Buspro Gateway User Manual

Applicable for the debugging and configuration of Buspro Gateway via Buspro Setup Tool 2 and Buspro Studio software, as well as remote control by ON+ APP

Version: V1.0.0

Published on July 05, 2021

Contents

1. Legal Statement & Update History

1. Legal Statement

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2. Update History

The form below contains the information of every update. The latest version contains all the updates of all former versions.

No.	Version	Update Information	Date
1	V1.0.0	Initial release	Jul 5, 2021

2. Comparison of Software

1. Difference between Buspro Setup Tool 2 & Buspro Studio

Functional Comparison	Buspro Setup Tool 2	Buspro Studio
Sign into IOT Platform to Proceed Project Management	Unsupported	Support
Create Project on IOT Platform	Unsupported	Support
Create Template for Batch Debugging/Testing	Unsupported	Support
Offline Edit	Unsupported	Support

2. Preparation

During the configuration process of Buspro Gateway done on Buspro Setup Tool 2 & Buspro Studio, the following tools might be included:

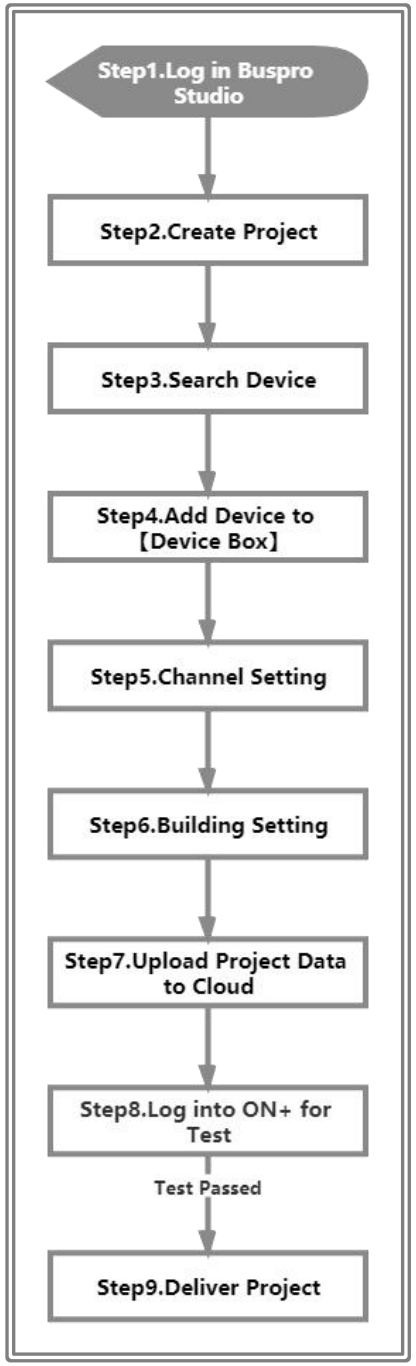
- Buspro Gateway (Model: HDL-MGWIP.430)
- A computer with Buspro Setup Tool 2 or Buspro Studio
- ON+ Application
- Dedicated Buspro cables

***Note:**

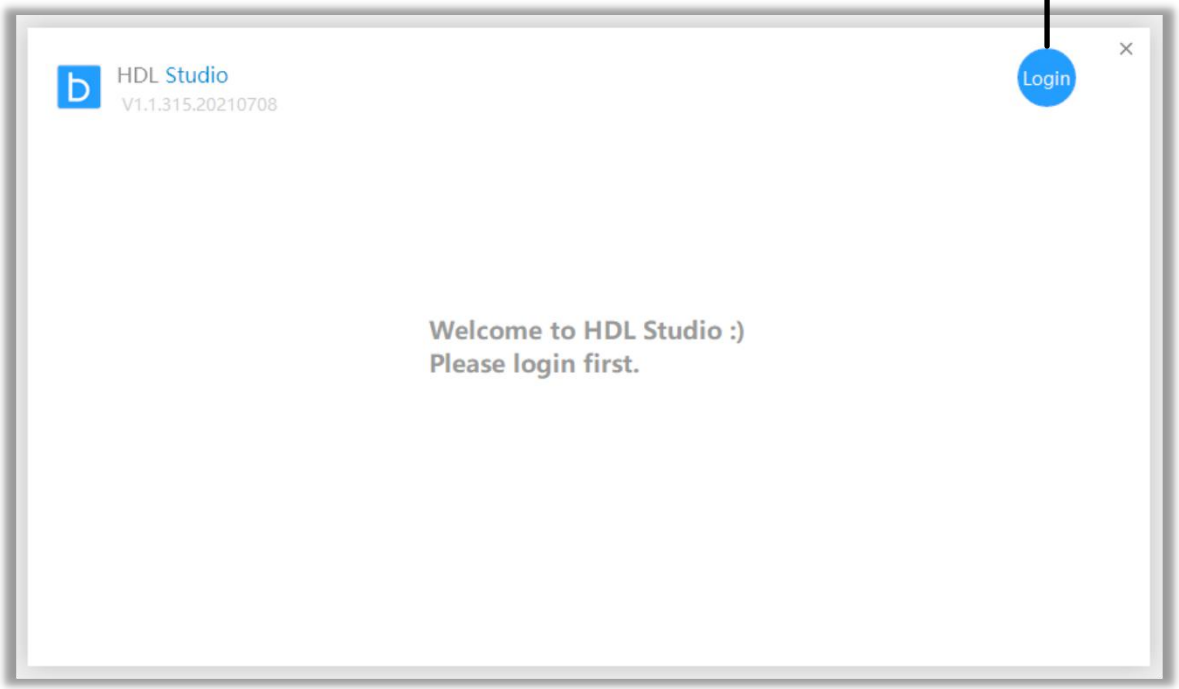
- As for Buspro Setup Tool 2, here it supports V10.05.180 and above.
- ON+ Application supports extranet and local control.
- Please refer to the data sheet attached to the product for the information of installation, wiring, specifications, etc.
- The pictures in this user manual are for reference only and the actual product should prevail.

3. Buspro Studio Instruction

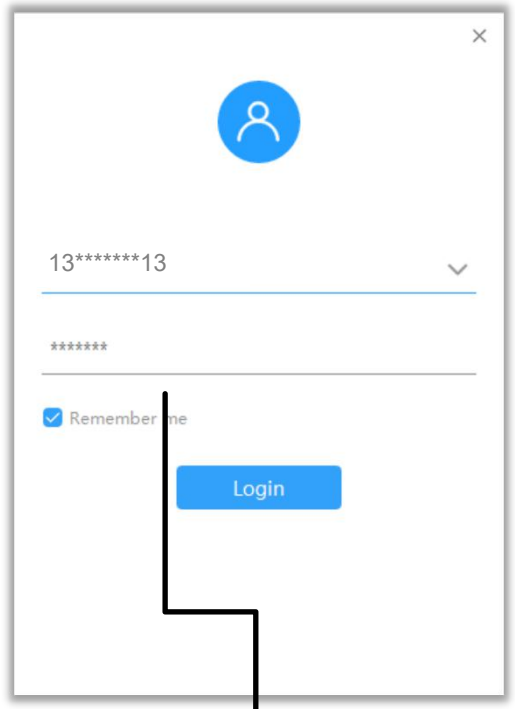
*



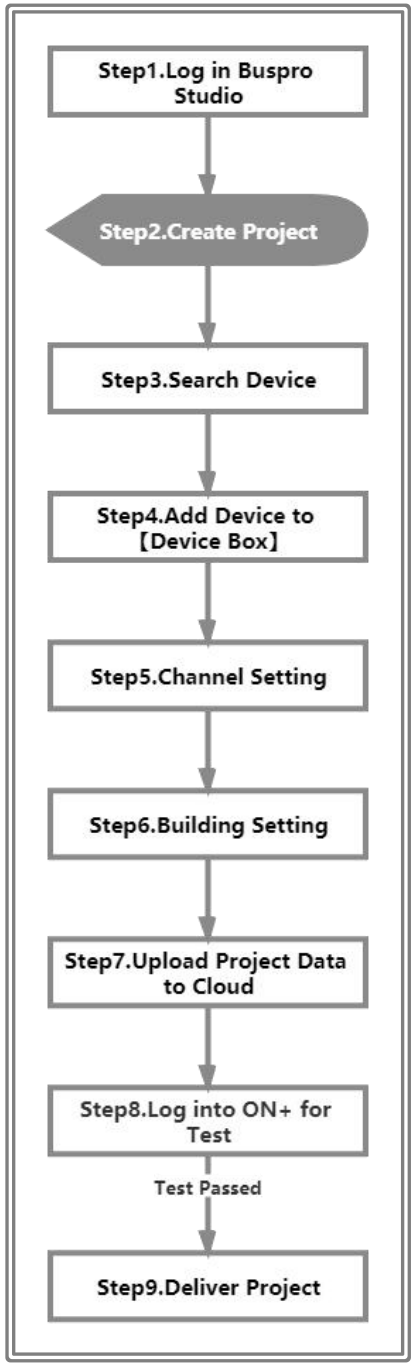
Step 1 —— Log in Buspro Studio



Click “Log in”

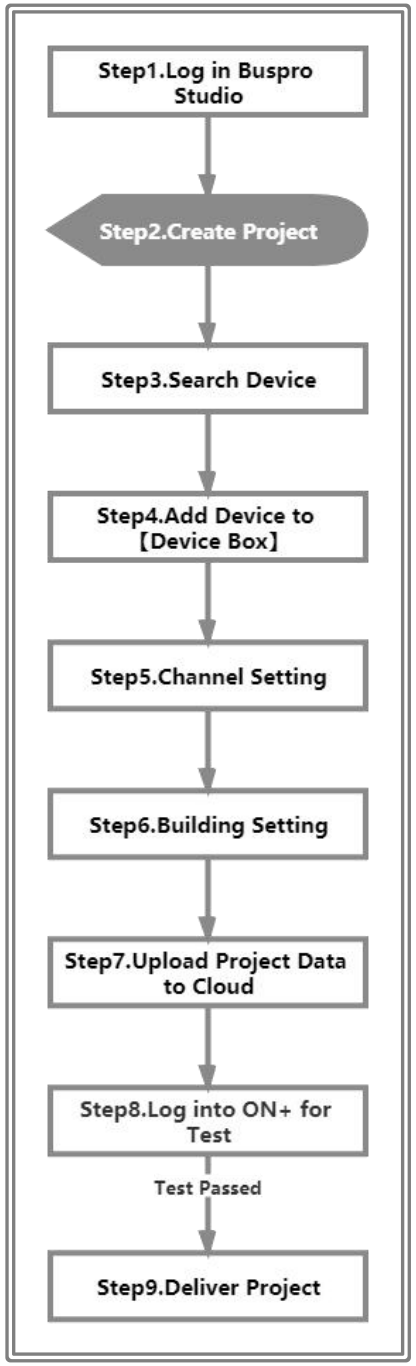


Input Account & Password

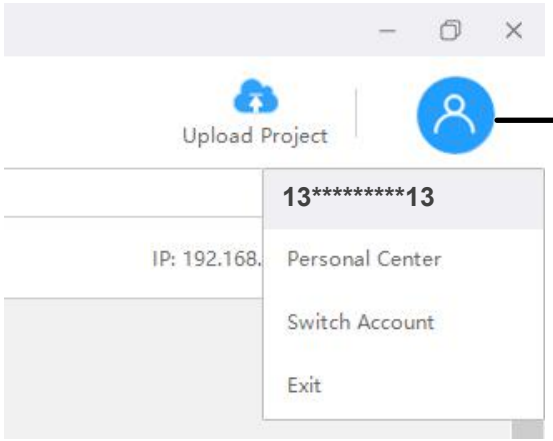


Step 2 —— Buspro Studio can be used together with IOT platform, which enables to create and manage projects by Cloud. So there are two options for creating projects, as shown below:

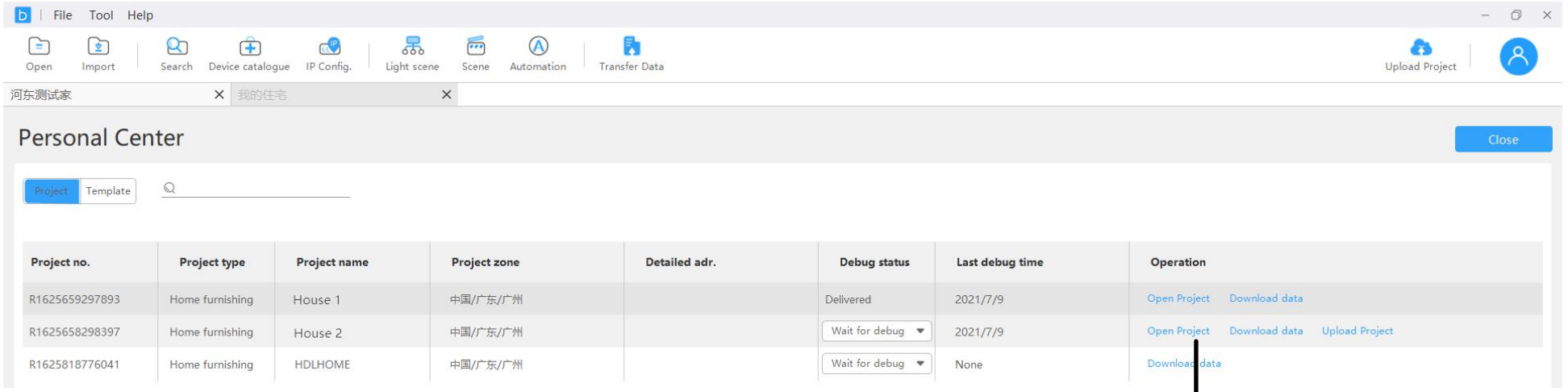
	Option 1	Option 2
Where to Create	IOT Platform	Buspro Studio
Advantages	Manage and Control by IOT Platform	No need to log in/sign up, you can locally create and manage projects
Applicable for	Applicable for large-scale projects, batch residential projects	Applicable for single project, as well as for creating personal debugging/testing templates



Option 1: Create by IOT Platform



① Click head portrait, select “Personal Center”



② Select project, click “Open Project”

Option 2: Create by Buspro Studio

Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

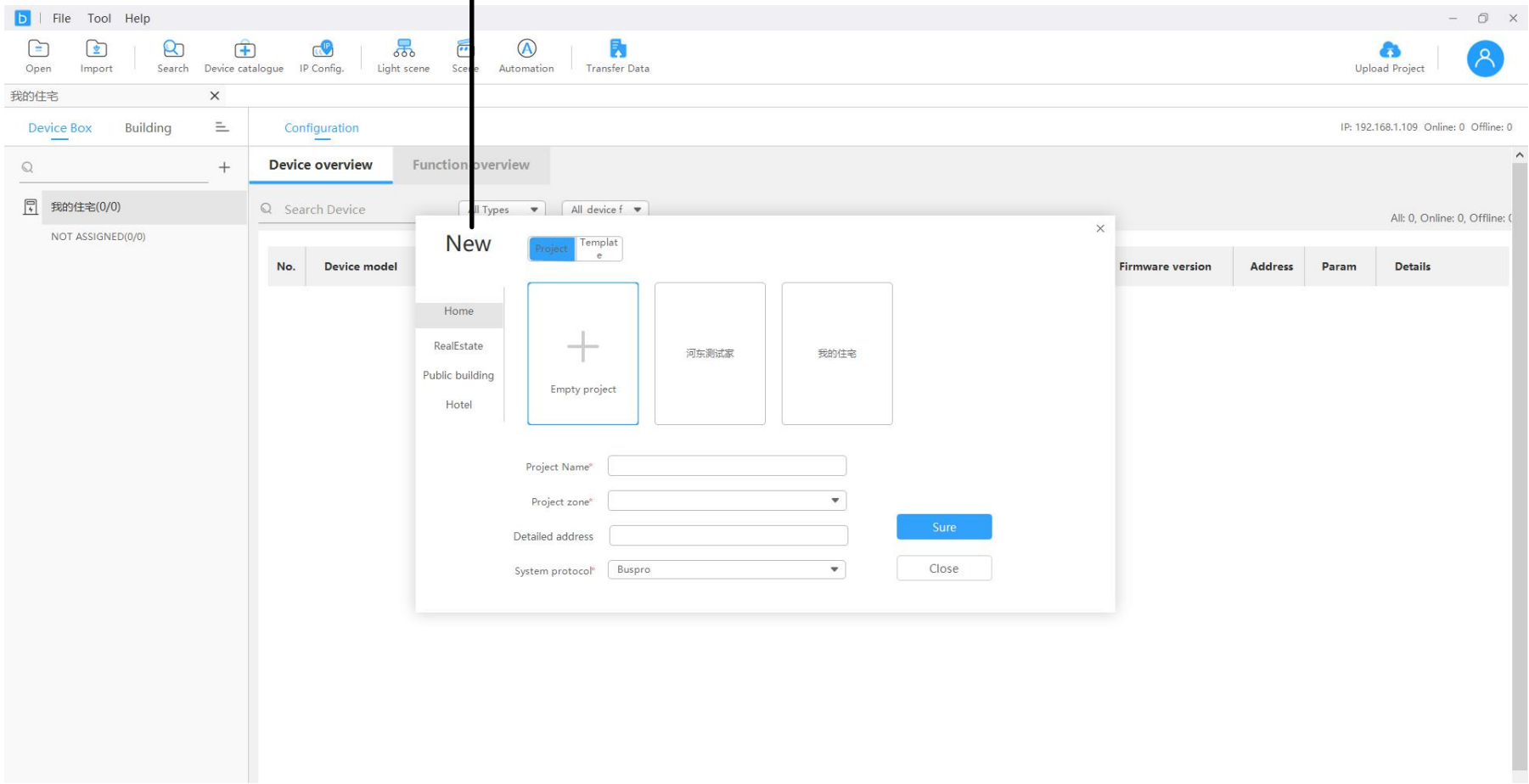
Step7.Upload Project Data to Cloud

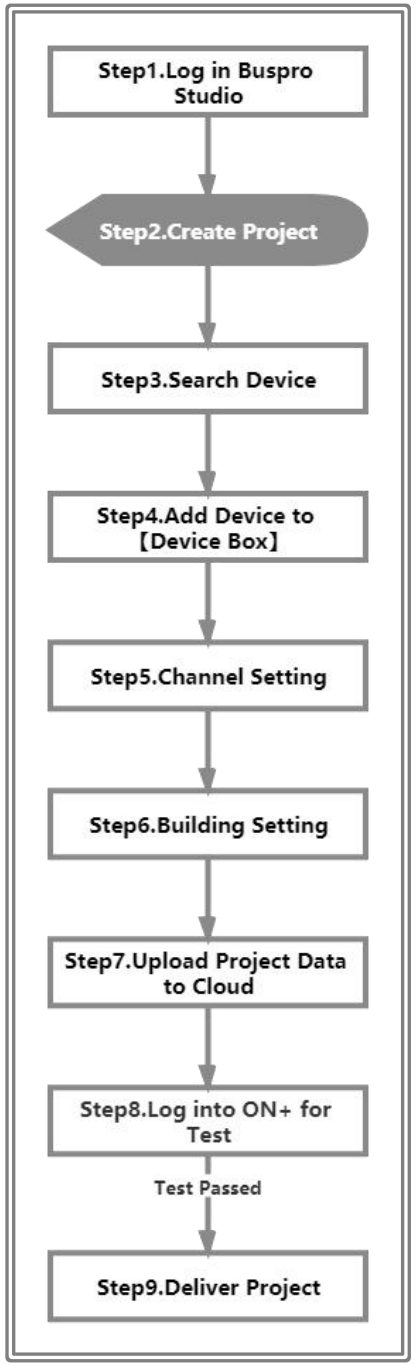
Step8.Log into ON+ for Test

Test Passed

Step9.Deliver Project

Click “New”

