point

NOTE: It is recommended that Gateway and Access Point be located nearby.

In order to place Sensor device, click on button. Then, select your device, drag the mouse pointer to the plan, and click on the location where you want it to be set.

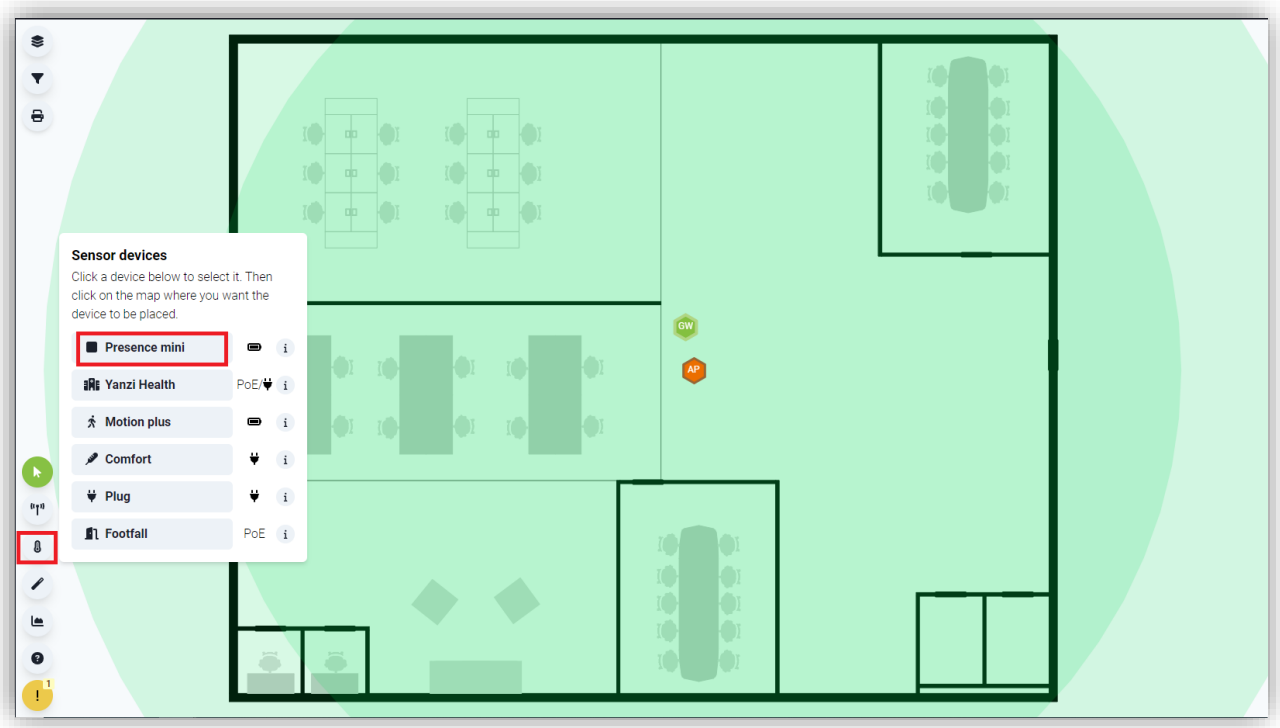


Figure 32. Set place for Sensor

When you complete setting places for 3 above devices, the outcome would be as follows:

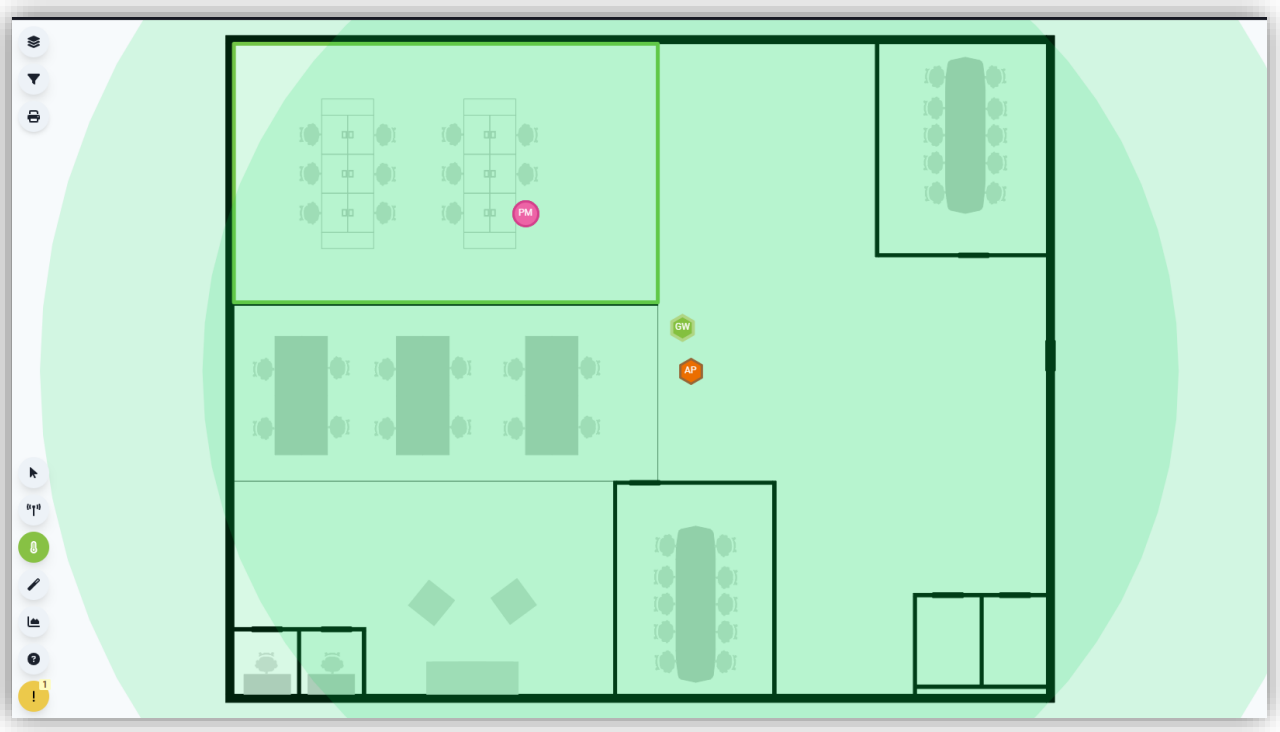


Figure 33. Placement result

Step 3: Install your devices

In this stage, after selecting the device placement, you must input the device IDs for each device placed on the floor plan to connect to Gateway.

Select [**Install**] from the toolbar to bring up the Yanzi installation tool screen:

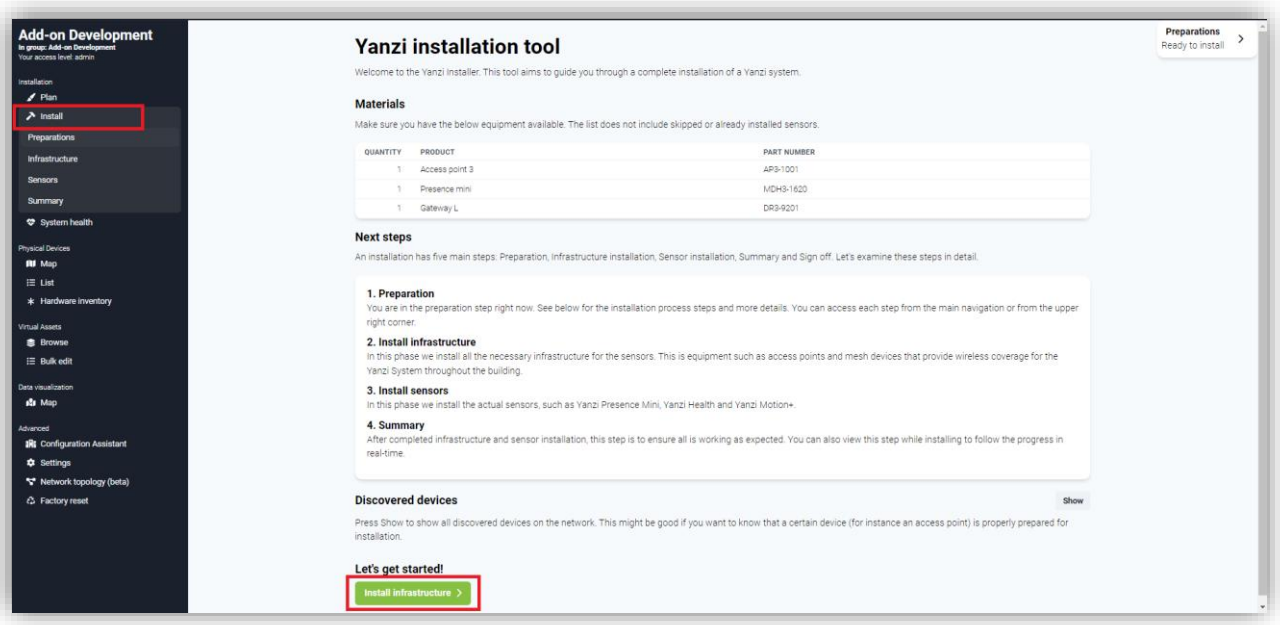


Figure 34. Yanzi installation tool

On navigating to [**Install Infrastructure**], you would see a floor plan with only grey Access Point symbol. When you click on it, a pop-up window appears in which you must enter device information.