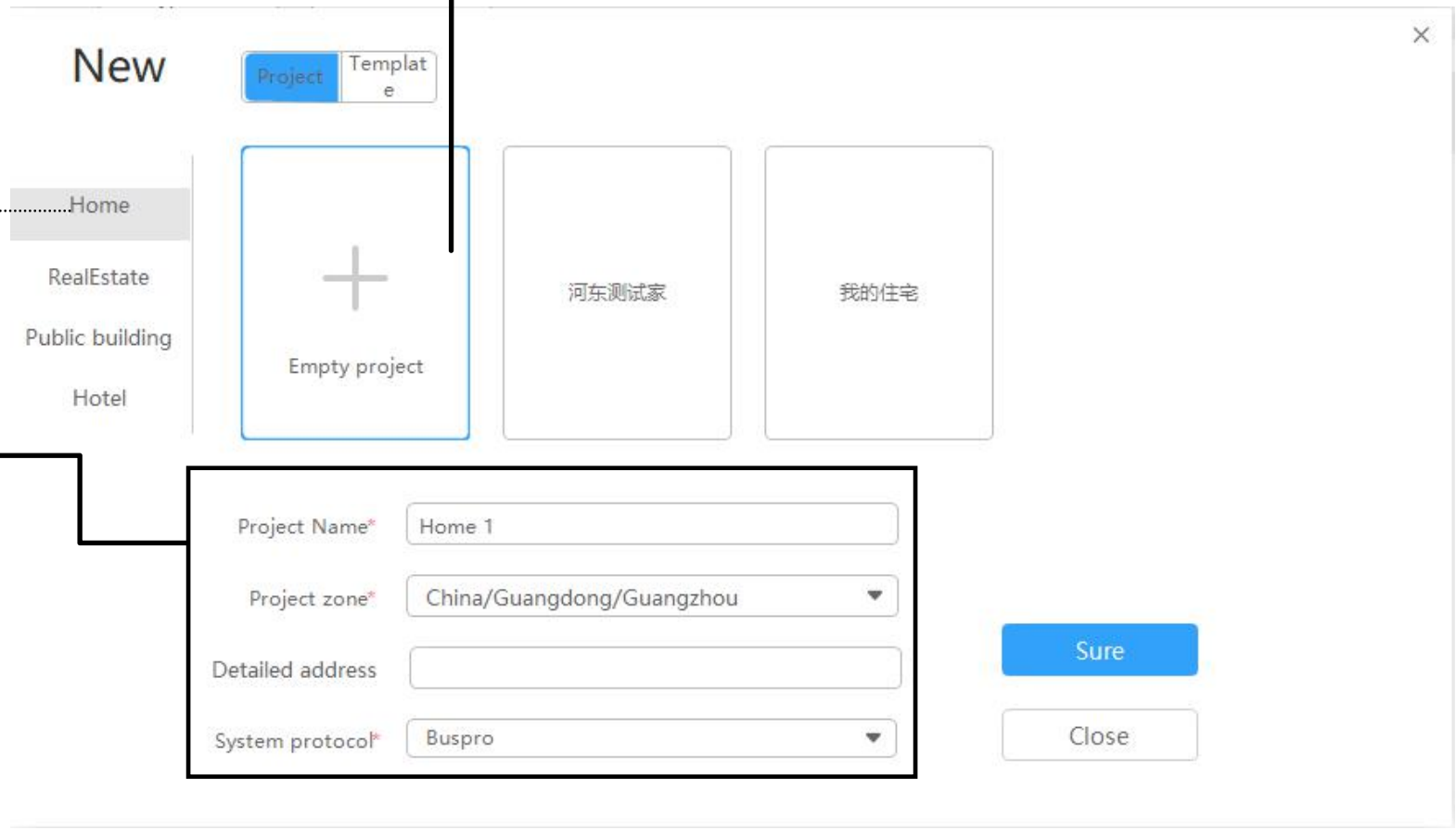




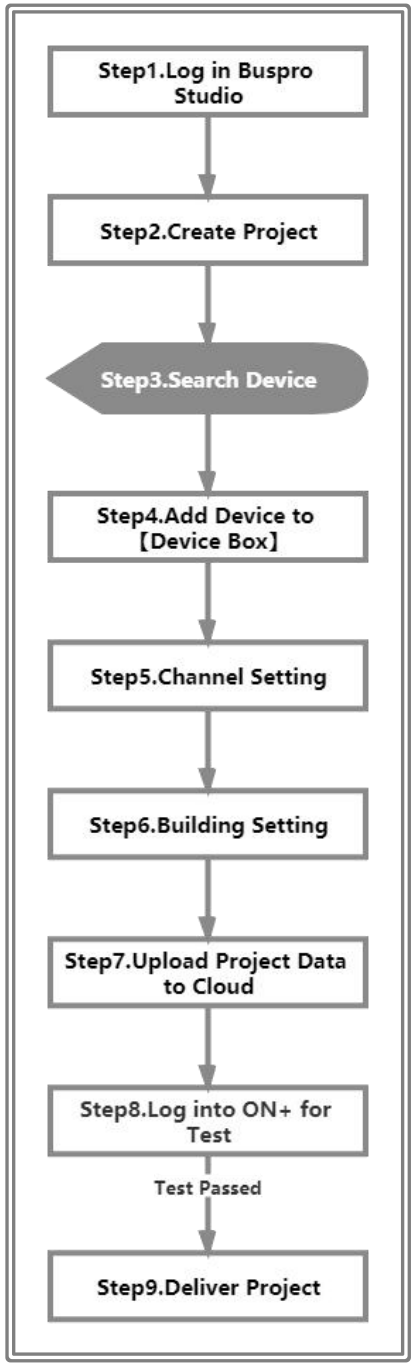
Step 2 —— After adding project, proceed editing project information.

① Click “Empty Project”

Select project type

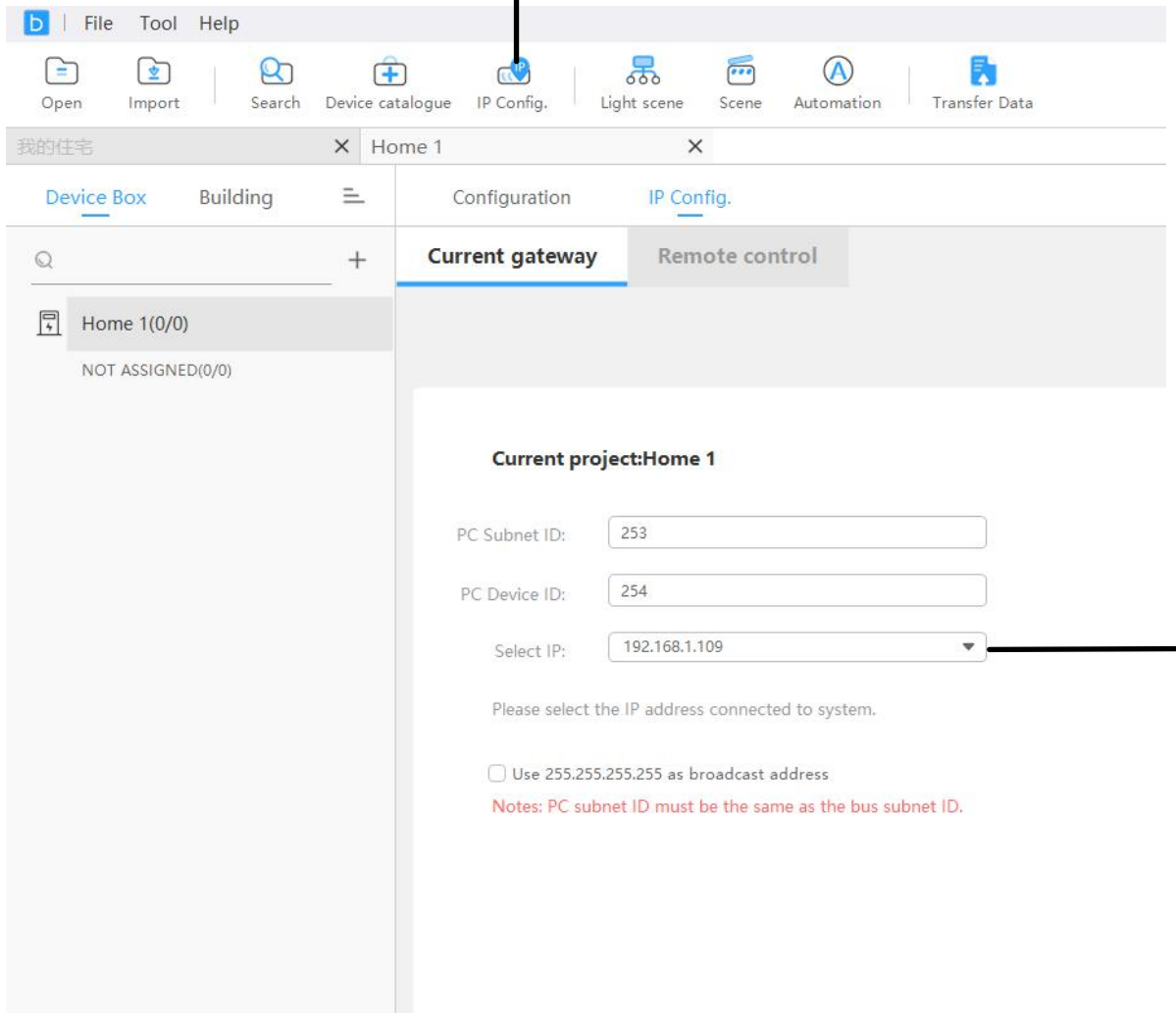


② Input project name, zone, address and system protocol.

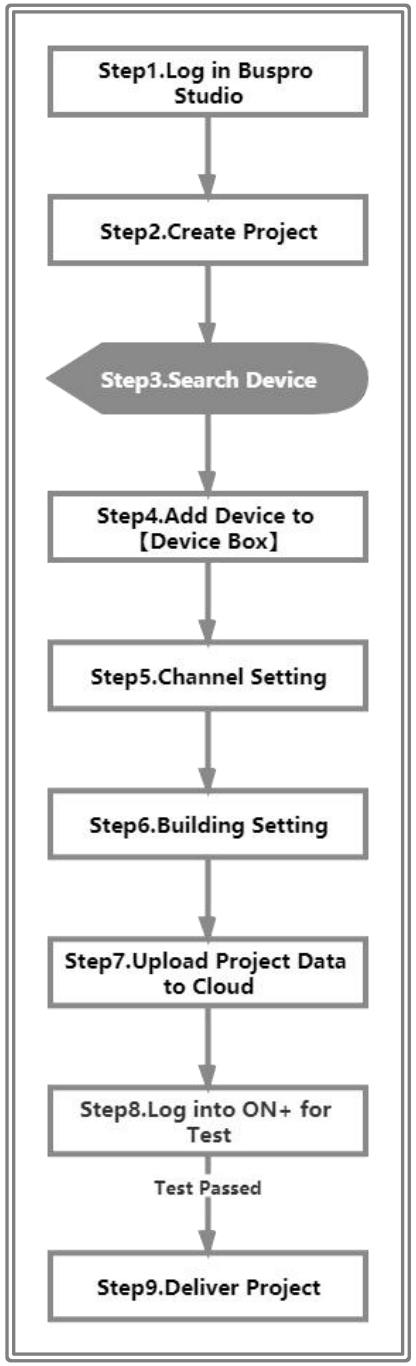


Step 3 —— Before searching device, please make sure current IP and device IP be kept at the same segment. If needed, you can revise as the followings:

① Click “IP Config.”



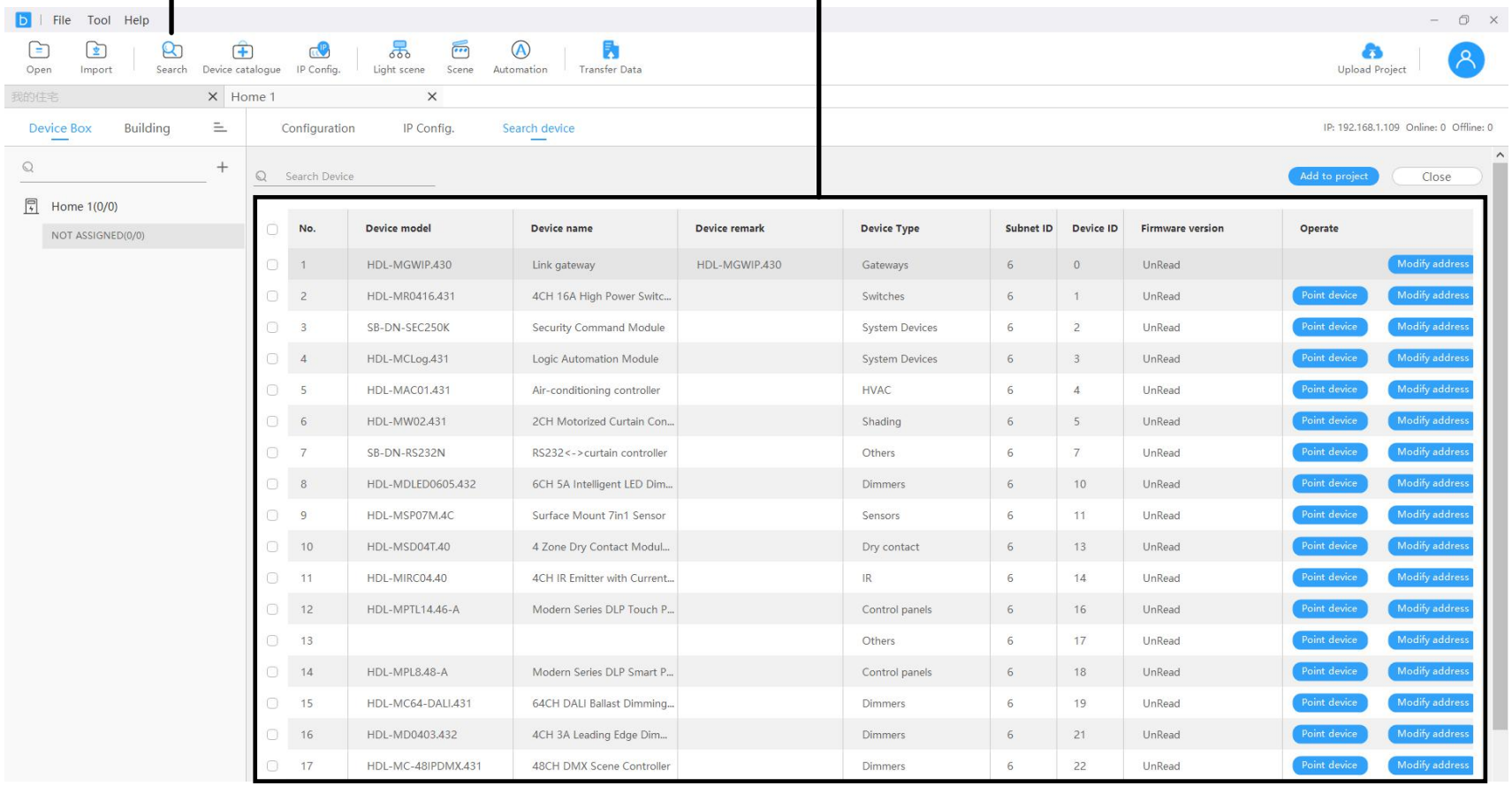
② Select IP

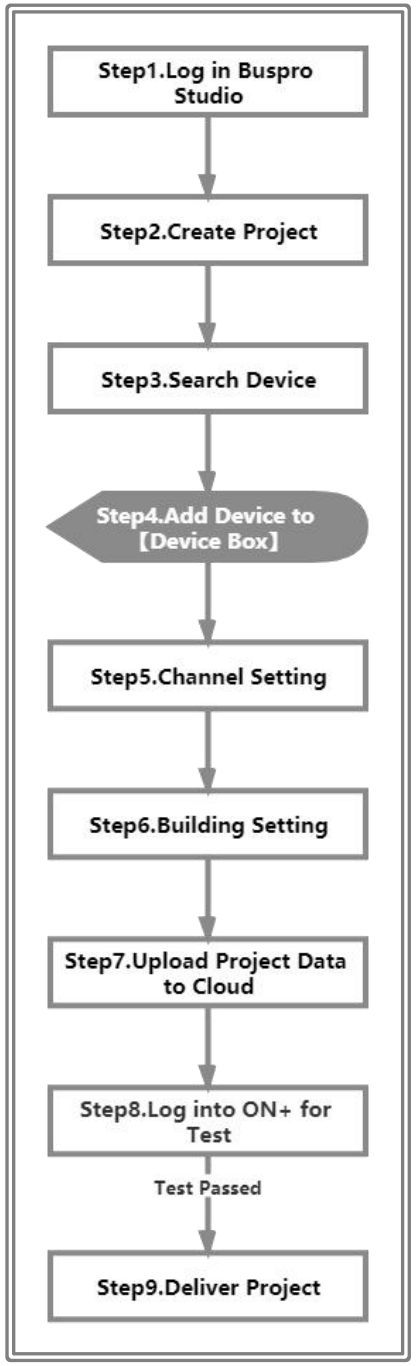


Step 3 —— After making sure the current IP and device IP be kept at the same segment, proceed searching device.