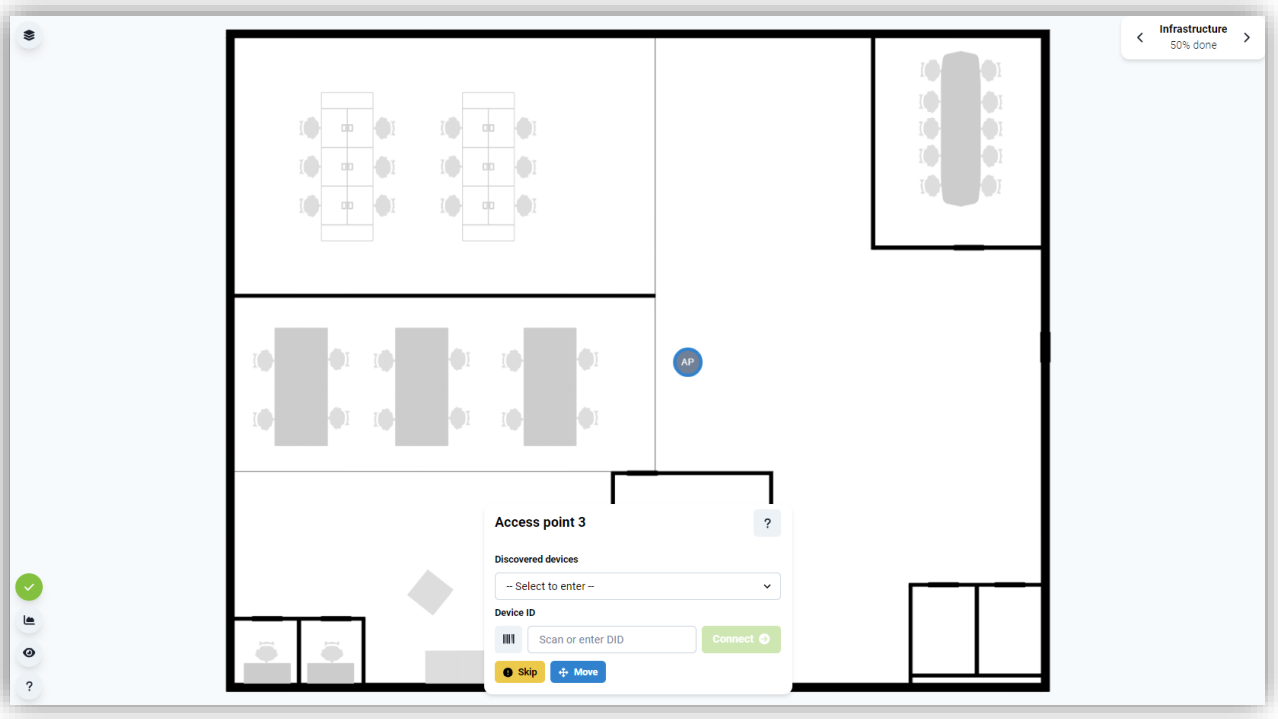
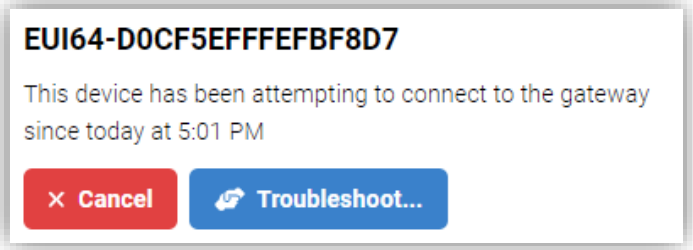


Figure 35. Assign Access Point

Select your device and enter its ID manually or by QR code Scanner, then click [**Connect**].



The connecting process may take several minutes.

When Access Point is connected to Gateway successfully, the Access Point on the floor plan would turn green. To switch to Sensor setup, click [>] in the upper right corner of the screen.

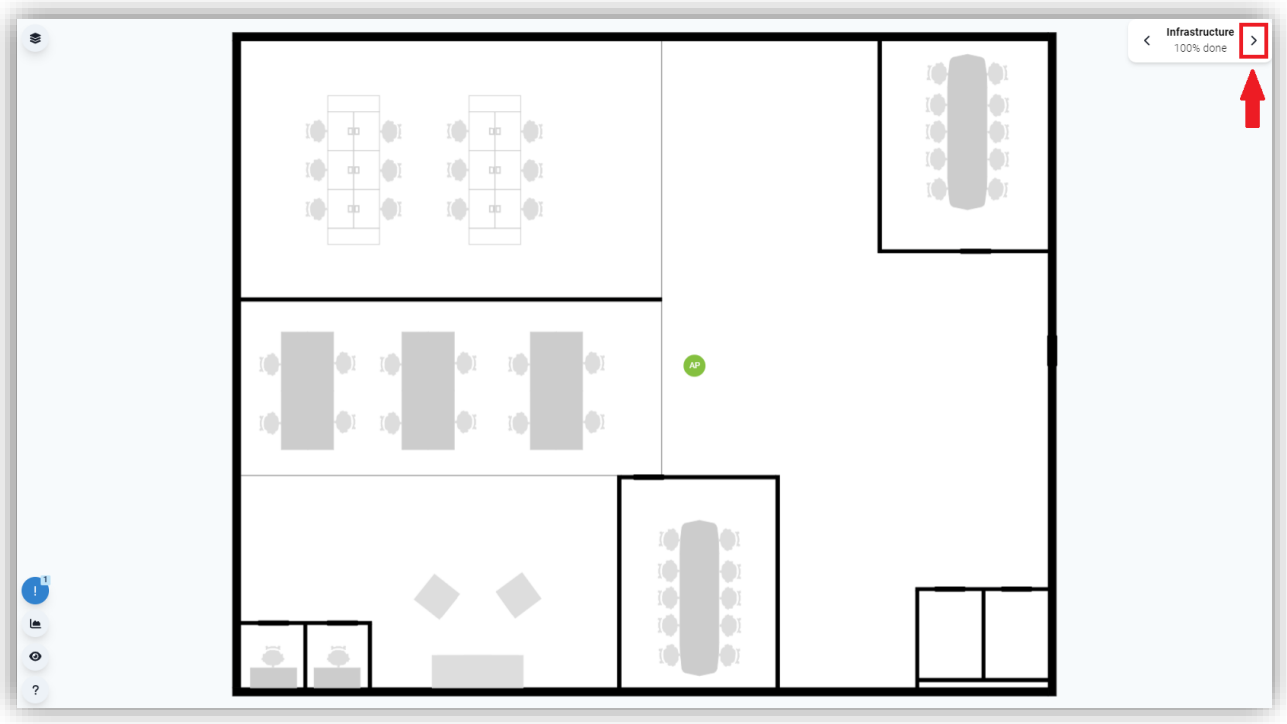


Figure 36. Assign Access Point successfully

Click on Sensor device on the map and enter the device ID. ➔ Press [**Connect**].

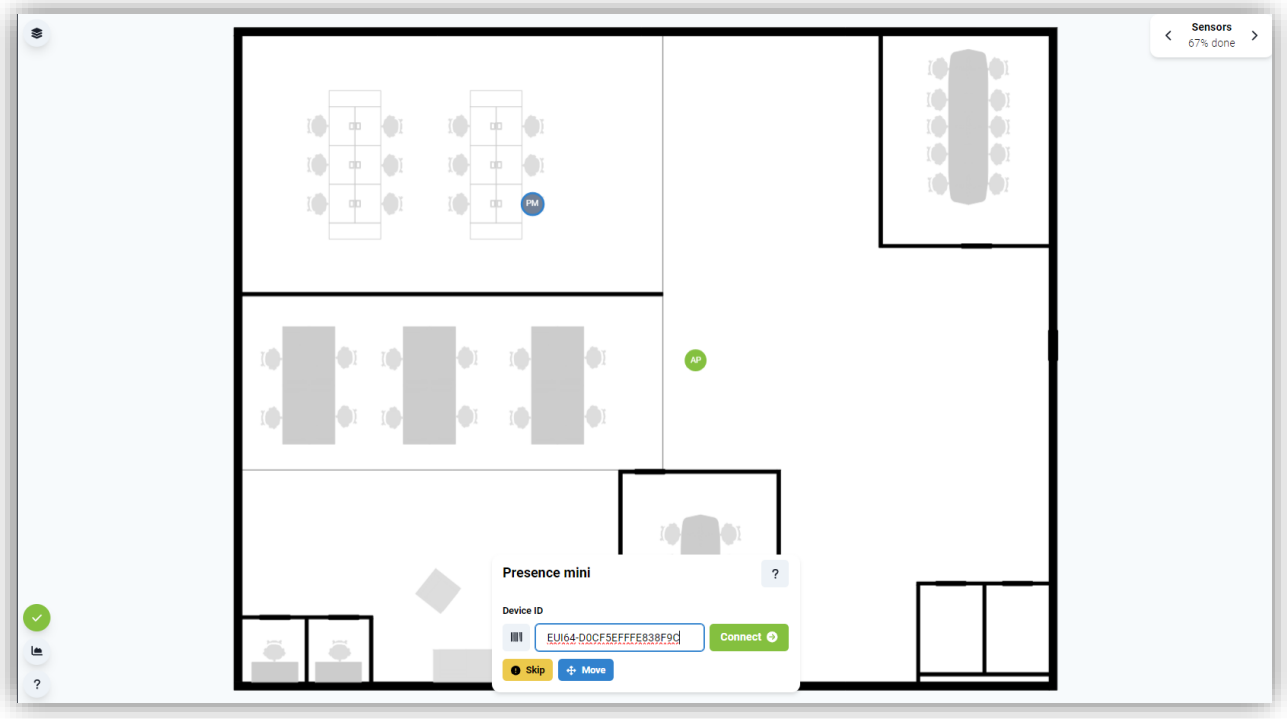
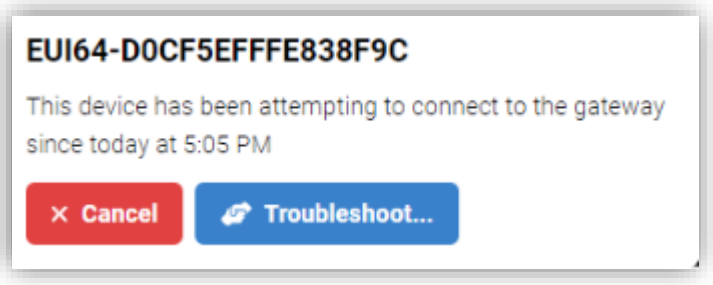


Figure 37. Assign Sensor

Another connection process message would be presented, which might take several minutes.