① Click “Search”

② Now all devices searched can be shown here





Step 4 —— Add device as your need.

① Select device

② Click “Add to project”

Search Device

Add to project | Close

No.	Device model	Device name	Device remark	Device Type	Subnet ID	Device ID	Firmware version	Operate	
1	HDL-MGWIP.430	Link gateway	HDL-MGWIP.430	Gateways	6	0	UnRead		Modify address
2	HDL-MR0416.431	4CH 16A High Power Switc...		Switches	6	1	UnRead	Point device	Modify address
3	SB-DN-SEC250K	Security Command Module		System Devices	6	2	UnRead	Point device	Modify address
4	HDL-MCLog.431	Logic Automation Module		System Devices	6	3	UnRead	Point device	Modify address
5	HDL-MAC01.431	Air-conditioning controller		HVAC	6	4	UnRead	Point device	Modify address
6	HDL-MW02.431	2CH Motorized Curtain Con...		Shading	6	5	UnRead	Point device	Modify address
7	SB-DN-RS232N	RS232<->curtain controller		Others	6	7	UnRead	Point device	Modify address
8	HDL-MDLED0605.432	6CH 5A Intelligent LED Dim...		Dimmers	6	10	UnRead	Point device	Modify address
9	HDL-MSP07M.4C	Surface Mount 7in1 Sensor		Sensors	6	11	UnRead	Point device	Modify address
10	HDL-MSD04T.40	4 Zone Dry Contact Modul...		Dry contact	6	13	UnRead	Point device	Modify address
11	HDL-MIRC04.40	4CH IR Emitter with Current...		IR	6	14	UnRead	Point device	Modify address
12	HDL-MPTL14.46-A	Modern Series DLP Touch P...		Control panels	6	16	UnRead	Point device	Modify address
13				Others	6	17	UnRead	Point device	Modify address
14	HDL-MPL8.48-A	Modern Series DLP Smart P...		Control panels	6	18	UnRead	Point device	Modify address
15	HDL-MC64-DALI.431	64CH DALI Ballast Dimming...		Dimmers	6	19	UnRead	Point device	Modify address
16	HDL-MD0403.432	4CH 3A Leading Edge Dim...		Dimmers	6	21	UnRead	Point device	Modify address
17	HDL-MC-48IPDMX.431	48CH DMX Scene Controller		Dimmers	6	22	UnRead	Point device	Modify address

Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

Step8.Log into ON+ for Test

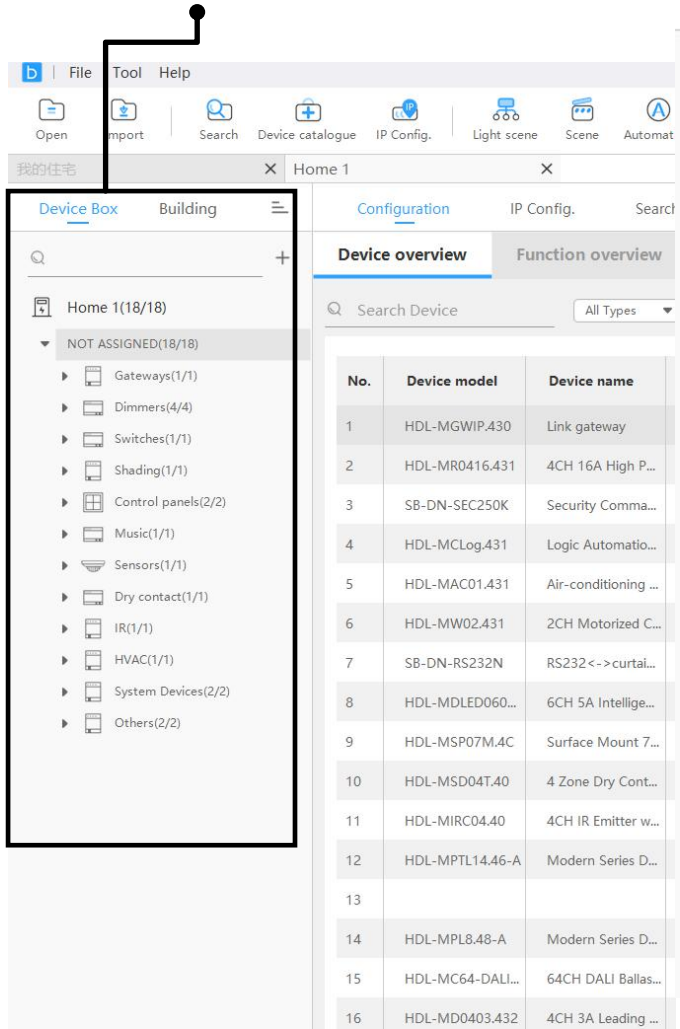
Test Passed

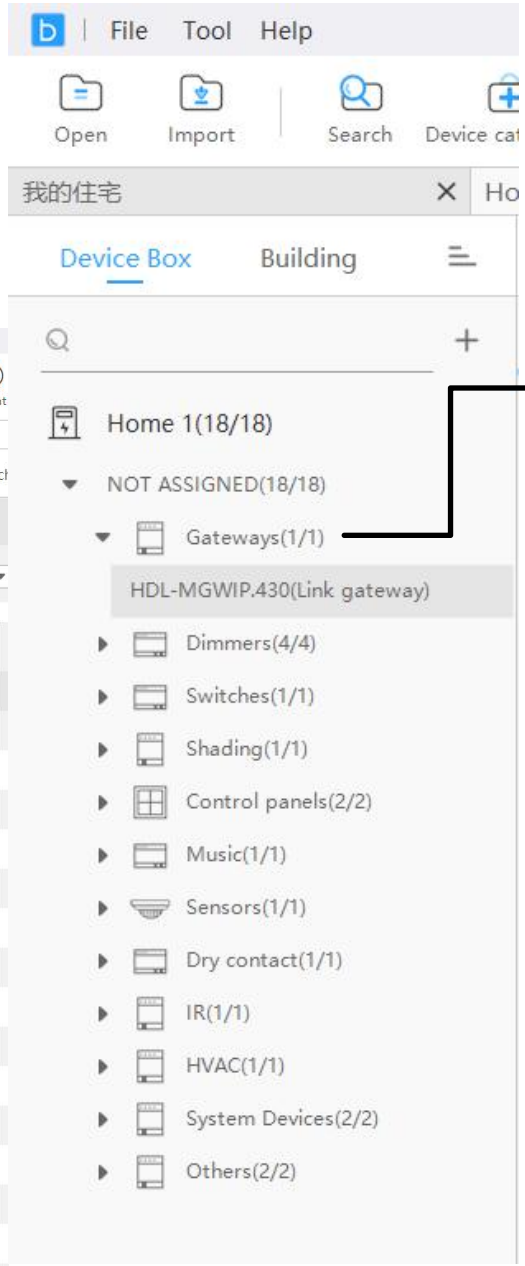
Step9.Deliver Project

Step 4 —— Add device as your need.

① Click “Device Box” to check all devices

*”Device Box” refers to electric boxes.





② Unfold to see each device.

*Under current version, it requires to click each device once so as to read device-related data and upload to “Building”.

Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

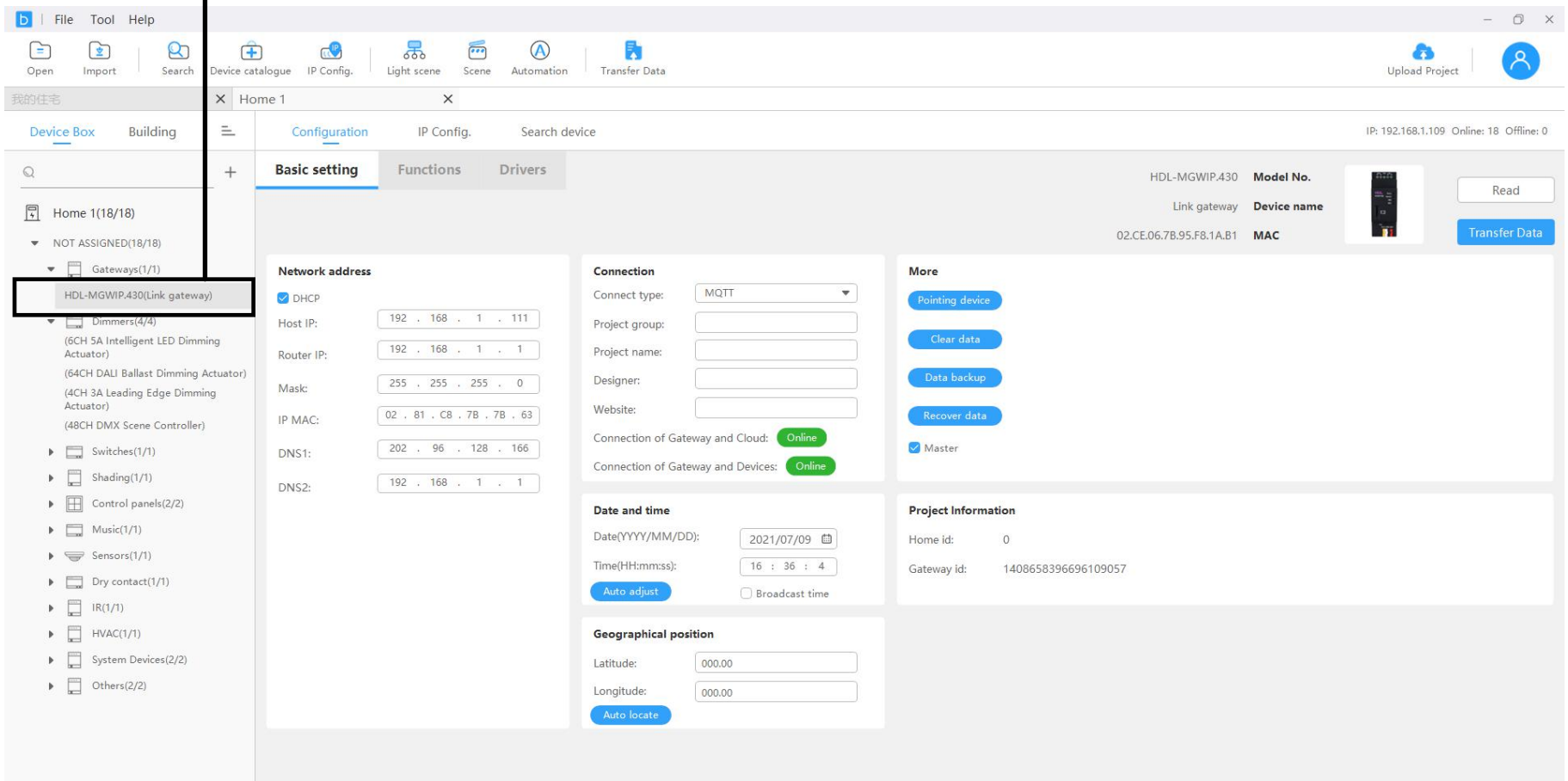
Step8.Log into ON+ for Test

Test Passed

Step9.Deliver Project

Step 4 —— Add device as your need.

Click this gateway



Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

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Test Passed

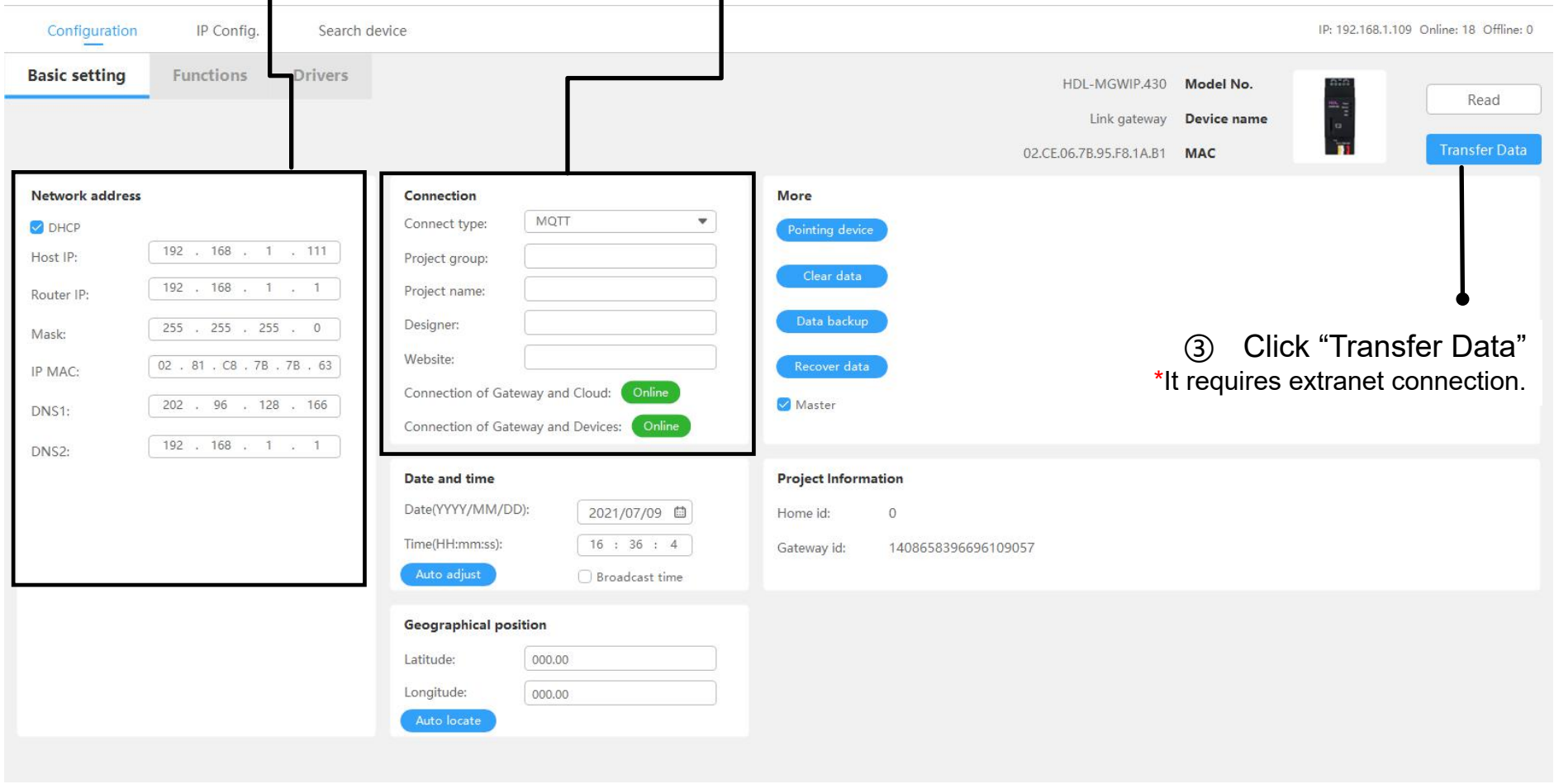
Step9.Deliver Project

Step 4 —— Add device as your need.

① “DHCP” is clicked by default

② Select “MQTT”

*Please note to make sure the connection status of gateway and Cloud is normal.



③ Click “Transfer Data”

*It requires extranet connection.

Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

Step8.Log into ON+ for Test

Test Passed

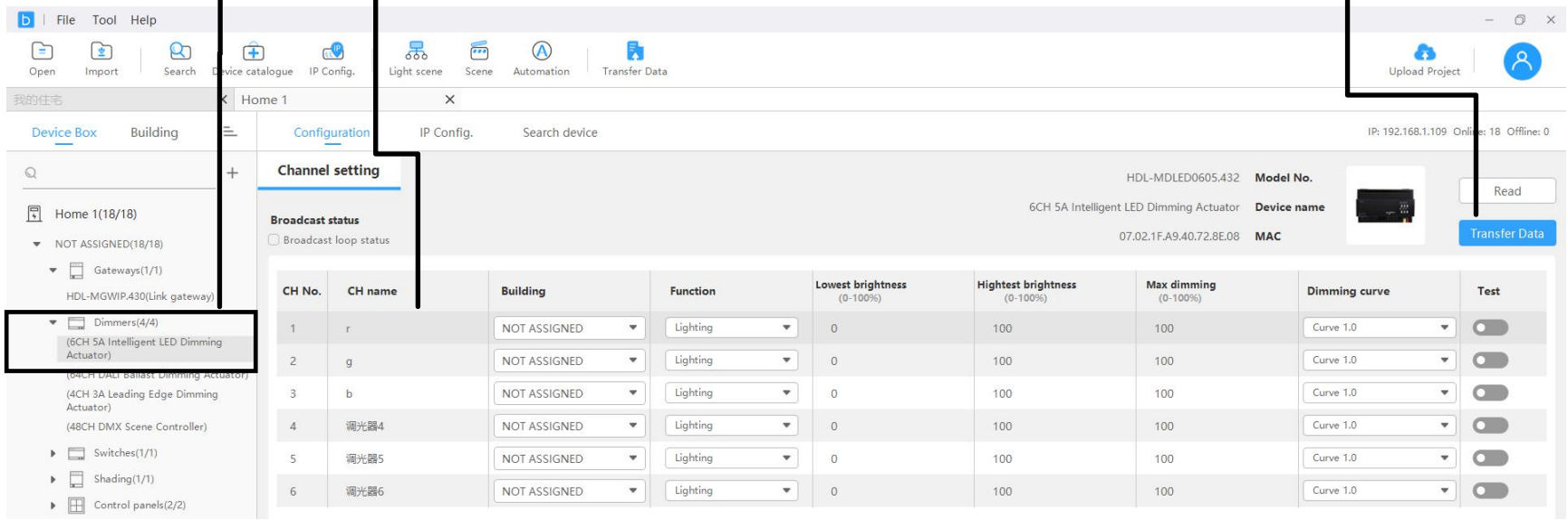
Step9.Deliver Project

Step 5 —— Channel setting

① Select the channel as needed

② Revise the channel name as needed, which corresponds to that shown in the function remark of ON+ APP.

③ Click “Transfer Data” after setting



Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

Step8.Log into ON+ for Test

Test Passed

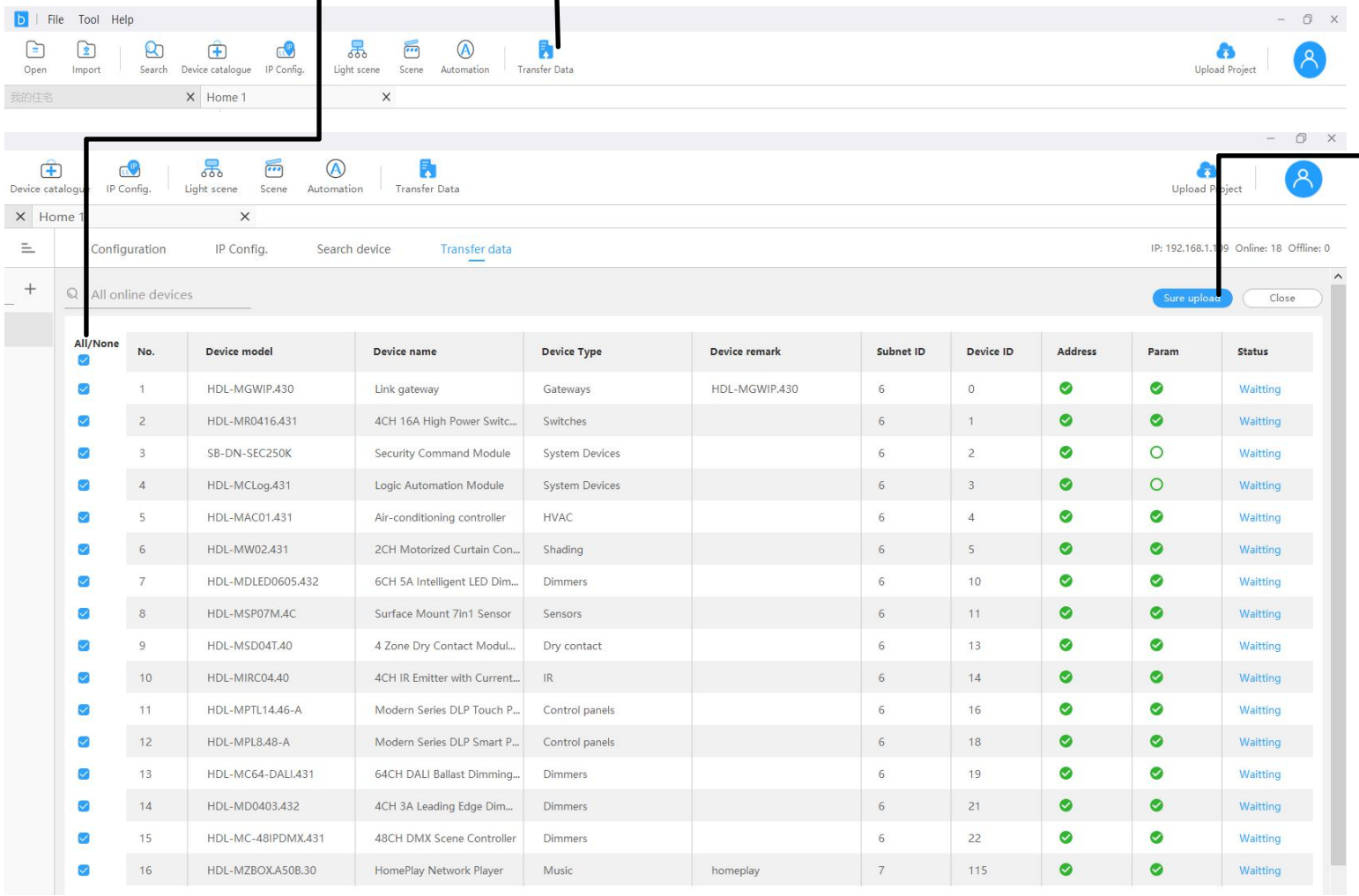
Step9.Deliver Project

Step 5 —— After channel setting, if you need to batch upload the device data, please proceed as below:

② Select the device as needed

① Click “Transfer Data”

③ Click “Sure upload”



Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

Step8.Log into ON+ for Test

Test Passed

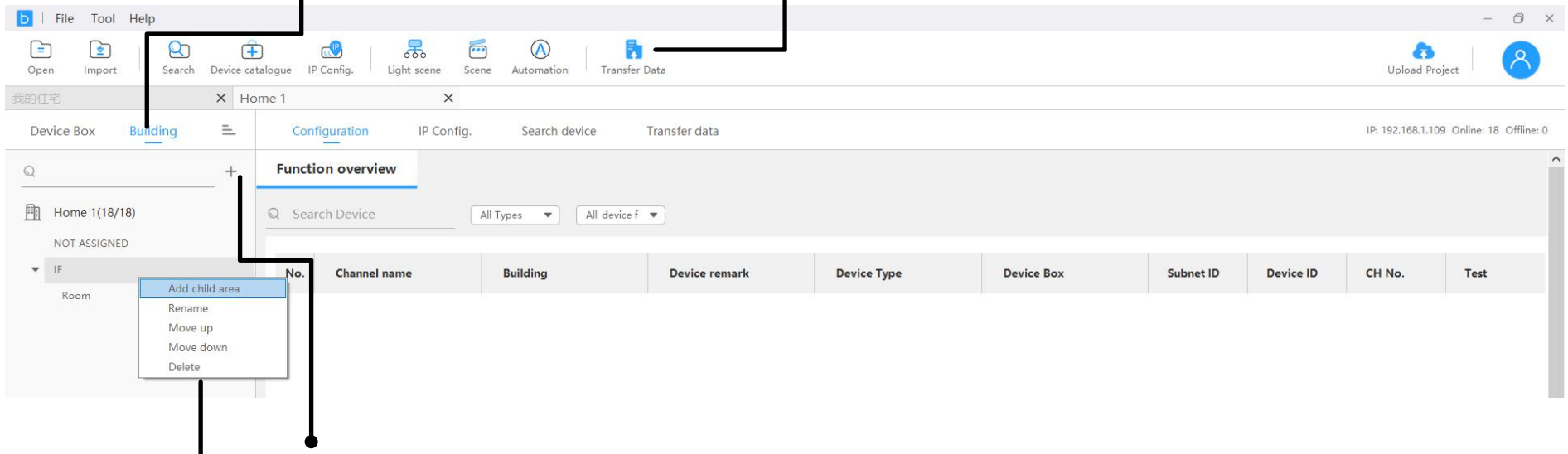
Step9.Deliver Project

Step 6 —— Building setting

① Select “Building”

*”Building” refers to the function shown in ON+ APP.

④ Click “Transfer Data”



② Click【+】to create building

③ Click the new building → Right click to proceed adding sub-area → Double click to revise area name

Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

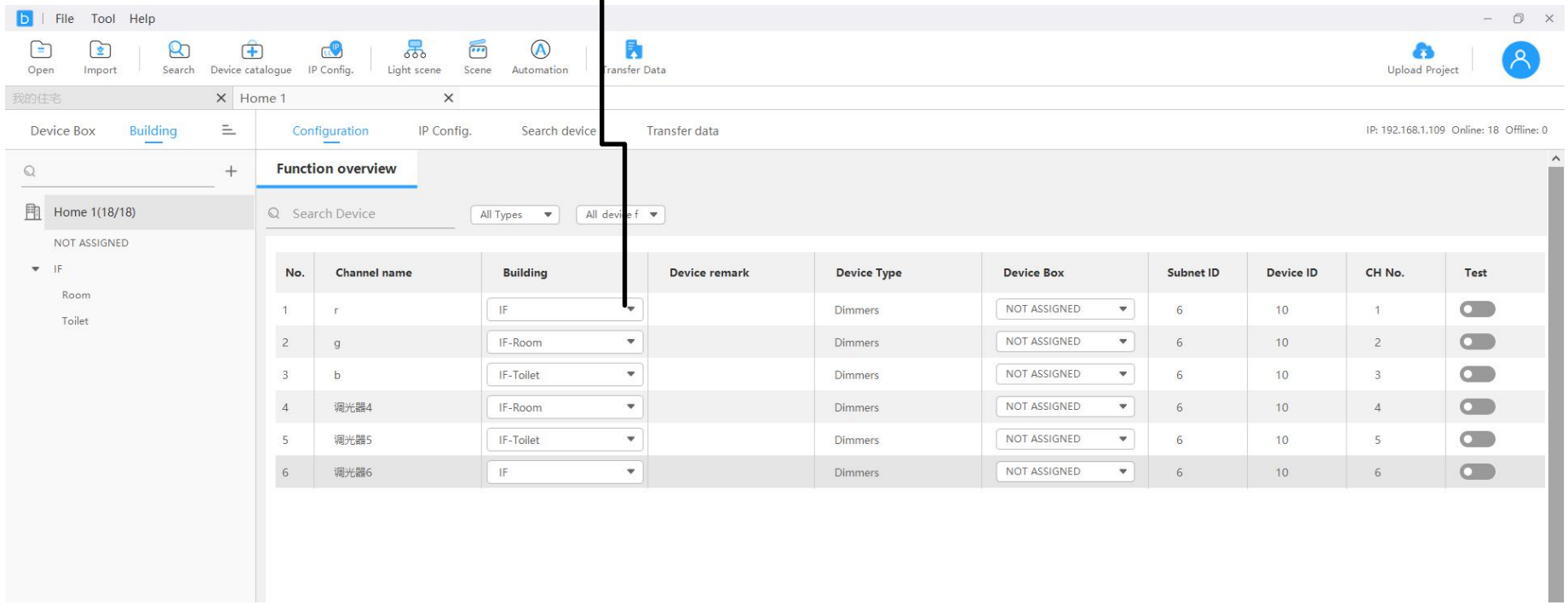
Step8.Log into ON+ for Test

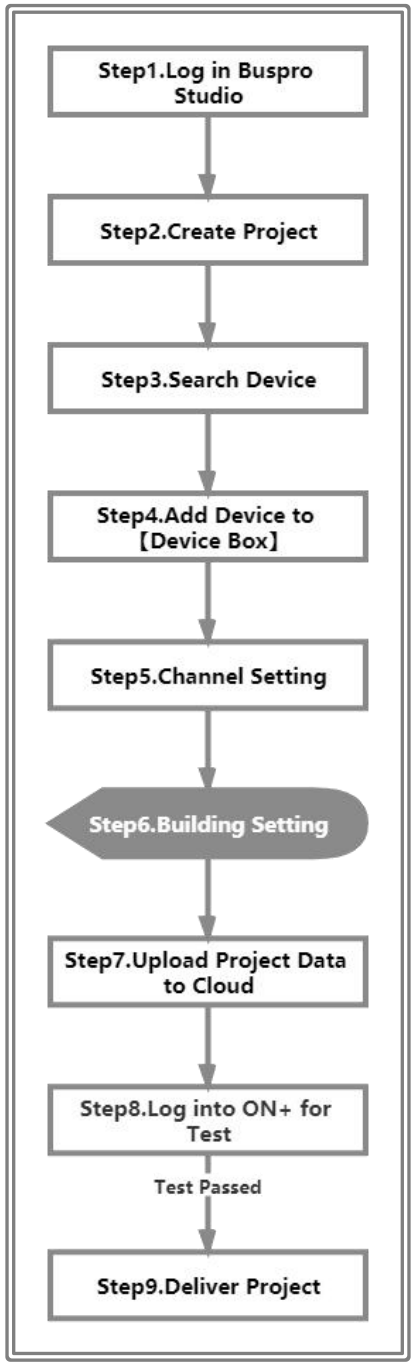
Test Passed

Step9.Deliver Project

Step 6 —— Building setting

Unfold to select the area as needed for the device





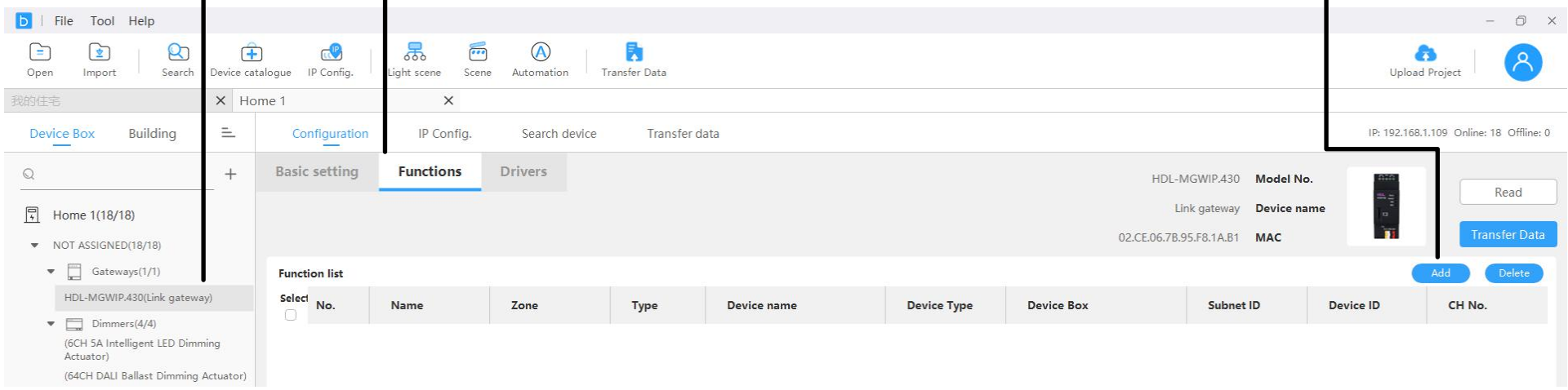
Step 6 —— Building setting

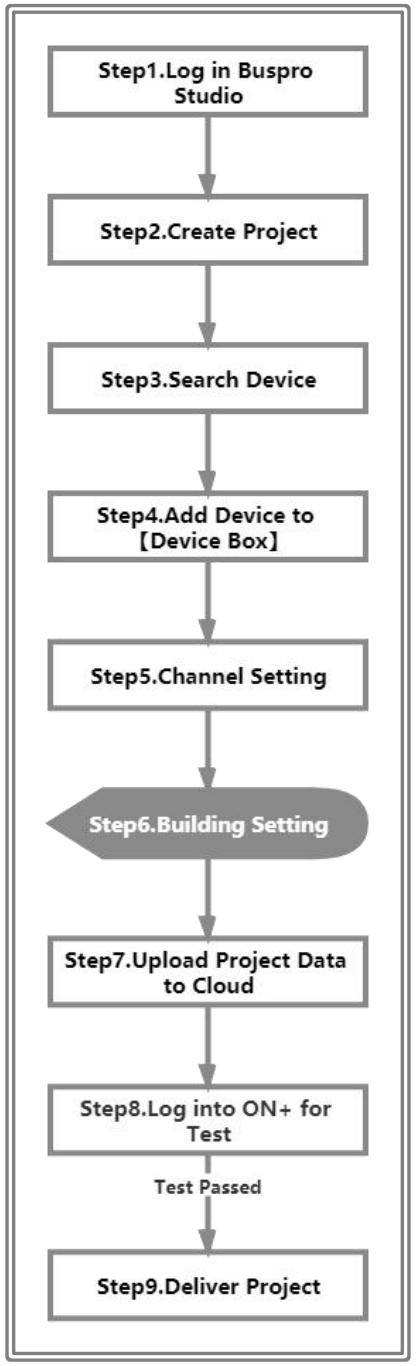
After assigning area and configuration function, back to “Device Box” and proceed as below:

① Back to “Device Box” and select this gateway

② Select “Function”

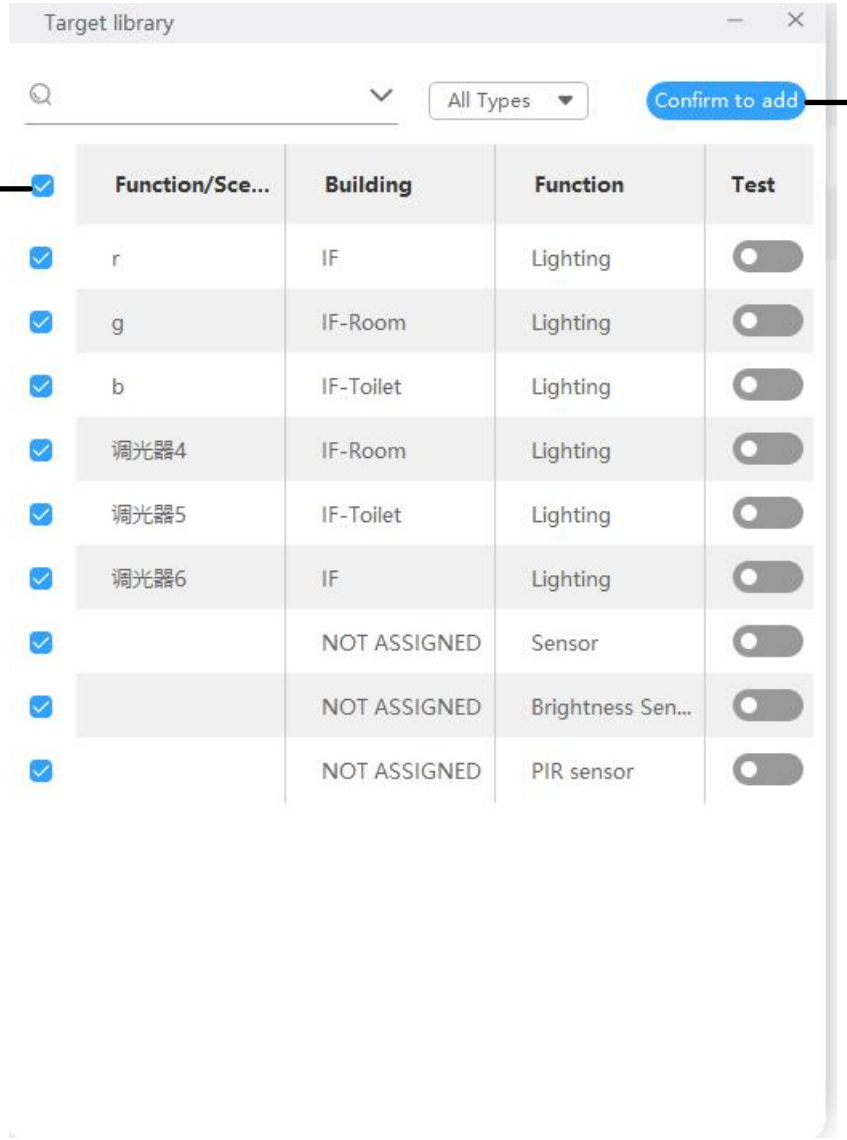
③ Click “Add”



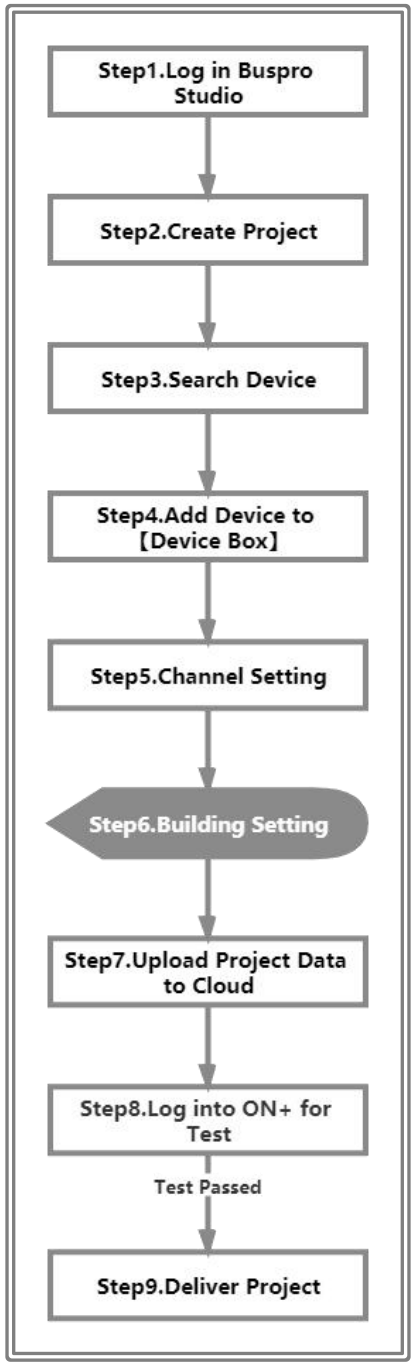


Step 6 —— Building setting

① Select the function you would like to upload to ON+ APP



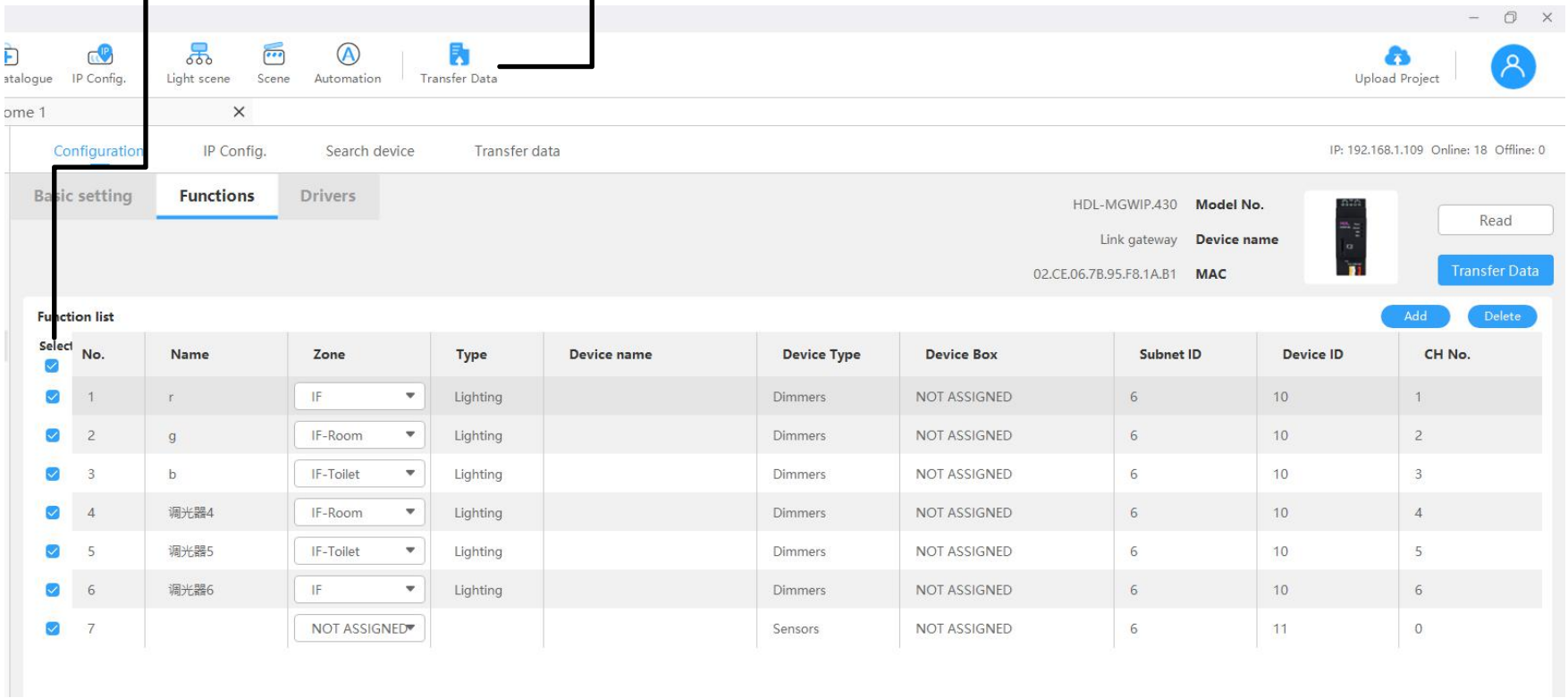
② Click “Confirm to add”



Step 6 —— Building setting

① Select the function you would like to upload to ON+ APP again

② Click “Transfer Data”



Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

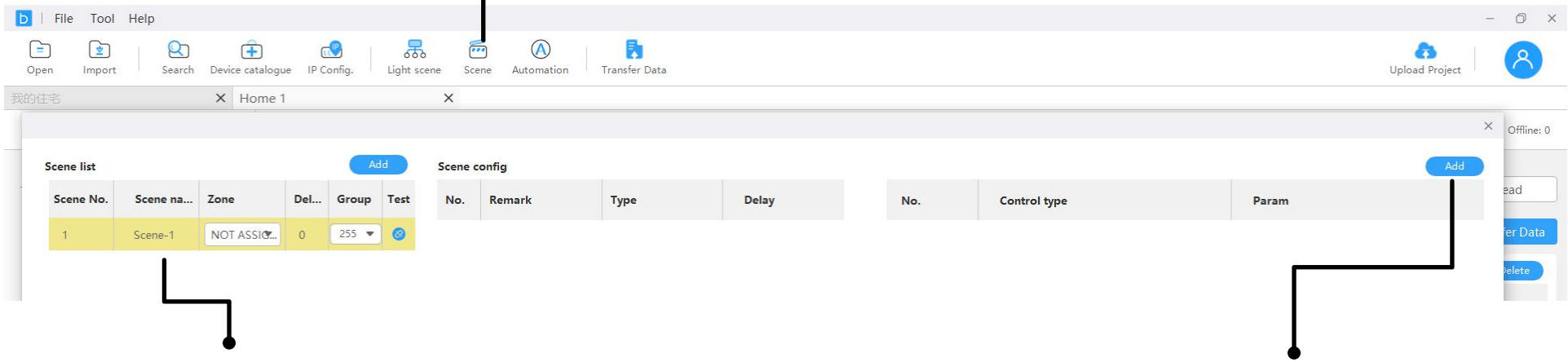
Step8.Log into ON+ for Test

Test Passed

Step9.Deliver Project

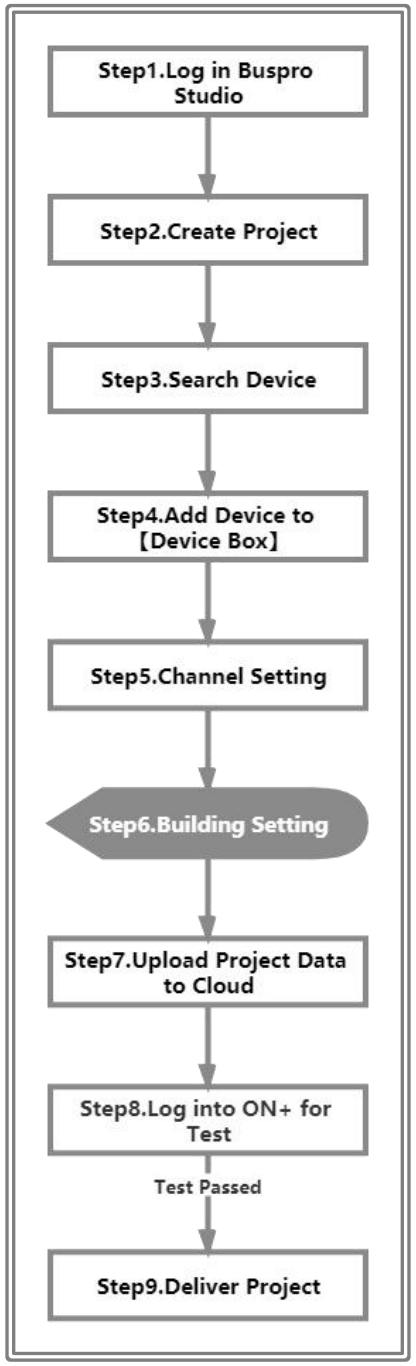
Step 6 —— After completing the previous steps, proceed scene setting.

① Click “Scene”



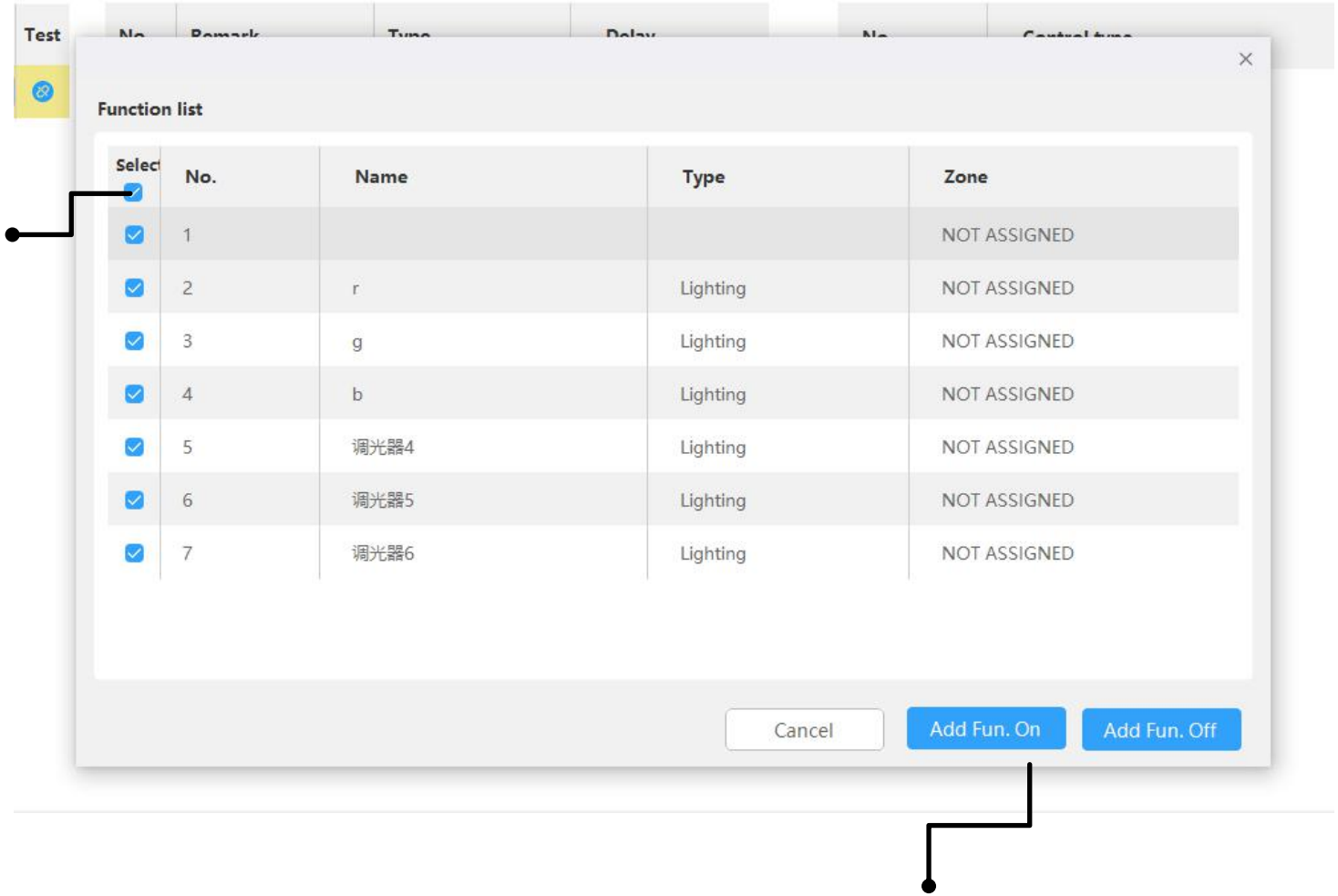
② Revise the scene name and assign area as needed

③ Click “Add”

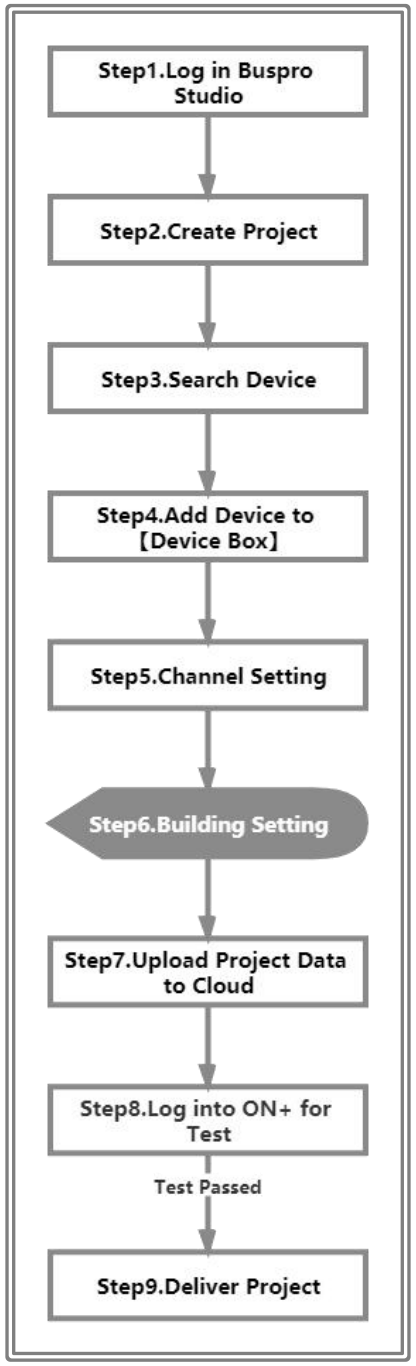


Step 6 —— After completing the previous steps, proceed scene setting.