When the Sensor device is successfully linked to the Gateway, the Sensor on the floor plan will become green.

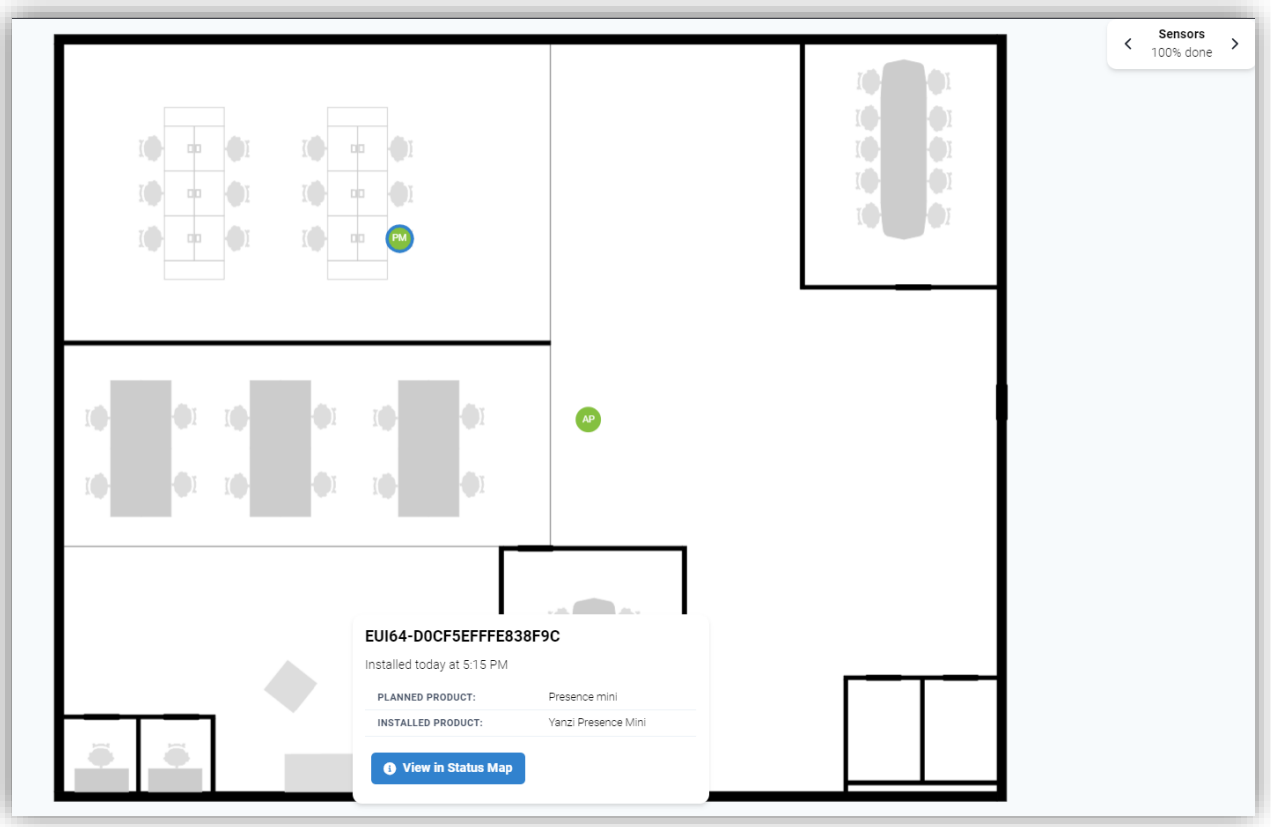


Figure 38. Assign Sensor successfully

Click on the connected device to view details, and an information label with the device ID, name, and installation time will emerge.

The added devices and their installation status would be displayed in the Installation summary when you click [›] in the upper right corner of the screen:

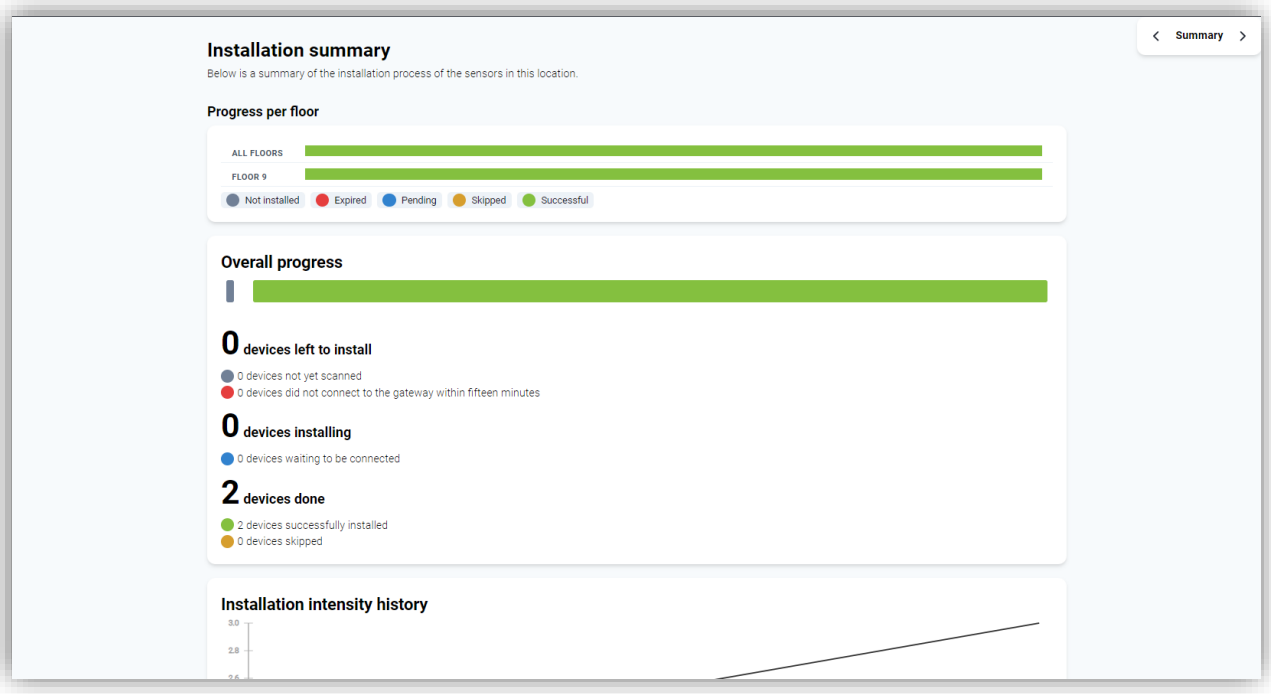


Figure 39. Installation summary

You can also see more information about the devices as well as the real-time status of them in System health, List, Hardware inventory, and Data Visualization Map.

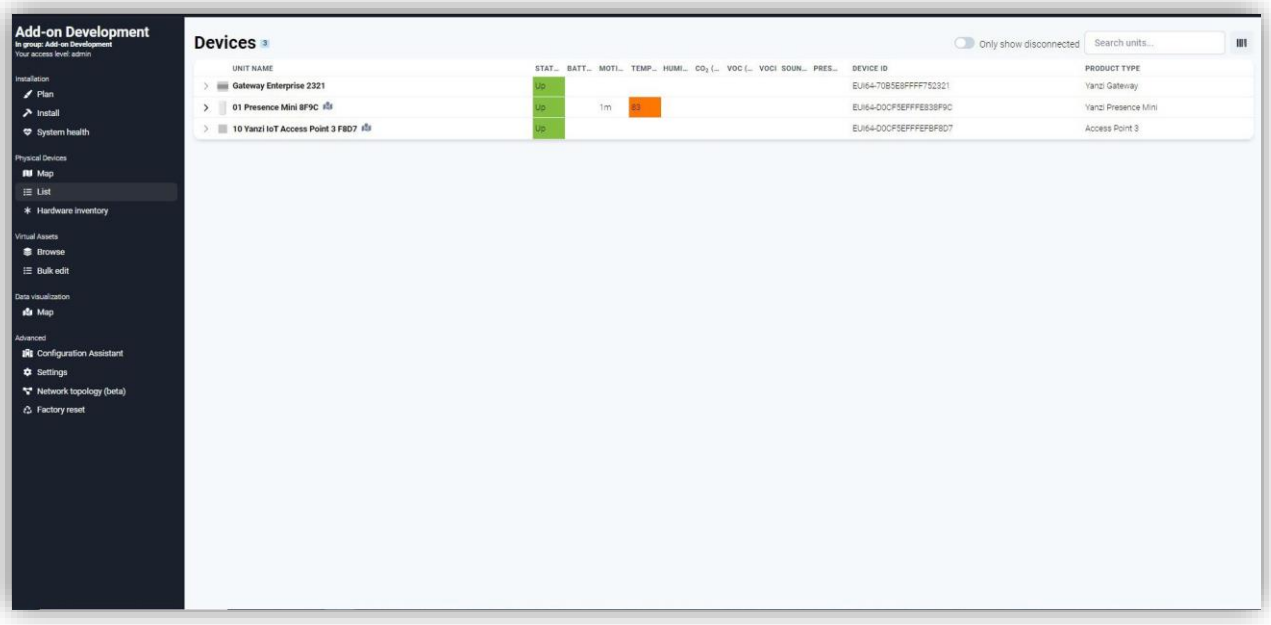


Figure 40. Installed devices status

Step 4: Solve errors in the configuration

Go to *Configuration Assistant* in the 'Advanced' section to see if there are any issues throughout the setup procedure. The system would detect the mistakes and display the defects on the screen as follows:

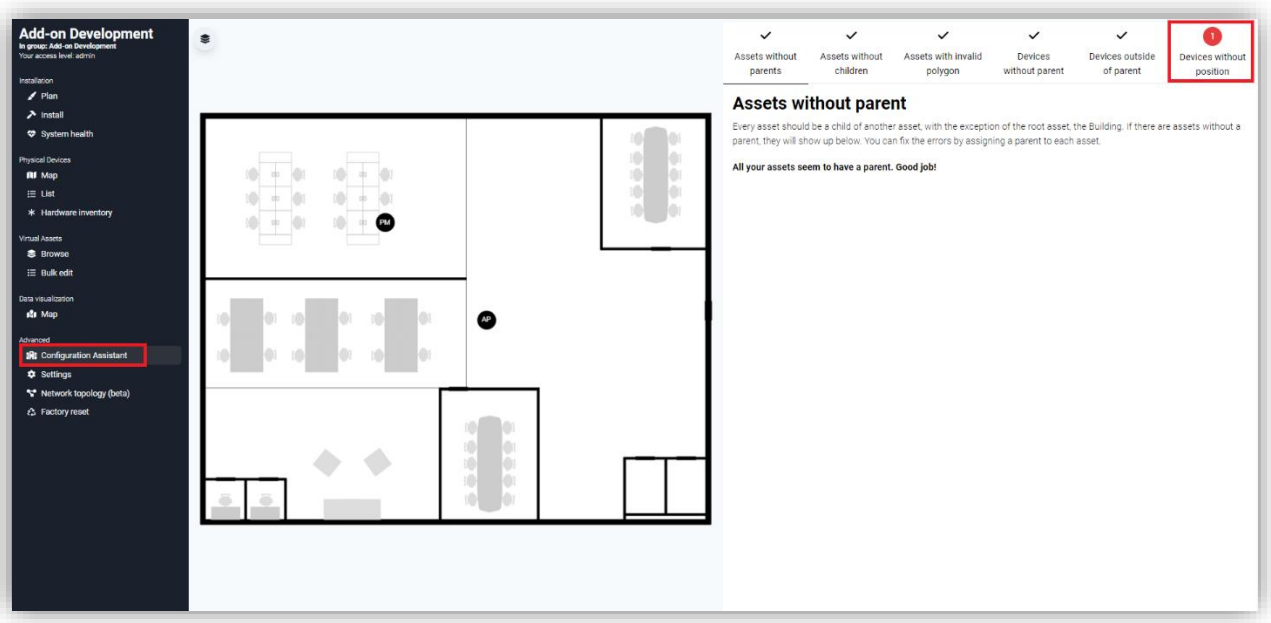


Figure 41. Configuration checkup

The most common error that you may encounter is a device without a position. To fix this, click on the defect warning to discover which device is missing from the map. Select [**Place device on map**] from the **Action** drop down selection and move the mouse cursor to the desired spot, then click to activate it.

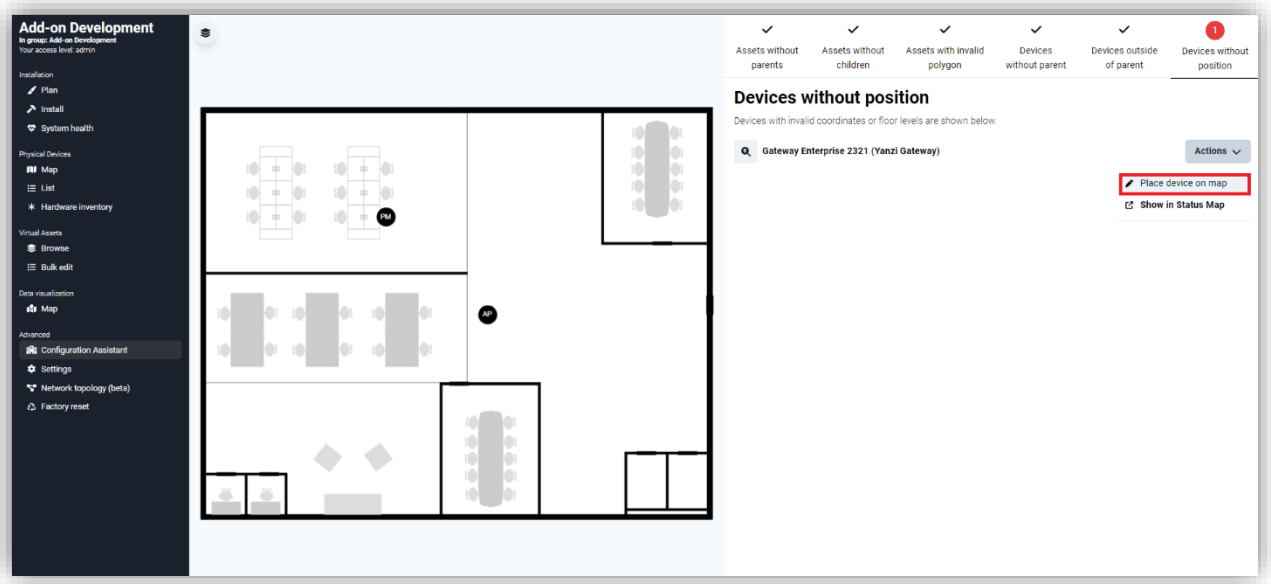
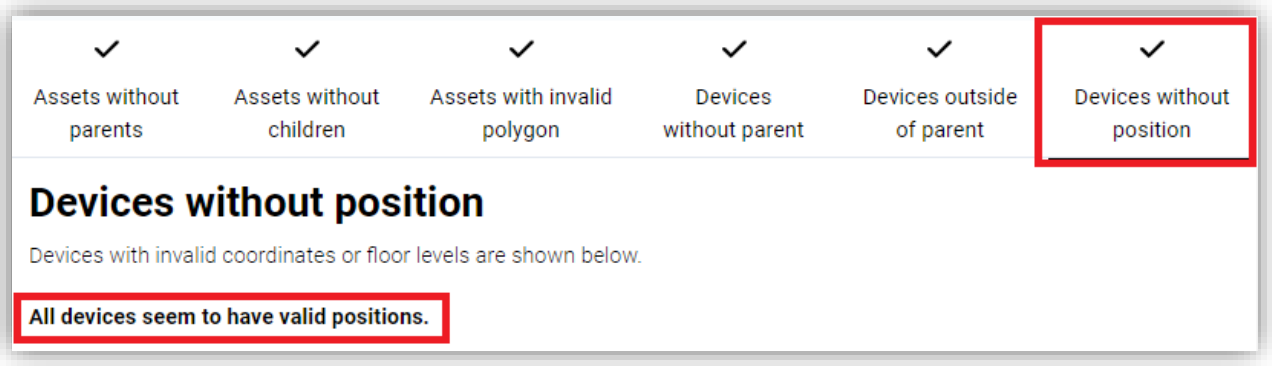


Figure 42. Device without position error

When all devices are present on the map, you would receive this message:



Furthermore, you may be unaware of a hidden error called 'Missing Assets Configuration', which stops the system from obtaining the status of your Sensor device. You should perform the following movement to avoid the probability of this error occurrence.

On the map, select your Sensor and the **Action** Drop down list would appear on the bottom of the plan. Choose [**Manually assign a new parent asset**] to bring up the below pop-up screen:

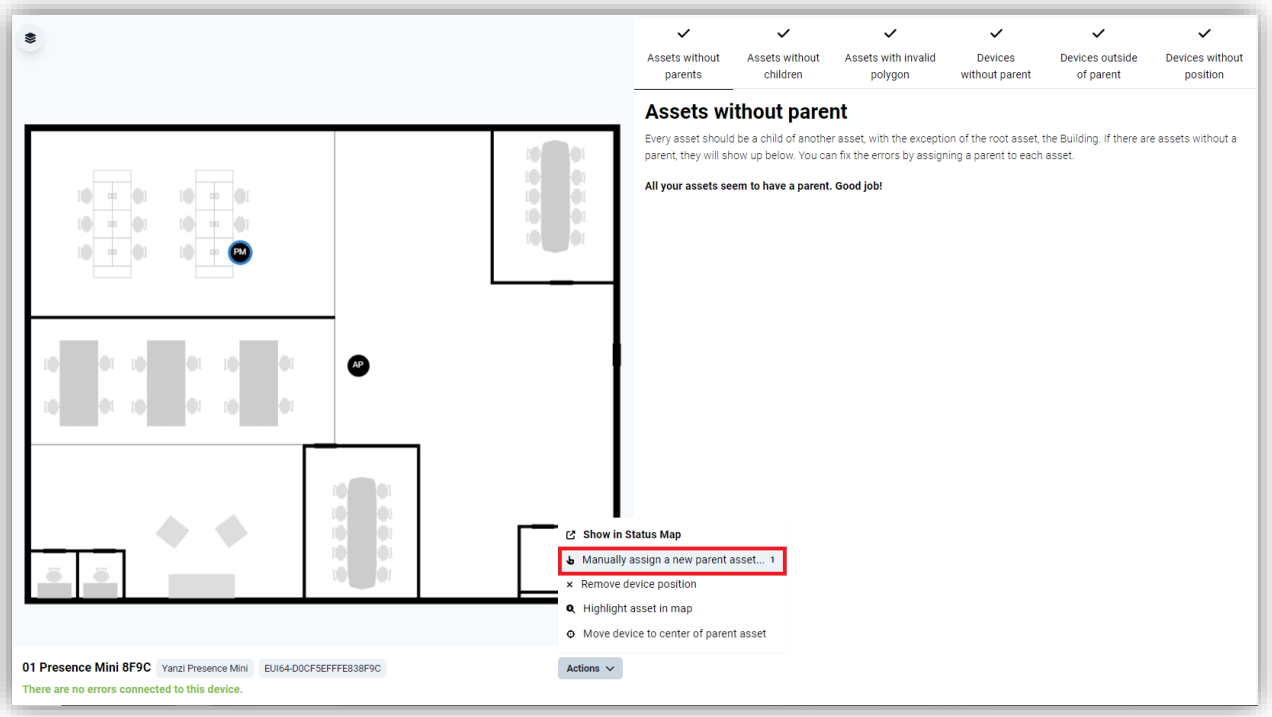


Figure 43. Missing Assets Configuration error

Click on [**Set as parent**] to finish.

After fixing all errors, the system would automatically build a tree diagram in *Browse* category under 'Virtual Assets' section. If it is not created automatically for you, it signifies that you specified wrong in the previous steps.

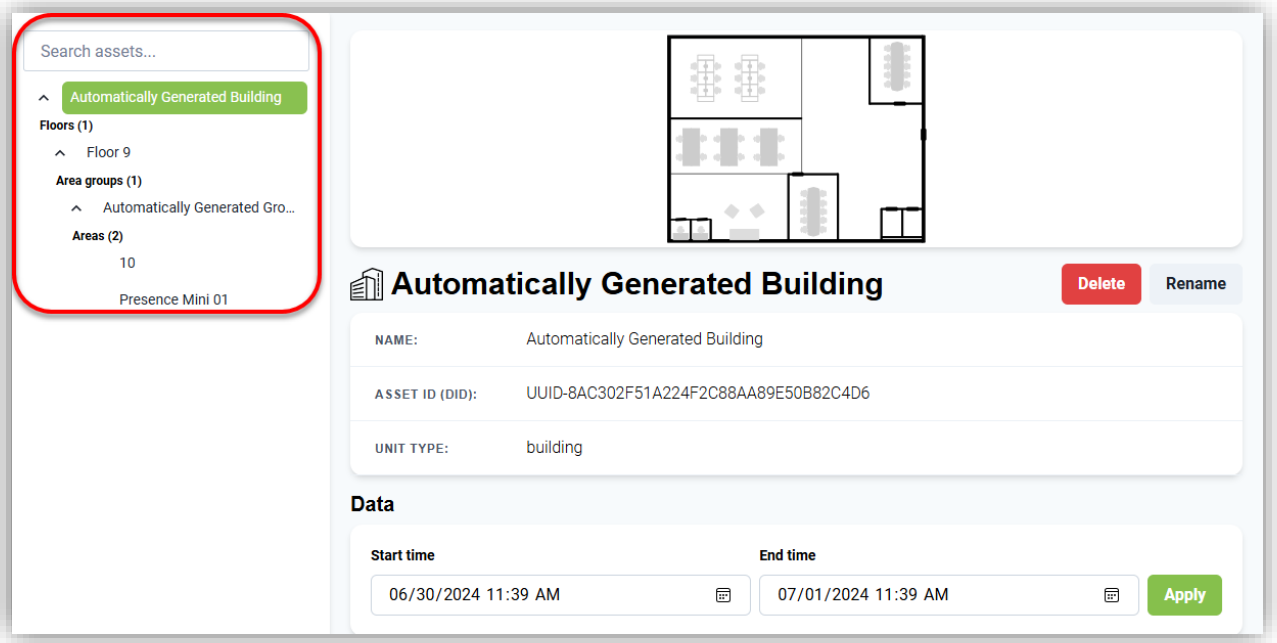


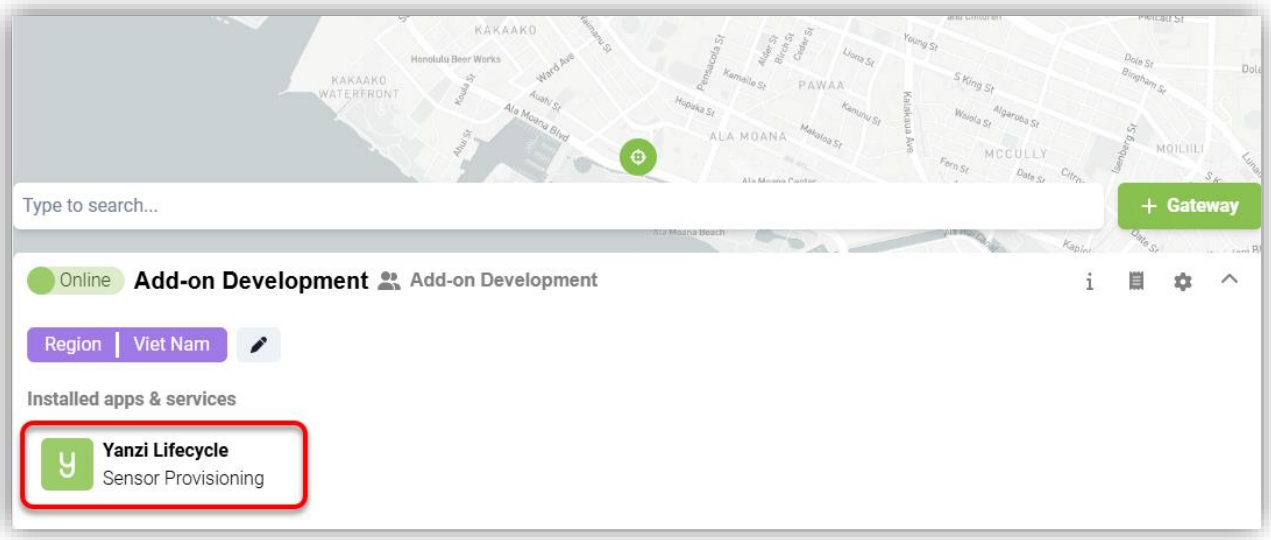
Figure 44. Automatically Generated Building

Reset integrated devices

If you wish to replace a location with a new one, you must first restart the Gateway, reset Sensor and Access Point that are linked to that location physically and on the web-based utility.

Reset on Yanzi Portal

Click the [**Yanzi Lifecycle**] button to access the Yanzi devices configuration screen, where you can reset all the integrated devices on the Yanzi Portal.



Choose the Gateway option under the ‘Factory reset’ category on this screen. You would be alerted about the possibility that activities performed in this view might disconnect your devices from the location, remove data permanently, and terminate data collecting.

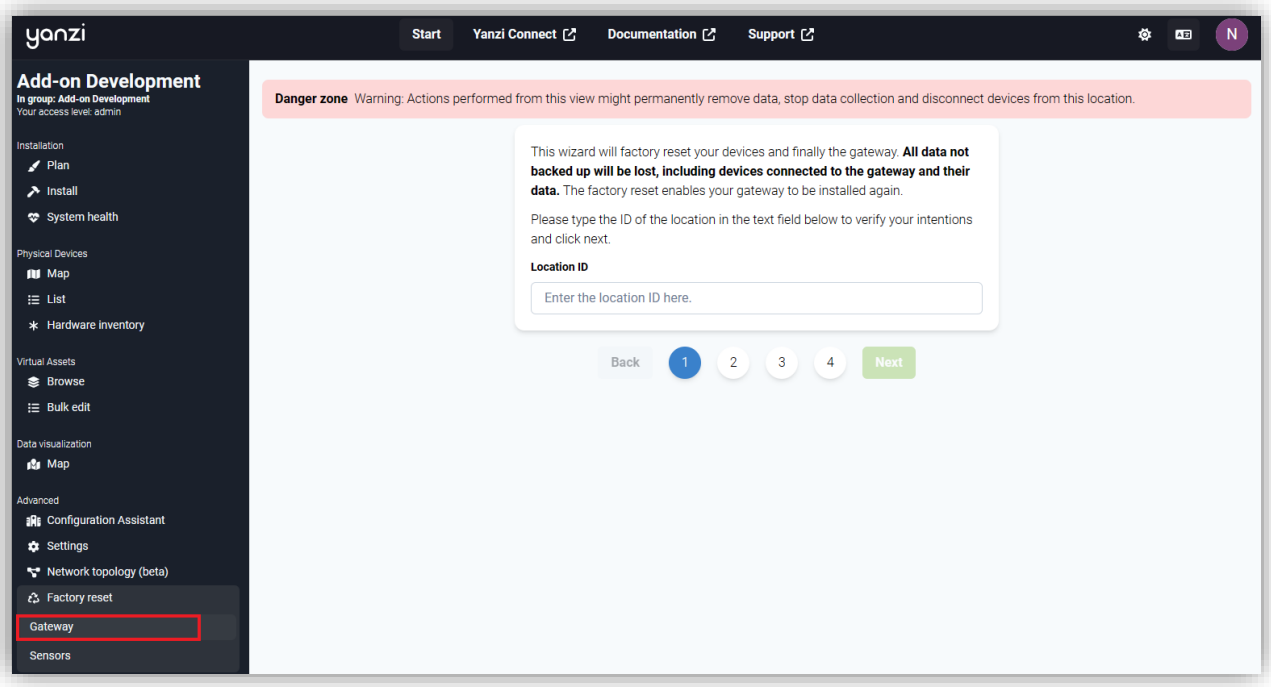


Figure 45. Choose Location

On the first step, enter the Location ID that has the integrated devices you would like to reset and select [**Next**].