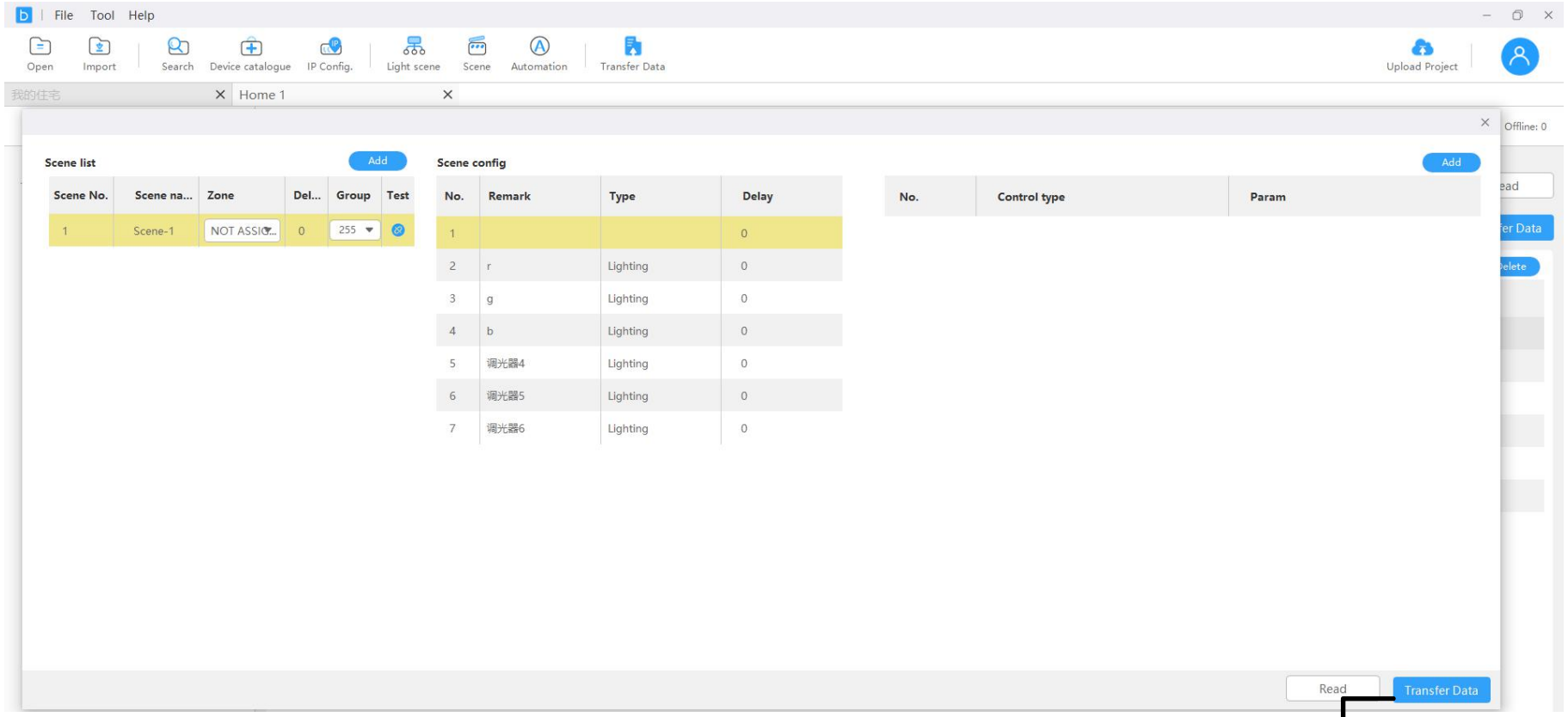
① Select function



② Select the function status



Step 6 —— After completing the previous steps, proceed scene setting.



After scene setting, click “Transfer Data”. When successfully uploading, close this page.

Step1.Log in Buspro Studio

Step2.Create Project

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Step5.Channel Setting

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Step7.Upload Project Data to Cloud

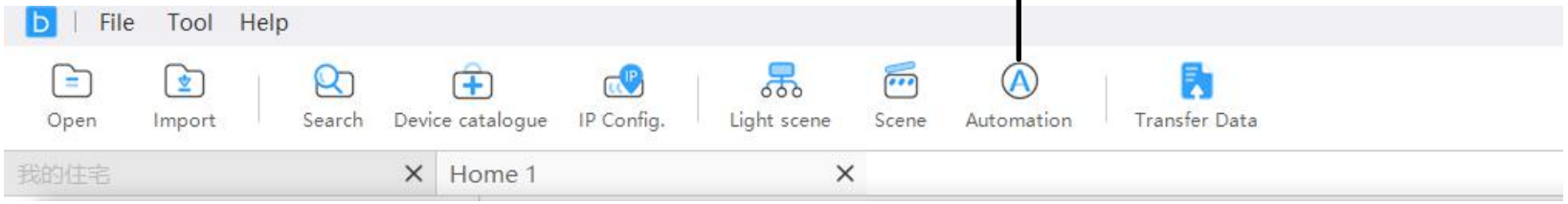
Step8.Log into ON+ for Test

Test Passed

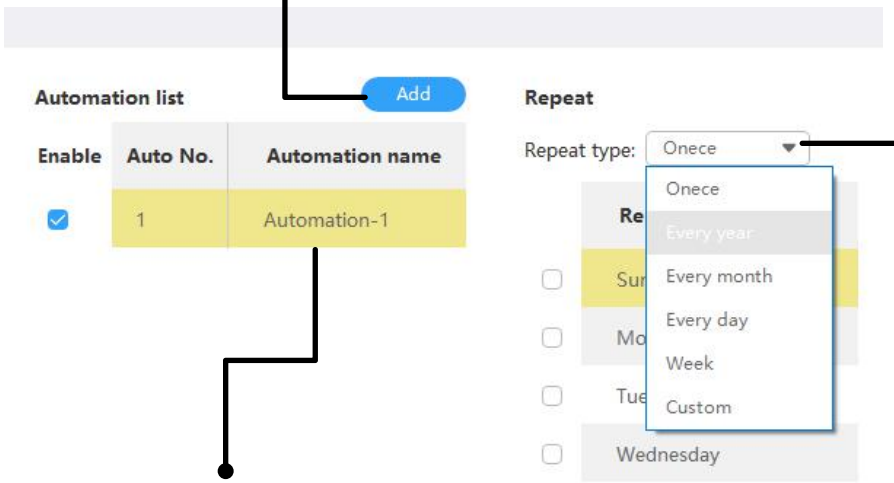
Step9.Deliver Project

Step 6 —— Automation setting

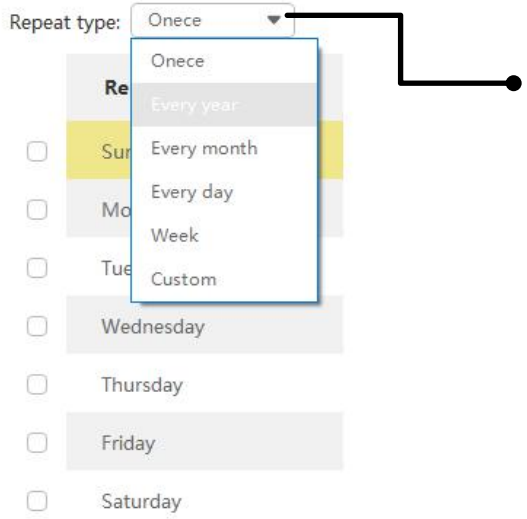
① Click “Automation”



② Click “Add”



③ Double click to revise name



④ Select repeat type.
E.g., set as “every year”

Step1.Log in Buspro Studio

Step2.Create Project

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Step7.Upload Project Data to Cloud

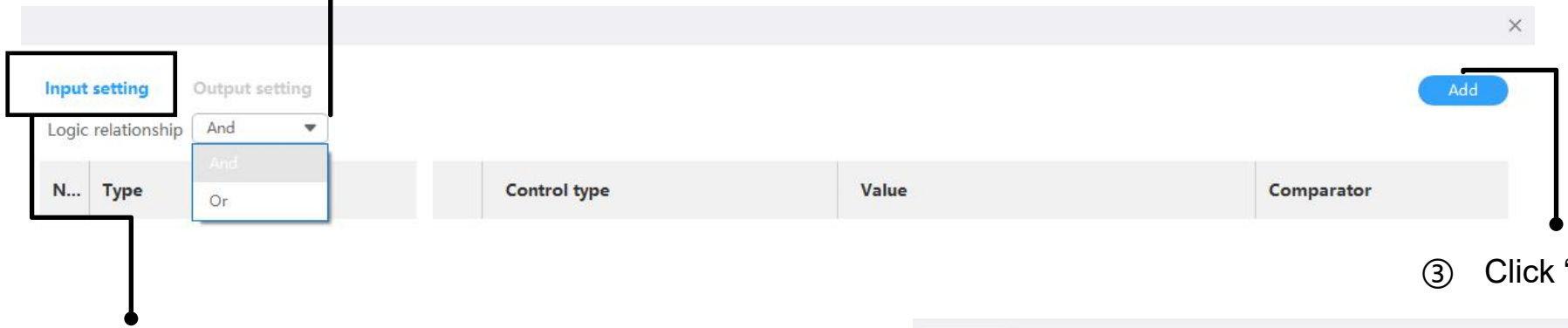
Step8.Log into ON+ for Test

Test Passed

Step9.Deliver Project

Step 6 —— Automation setting

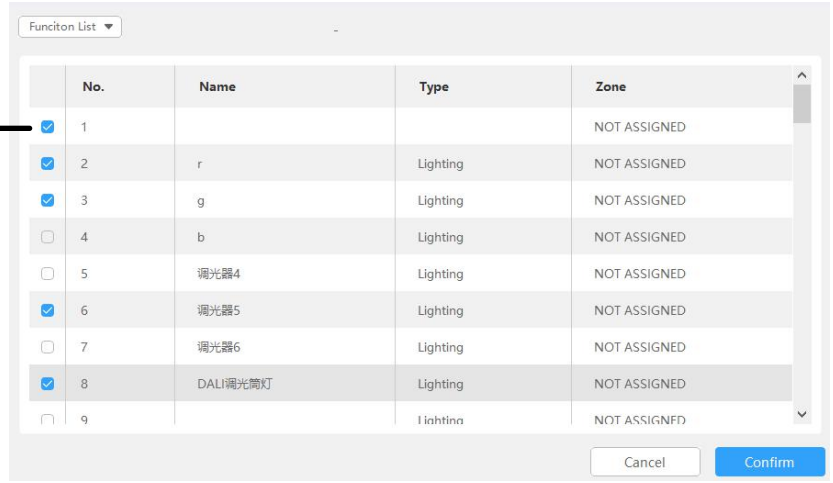
① Select logic relationship, “And” or “Or”



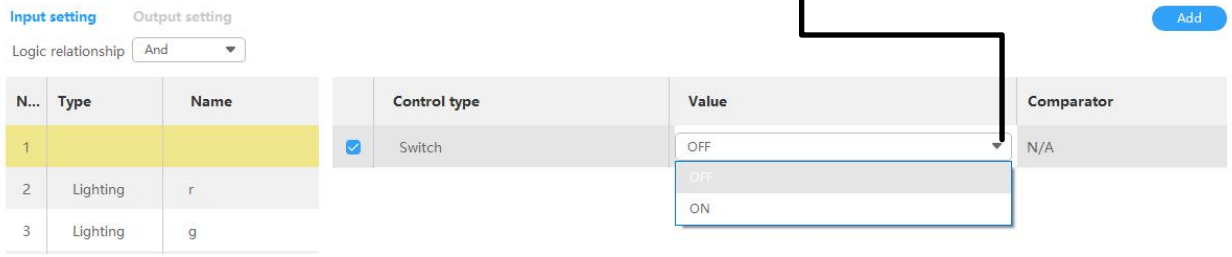
③ Click “Add”

② Click “Input setting” to set conditions for execution

④ Select function



⑤ Set the function status



Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

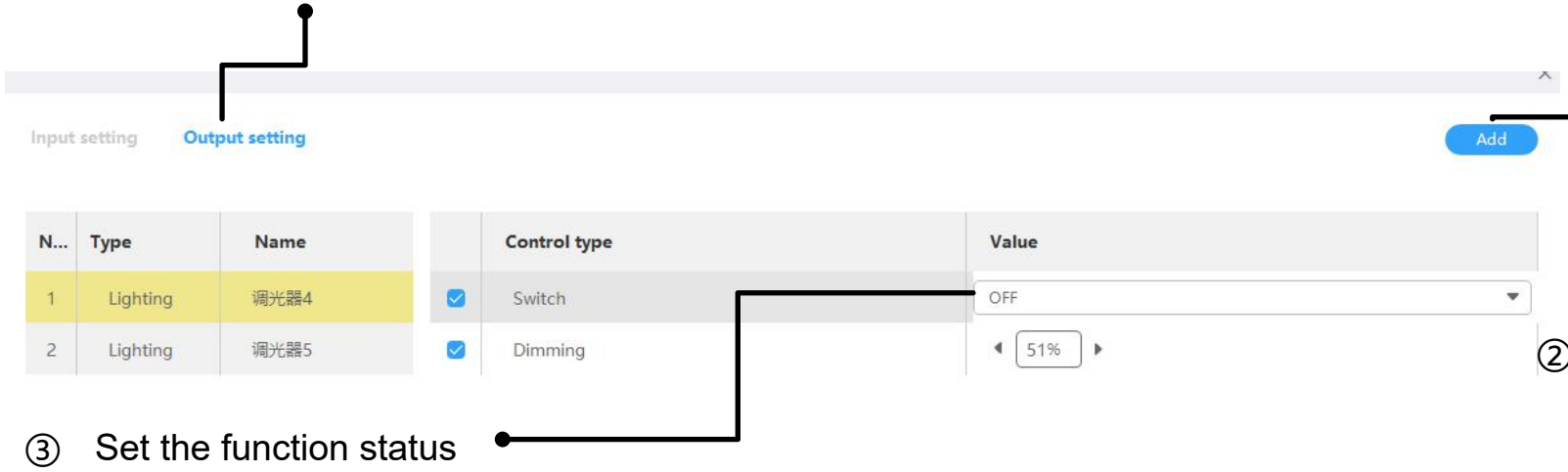
Step8.Log into ON+ for Test

Test Passed

Step9.Deliver Project

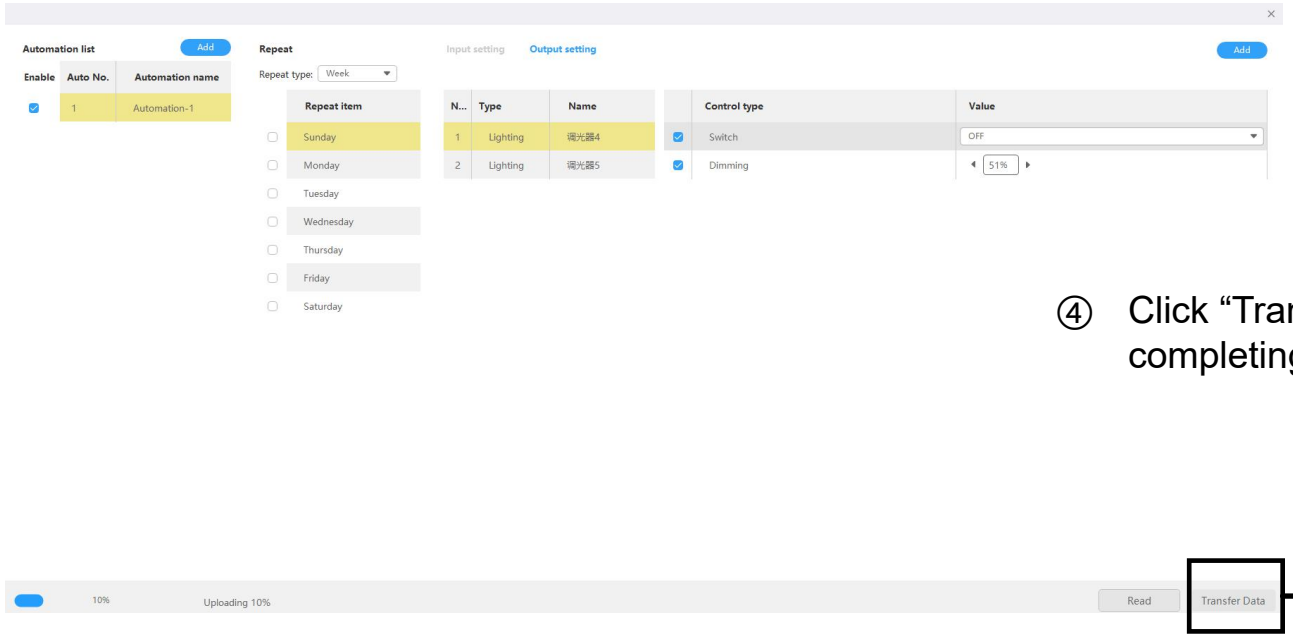
Step 6 —— Automation setting

① After setting conditions, click “Output setting”, i.e. execution target.

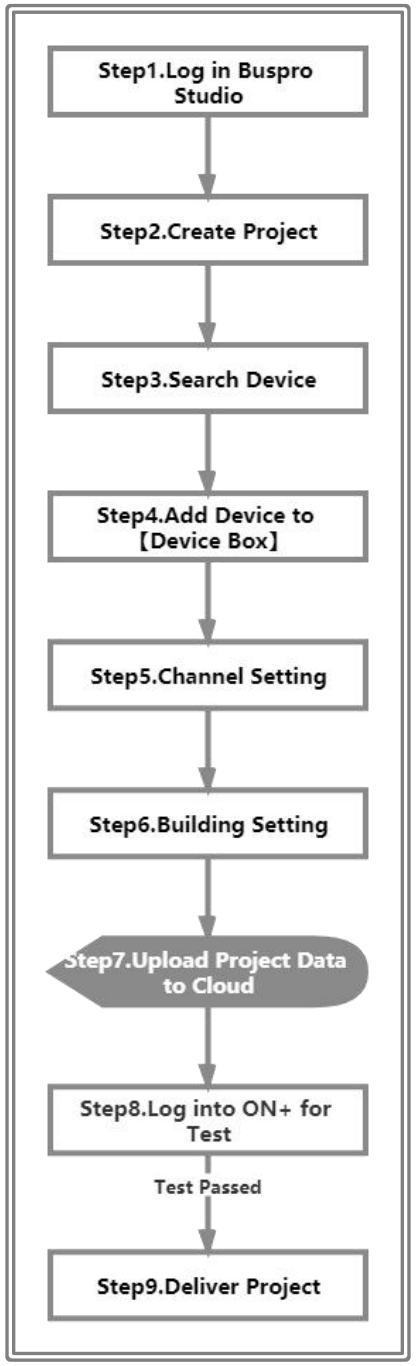


② Click “Add”

③ Set the function status



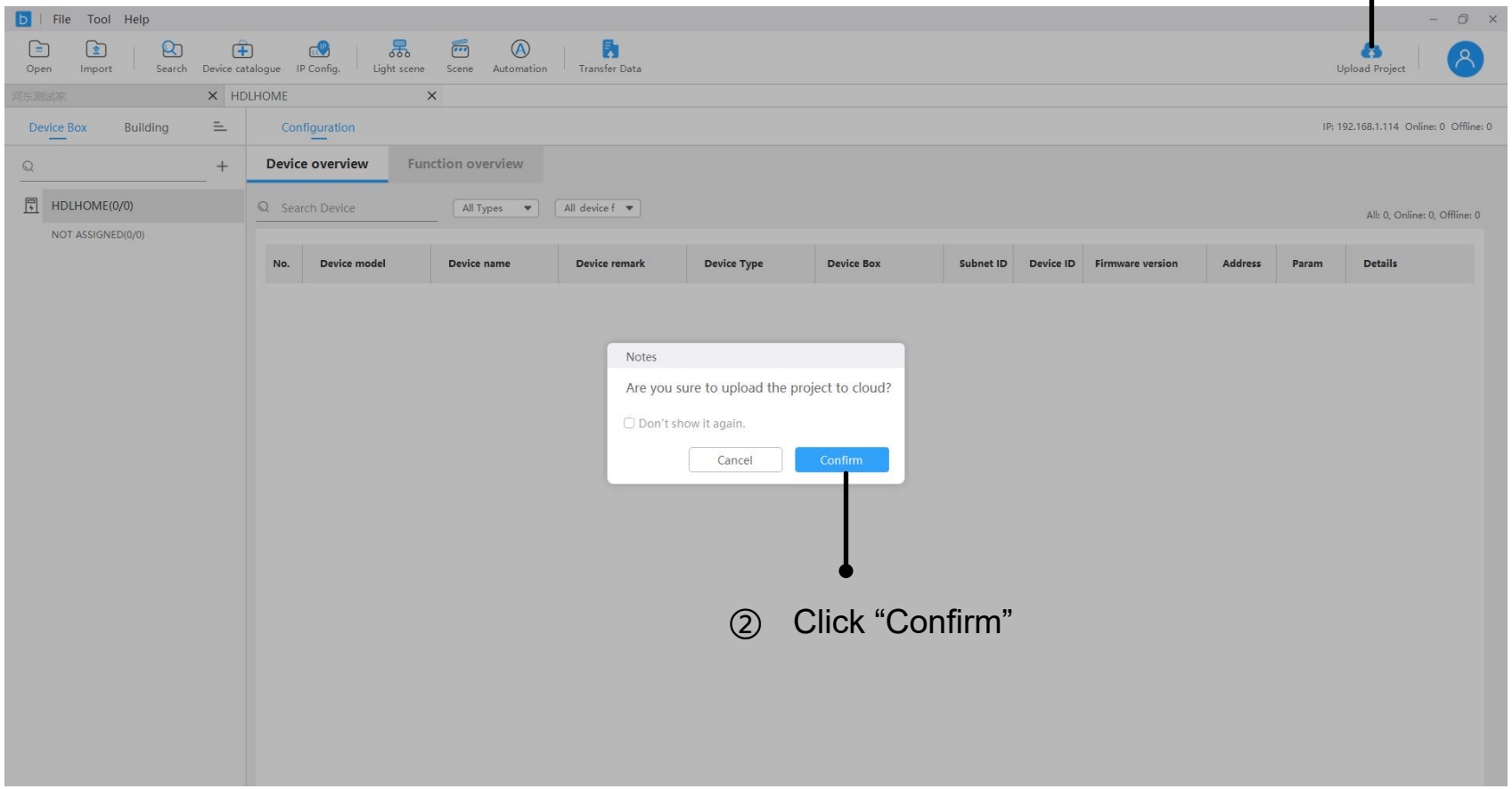
④ Click “Transfer Data” while completing setting



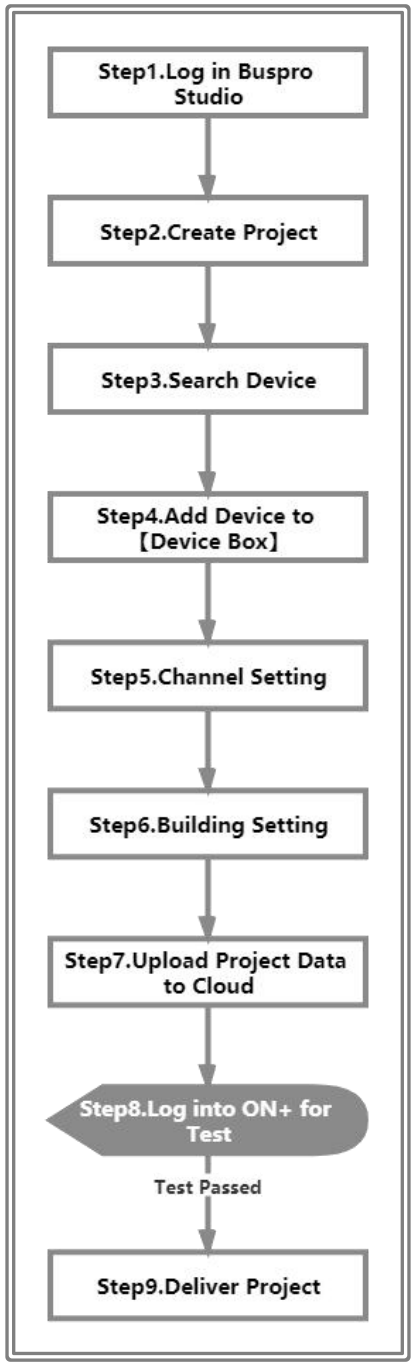
Step 7 —— Upload data to Cloud after completing settings.

***It is OK to proceed settings when there is no external network; while uploading data to Cloud, please make sure there is valid extranet.**

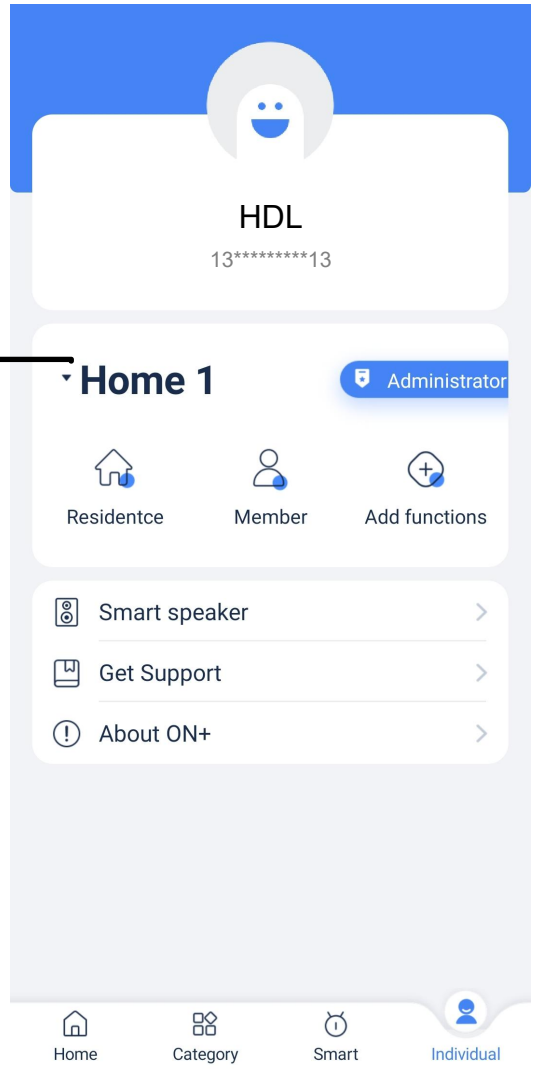
① Click “Upload Project”



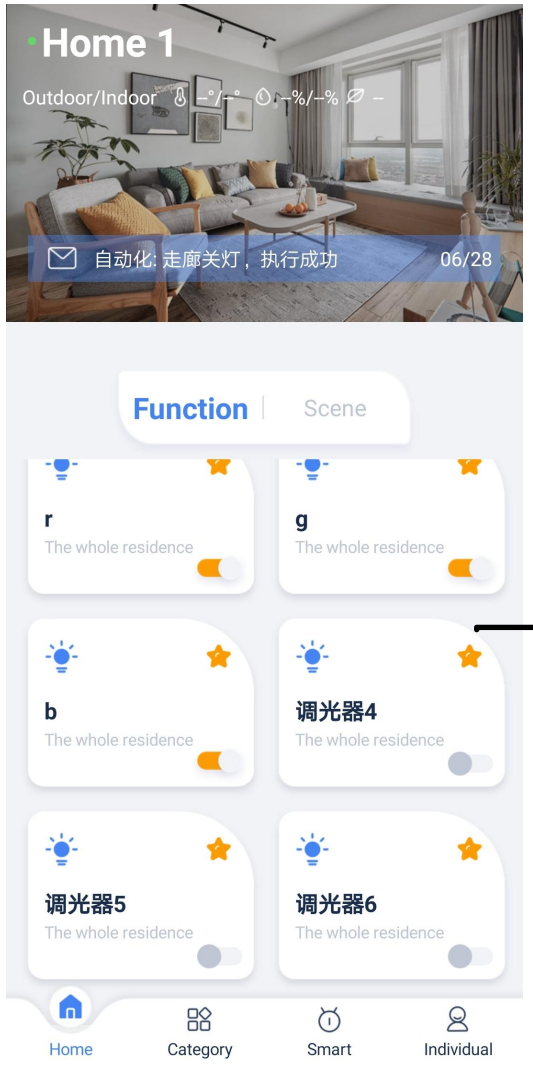
② Click “Confirm”



Step 8 —— After uploading data, proceed logging in ON+ APP for testing.



Select residence



Set the function needed as favorites then proceed testing in Home page.

Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

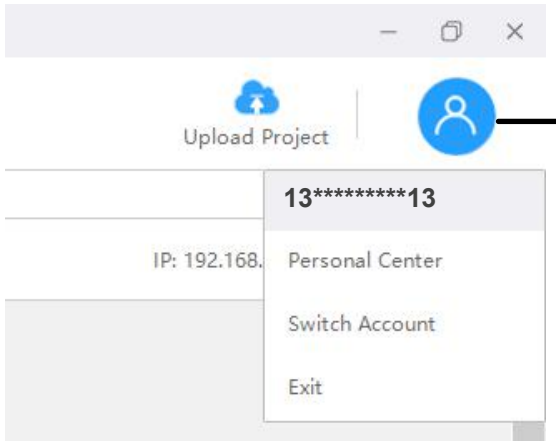
Step7.Upload Project Data to Cloud

Step8.Log into ON+ for Test

Test Passed

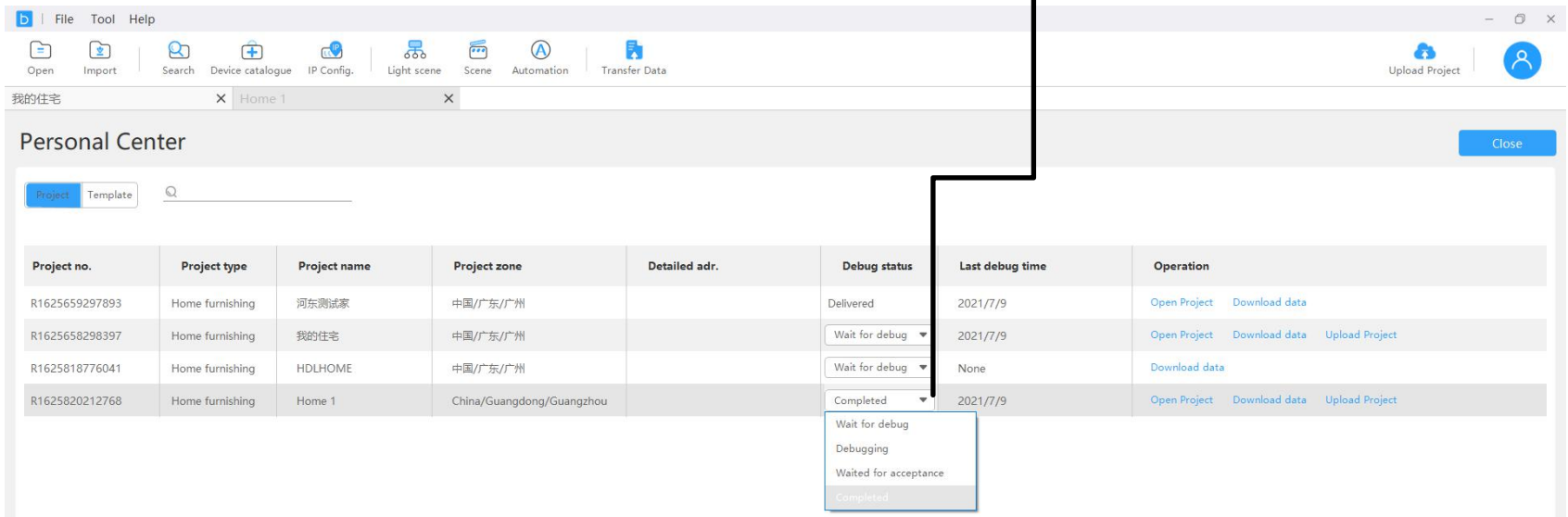
Step9.Deliver Project

Step 8 —— Deliver project when test is passed.



① Click head portrait, select “Personal Center”

② Select the project and set it as “Completed”.