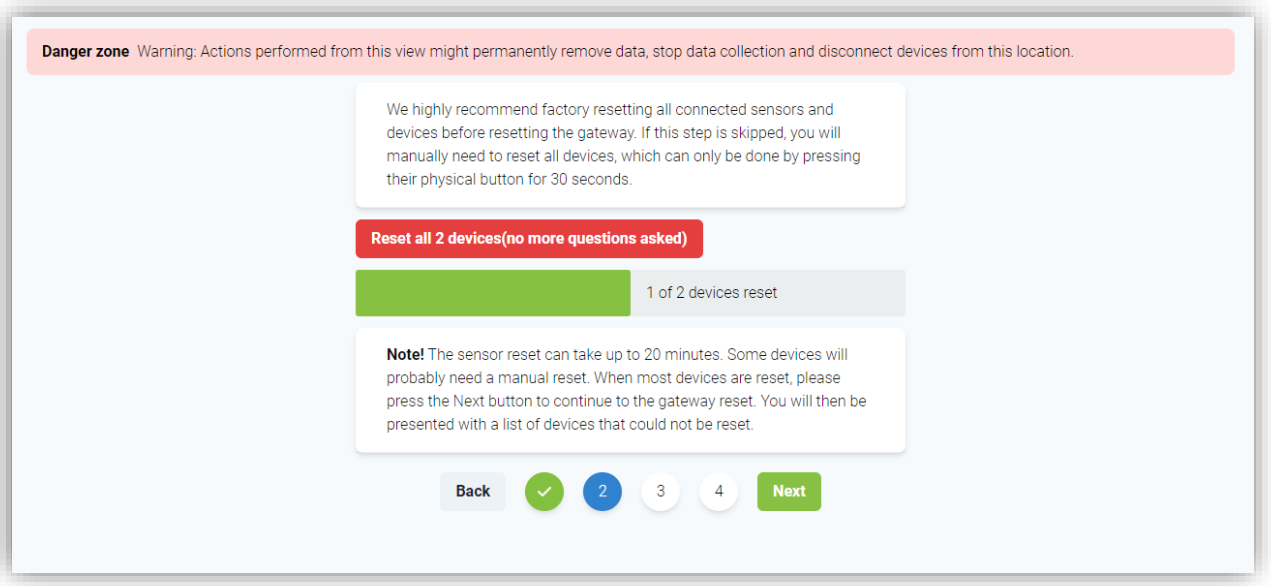


Figure 46. Reset Access Point and Sensor

On the second step, click [**Reset all 2 devices**] to reset Sensor and Access Point device. The process may take up to 20 minutes for each device.

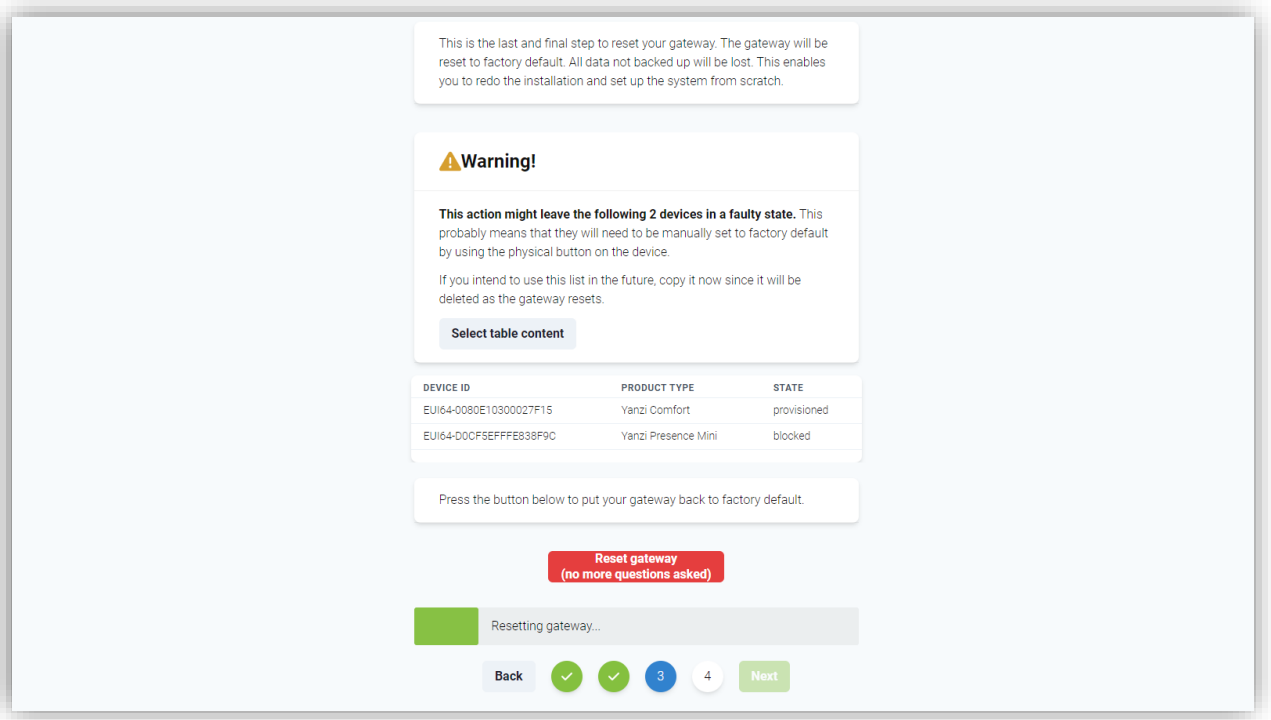


Figure 47. Reset Gateway

After choosing [**Next**], you would be switched to Step 3 and see the devices that cannot be reset on the web, which means that you must do it manually by pressing their physical reset button. To reset Gateway to factory defaults, hit [**Reset gateway**] and then [**Next**].

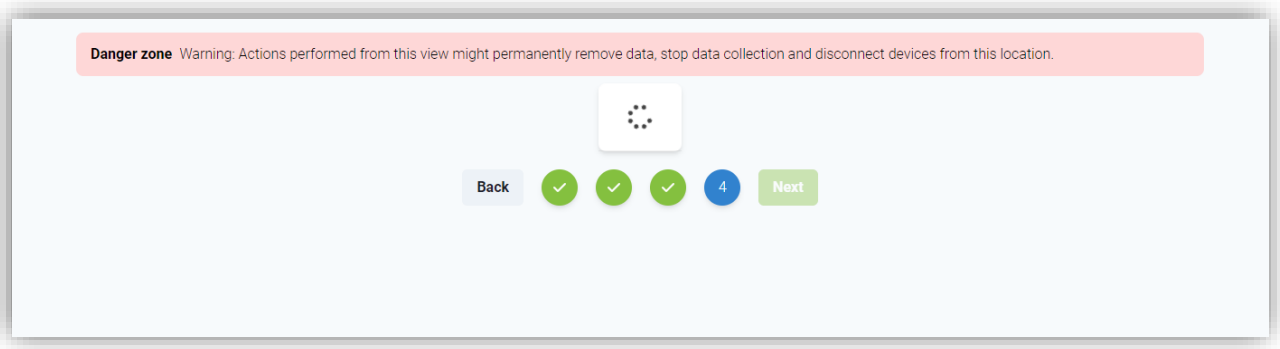


Figure 48. Device resetting process

The 4th step would show the processing icon. When it is completed, select [**Next**] and continue to click [**Delete location**]

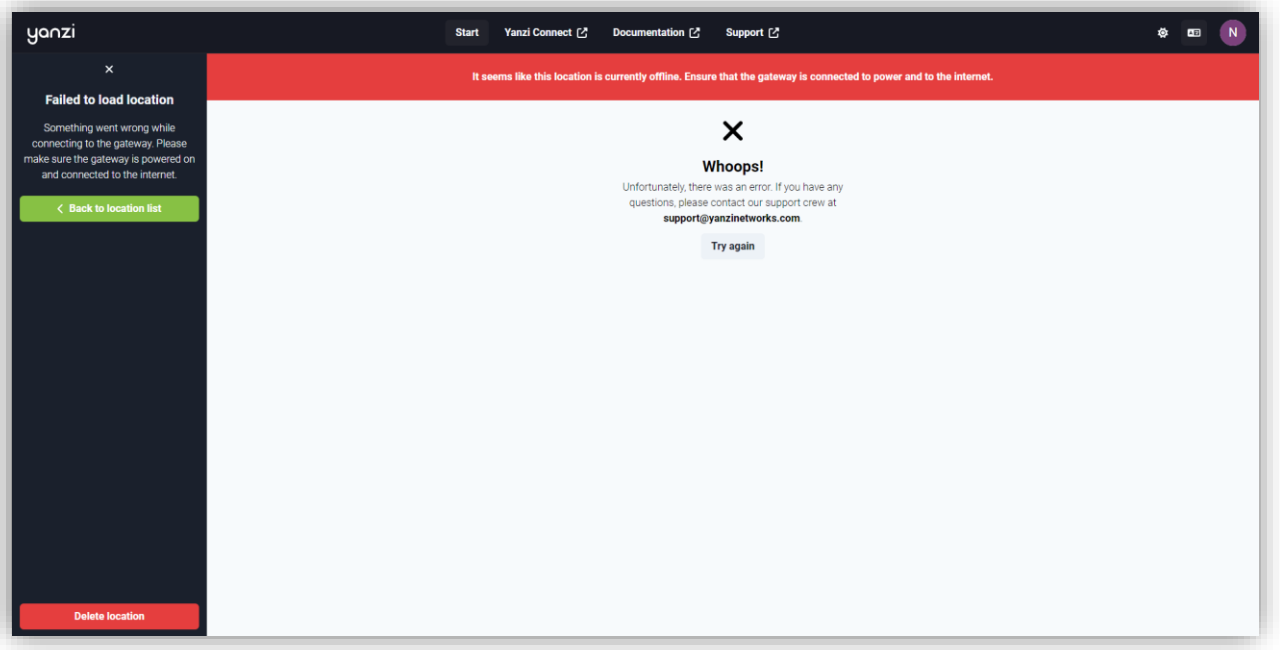


Figure 49. Delete Location

Another warning will be displayed, confirming that you still wish to remove the Location. Choose [**Yes, remove this location**] to confirm.

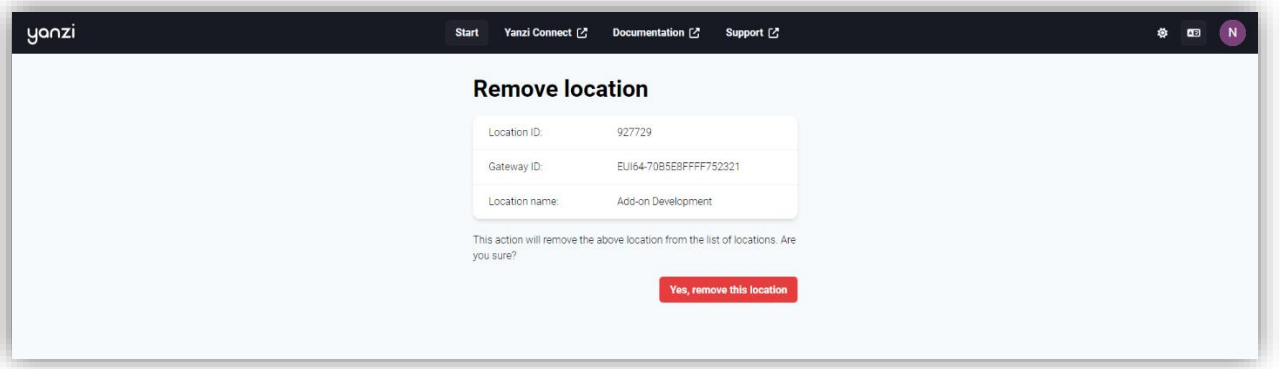


Figure 50. Remove location confirmation

Restart/Reset hardware devices

1. Restart Gateway

Figure 51. Gateway power button

To restart Gateway, you must have it connected to a monitor screen and keyboard. You can perform reset by 1 of two following ways:

Choice 1: Press and hold the Power Button until the screen shows that Gateway is shutting down.

Choice 2: On the keyboard, press the key combination [**Ctrl + Alt + Delete**] to restart Gateway.

2. Reset Access Point

Figure 52. Access point reset button

With the router powered on, turn it to the side that has the Reset button. The Reset button is either on the back or the bottom.

When you hold down the Reset button, the light would change from yellow to flashing yellow-orange color.

When you see that blinking light, keep pressing that button for 10 more seconds and release it.

3. Reset Sensor

Figure 53. Sensor reset button

To reset a sensor, turn the device over and look for the circle of ‘RESET’ on the back or bottom.

Insert a paperclip or other thin wire through the label and depress the reset button. You would see the solid red light when it is pressed (you should not have to press very hard).

The light would gradually turn to blinking green-yellow color. Keep holding down for 10 more seconds until you see the red light again. That is when Sensor device is fully reset.

NOTE: Do not disconnect the above devices from power source and Ethernet cable (If any) during restarting/resetting process.

CHAPTER 3.

Yanzi Live

Yanzi Live is a web page which shows the real time status of the devices on Yanzi Cloud.

Open the browser and direct to the address of the web server where Yanzi Live is hosted. Then, log in to your account (which is the account you set up for Yanzi Cloud), the Yanzi Live interface would assemble below figure:

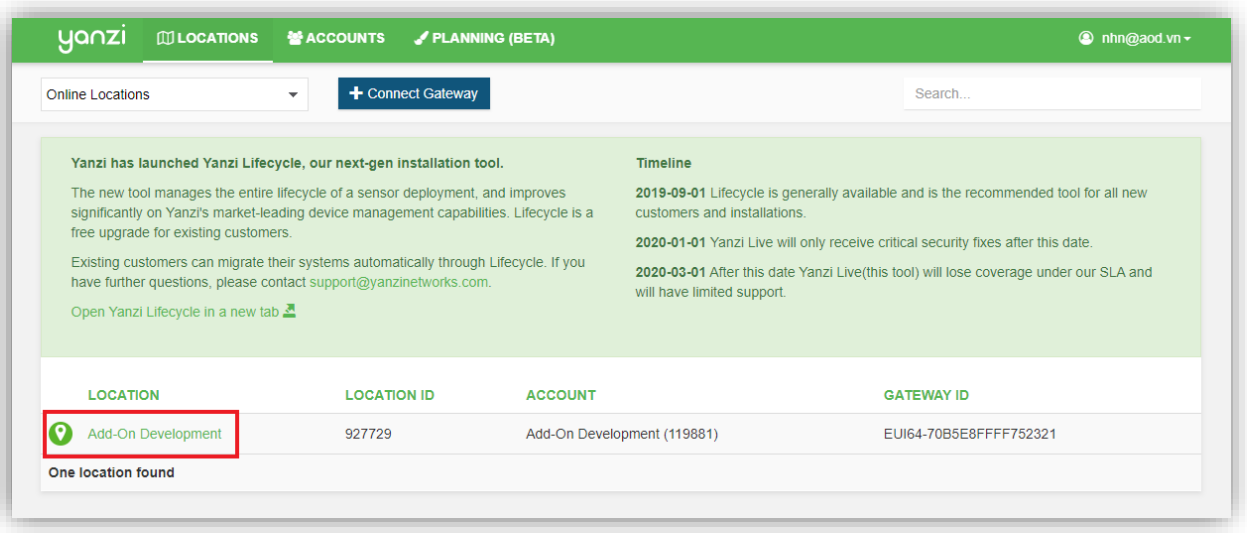


Figure 54. Yanzi Live interface

Click on the Location that you wish to see details, all integrated sensors would be listed as follows:

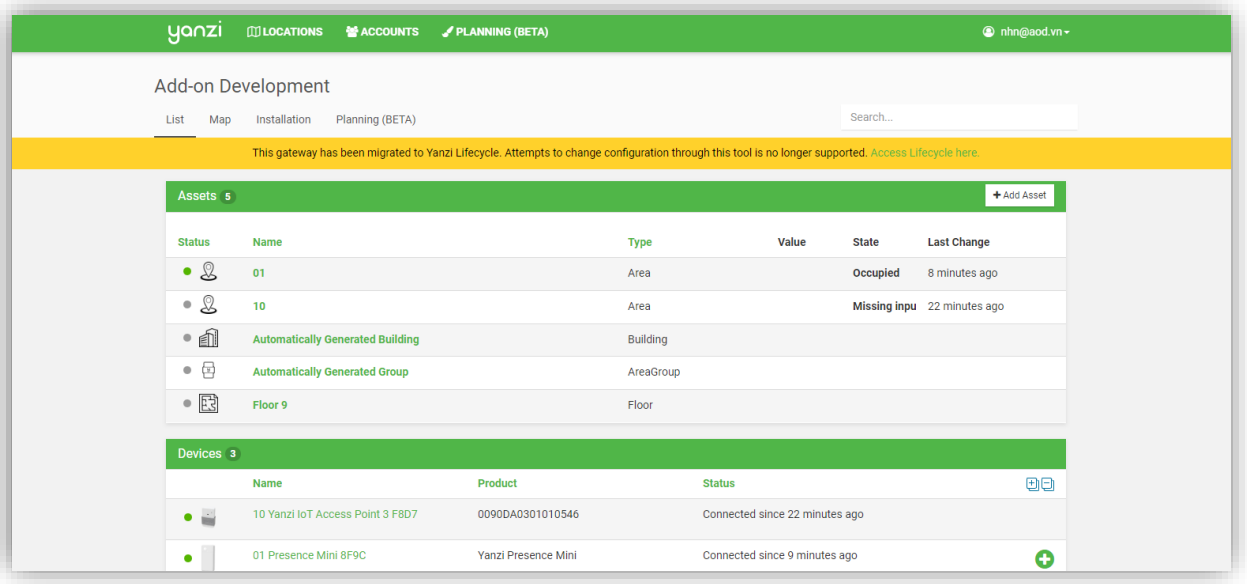


Figure 55. Sensor list

When you select a Sensor, you will be sent to a new screen with extensive information on that device. On the ‘Details’ tab, you may view the device's status, Logical Name, ID, Type, and location map. ‘Logical Name’ is the only field that you can modify.

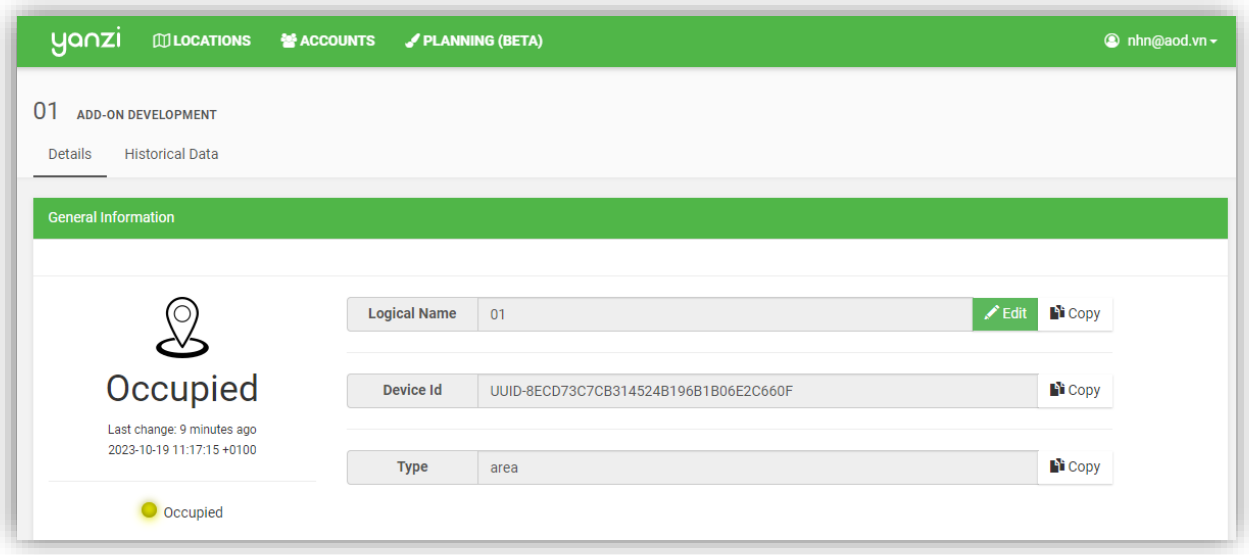


Figure 56. Sensor details

Regarding 'Historical Data' tab, you would see a Graph which allows you to obtain an instant view of device connection status in a specific period of time.

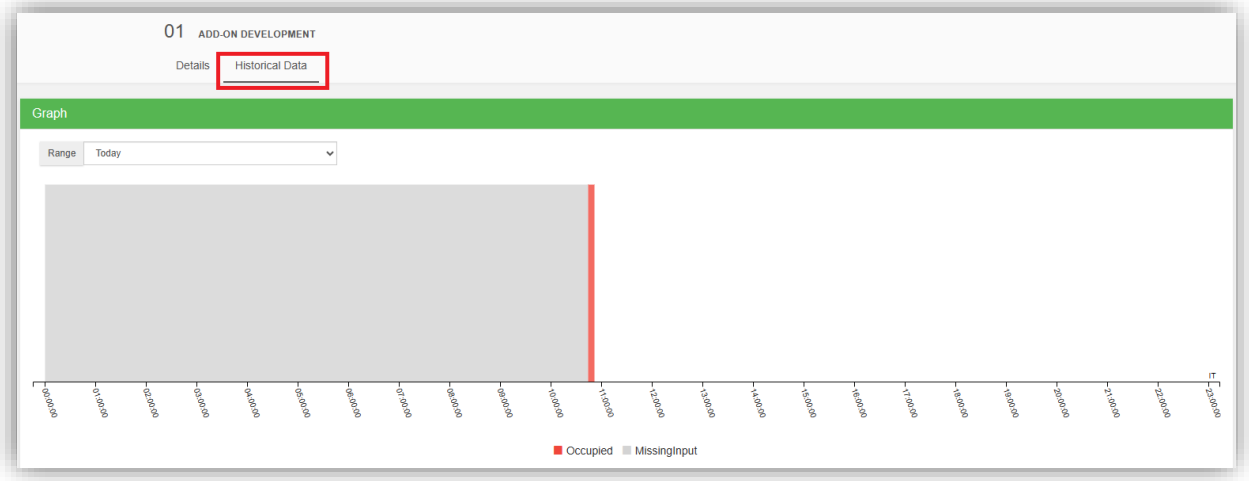
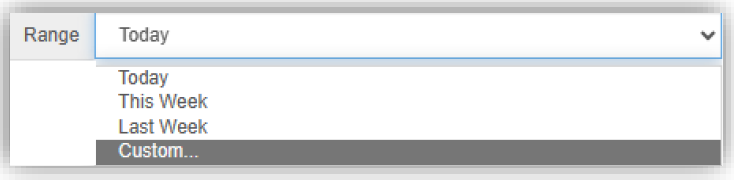


Figure 57. Sensor historical data

There are three default time range (**Today**/**This week**/**Last week**) or you can adjust the time period as you wish by selecting [**Custom**].



On Yanzi Live, you can grant access permission to other users to obtain and manage Sensor data source who share the same group on Yanzi Cloud.

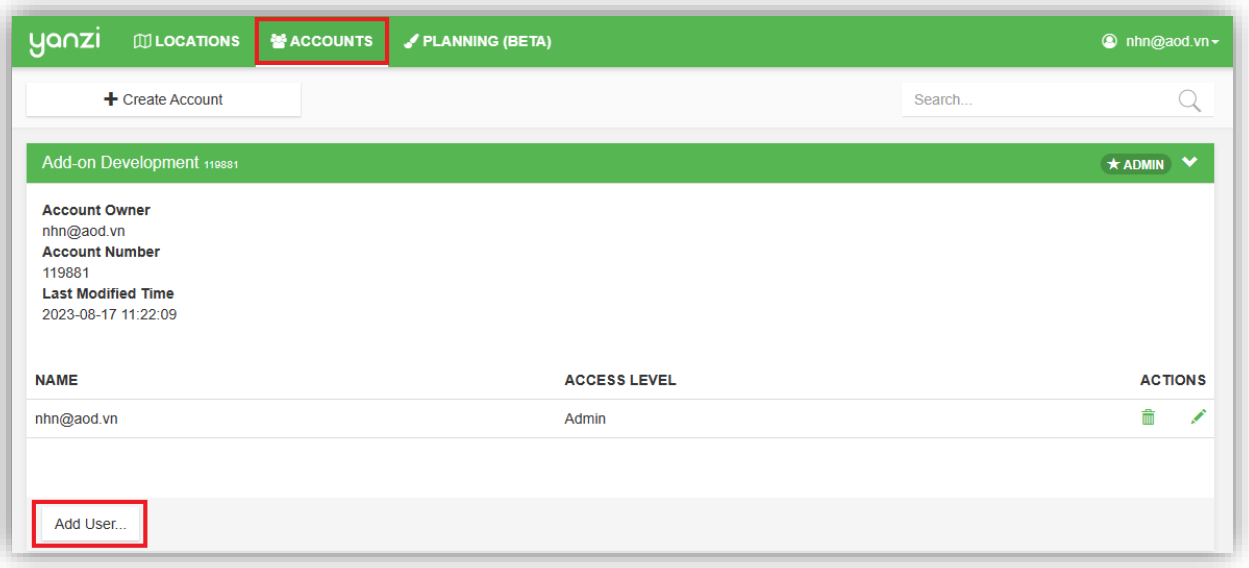


Figure 58. Add user

Click on [**ACCOUNTS**] button on the top bar, you can see your account details and your access level. To assign access permission to others, select [**Add User**], the 'Manage Role' screen will appear assemble the figure shown below:

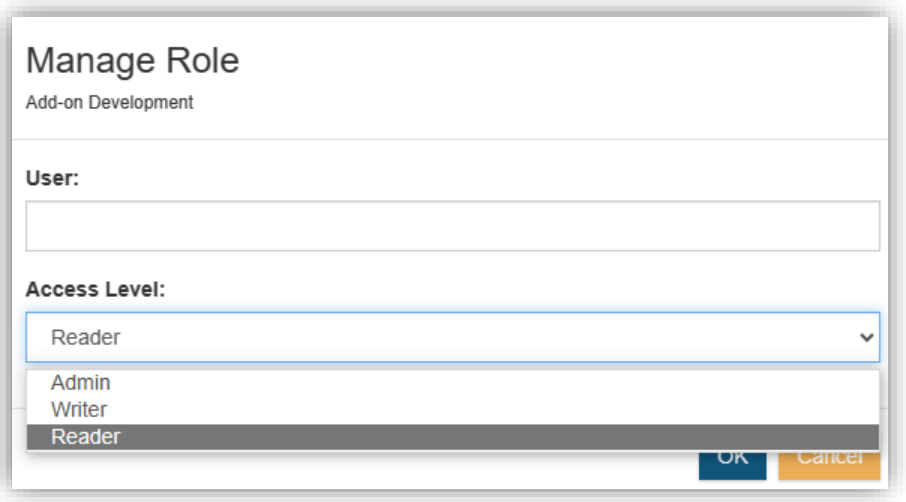


Figure 59. Grant access level

You must enter the member's email address in the 'User' field and choose the Access Level that you want to grant to them. Access levels are divided into three tiers, which are mentioned in the table below:

Access Level	Read Data	Set Outputs	Install Sensors	Configure System	Manage Users
Admin	✓	✓	✓	✓	✓
Writer	✓	✓			
Reader	✓				

Click [**OK**] to finish the role addition.