Step1.Log in Buspro Studio

Step2.Create Project

Step3.Search Device

Step4.Add Device to【Device Box】

Step5.Channel Setting

Step6.Building Setting

Step7.Upload Project Data to Cloud

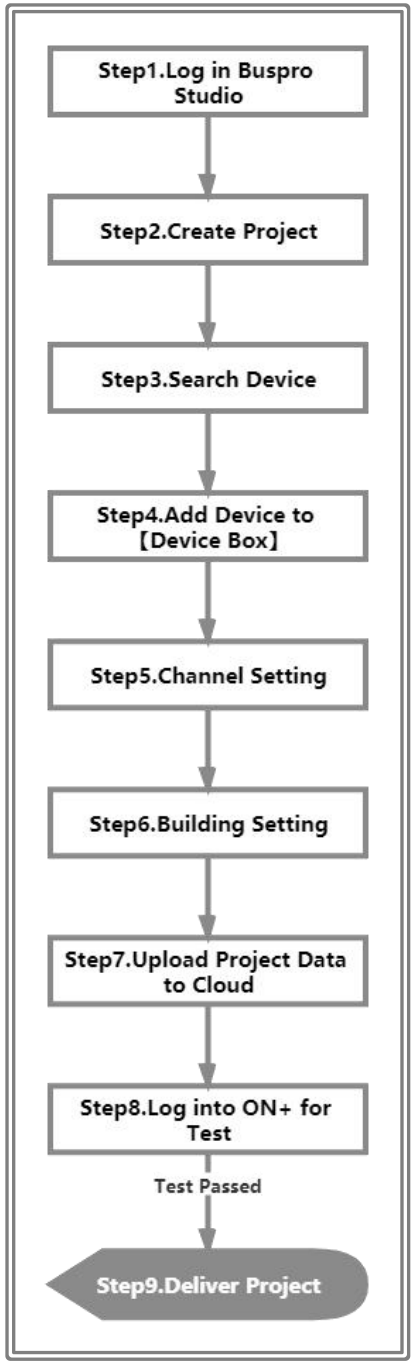
Step8.Log into ON+ for Test

Test Passed

Step9.Deliver Project

Step 8 —— Now please inform the relevant administrator to log in IOT platform and proceed project delivery.

Click this tab

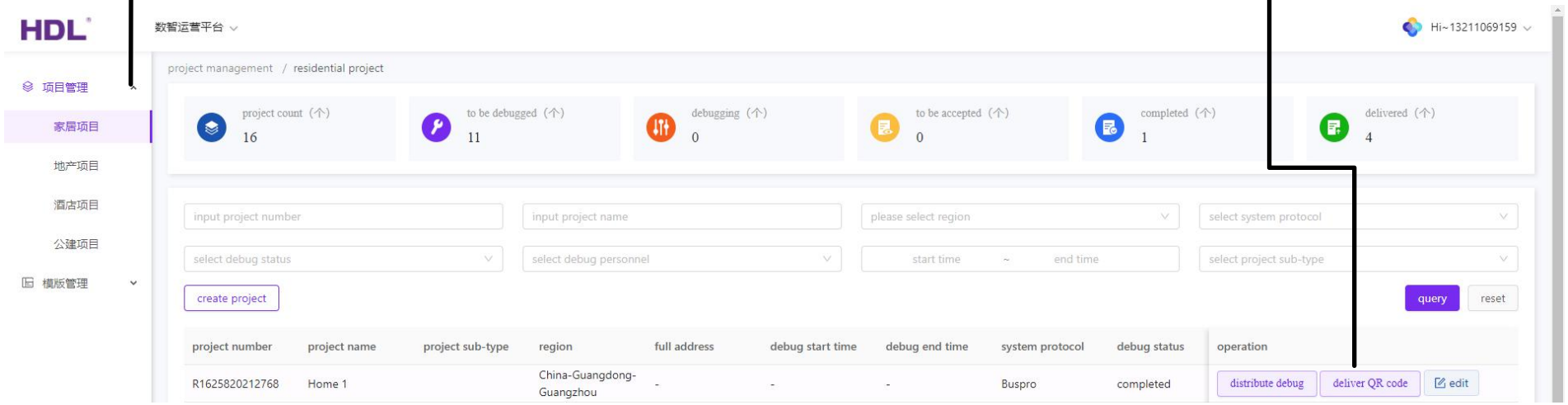


Step 8 —— Now please inform the relevant administrator to log in IOT platform and proceed project delivery.

① Select “项目管理 (Project Management)” → Select residential type

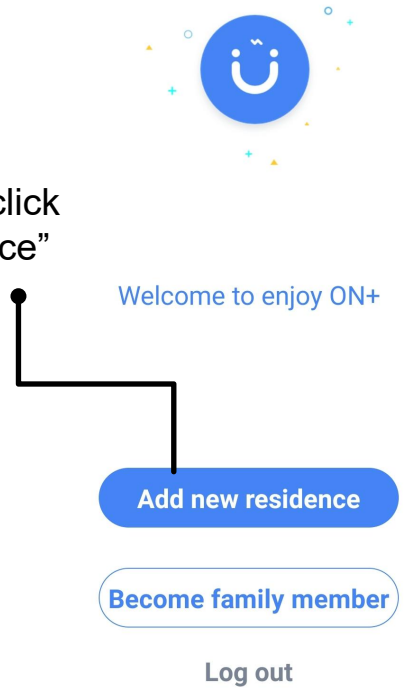
② Select the project as needed, click “deliver QR code”. Show it to the residence owner for scanning (see next page for more details).

*The QR code is valid for the first scanning. Since then, it is bound to the administrator’s account by default.

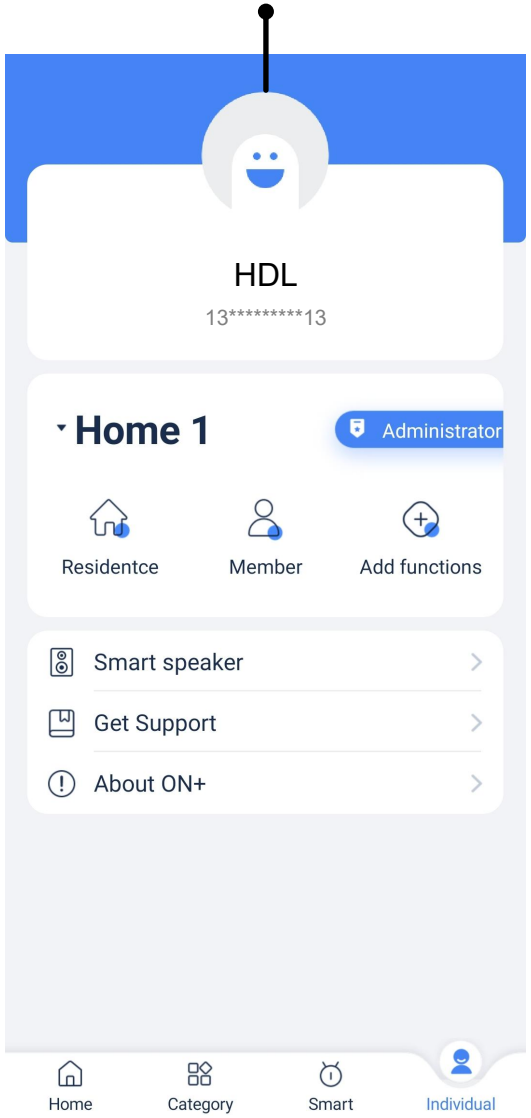


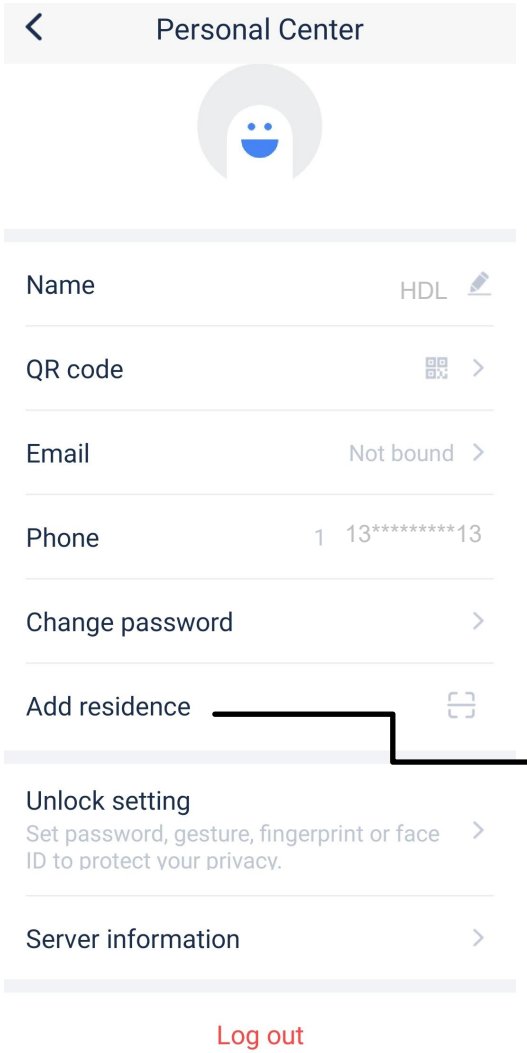
How to Scan Deliver QR Code

① After signing up, click “Add new residence”



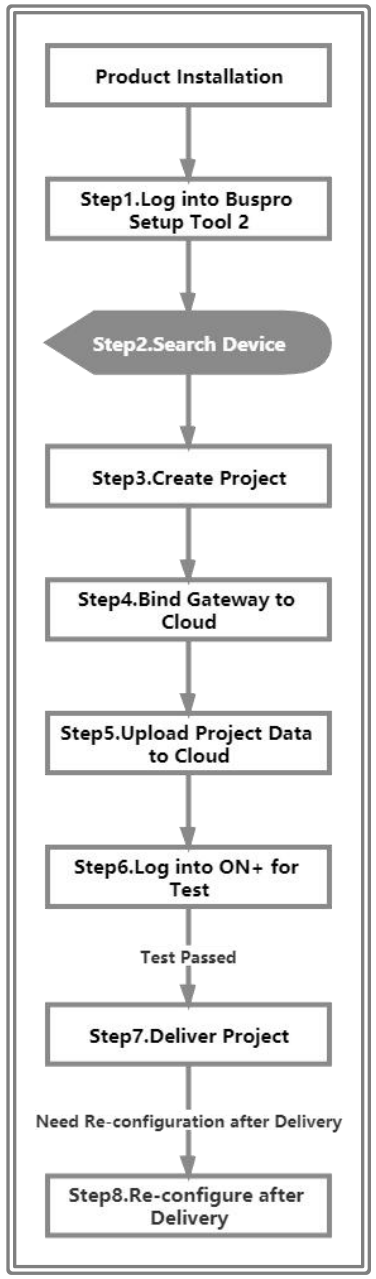
② Click head portrait





③ Click “Add residence”

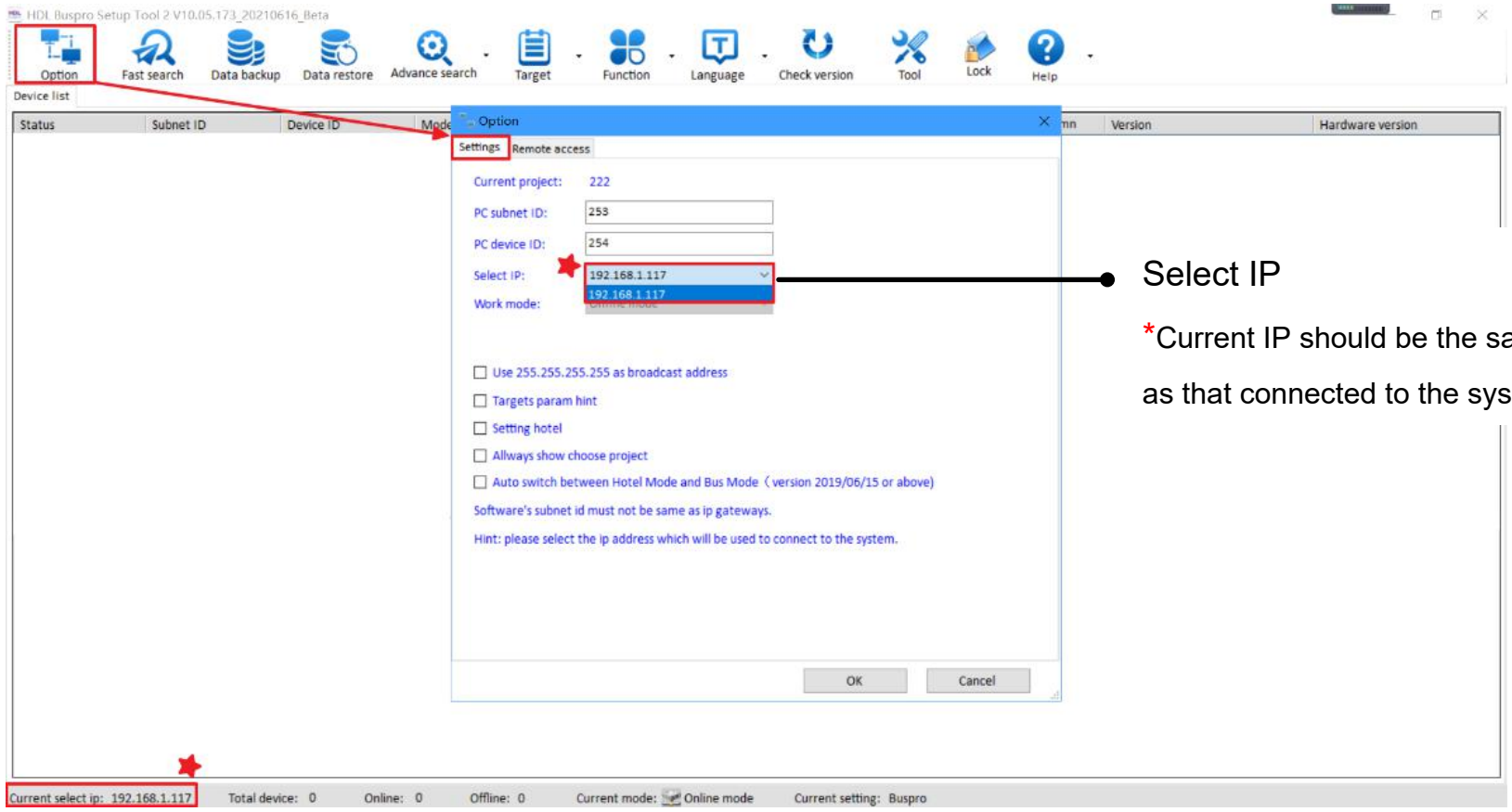
4. Buspro Setup Tool 2 Instruction



Step 1 —— Not Describe Here

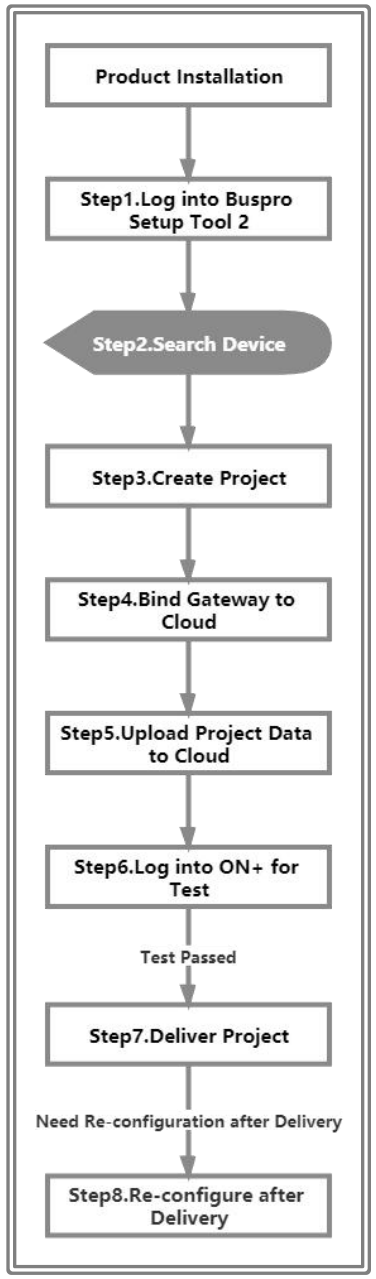
Step 2 —— Connect Buspro gateway to the system, and open Buspro Setup Tool 2 in the computer. Then proceed IP settings.

① Click “Option” to enter “Setting” page → Select IP, which will be used to connect to the system → Click “OK” to complete.



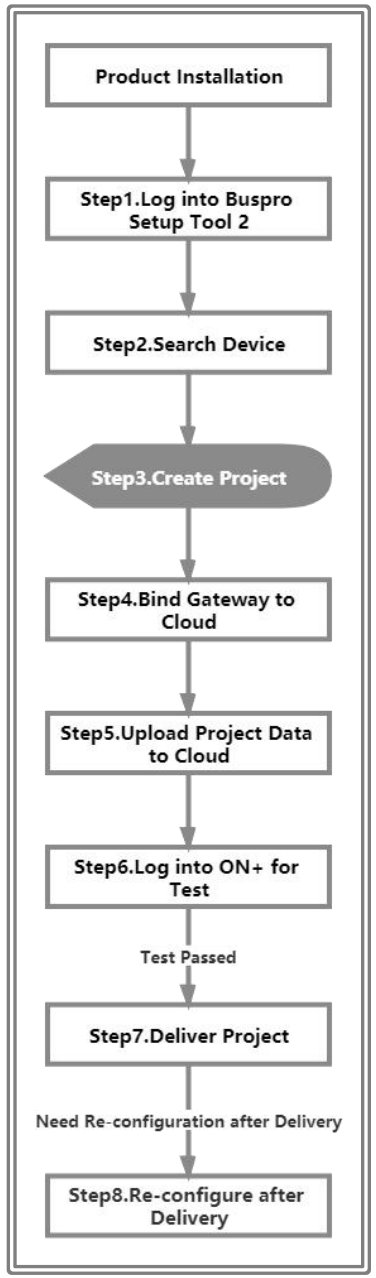
Select IP

*Current IP should be the same as that connected to the system



Step 2 —— After IP setting, please proceed searching for device, then open the configuration page.

② Click “Fast Search” → Double click the “Model” or “Description” column to enter configuration page of Buspro gateway

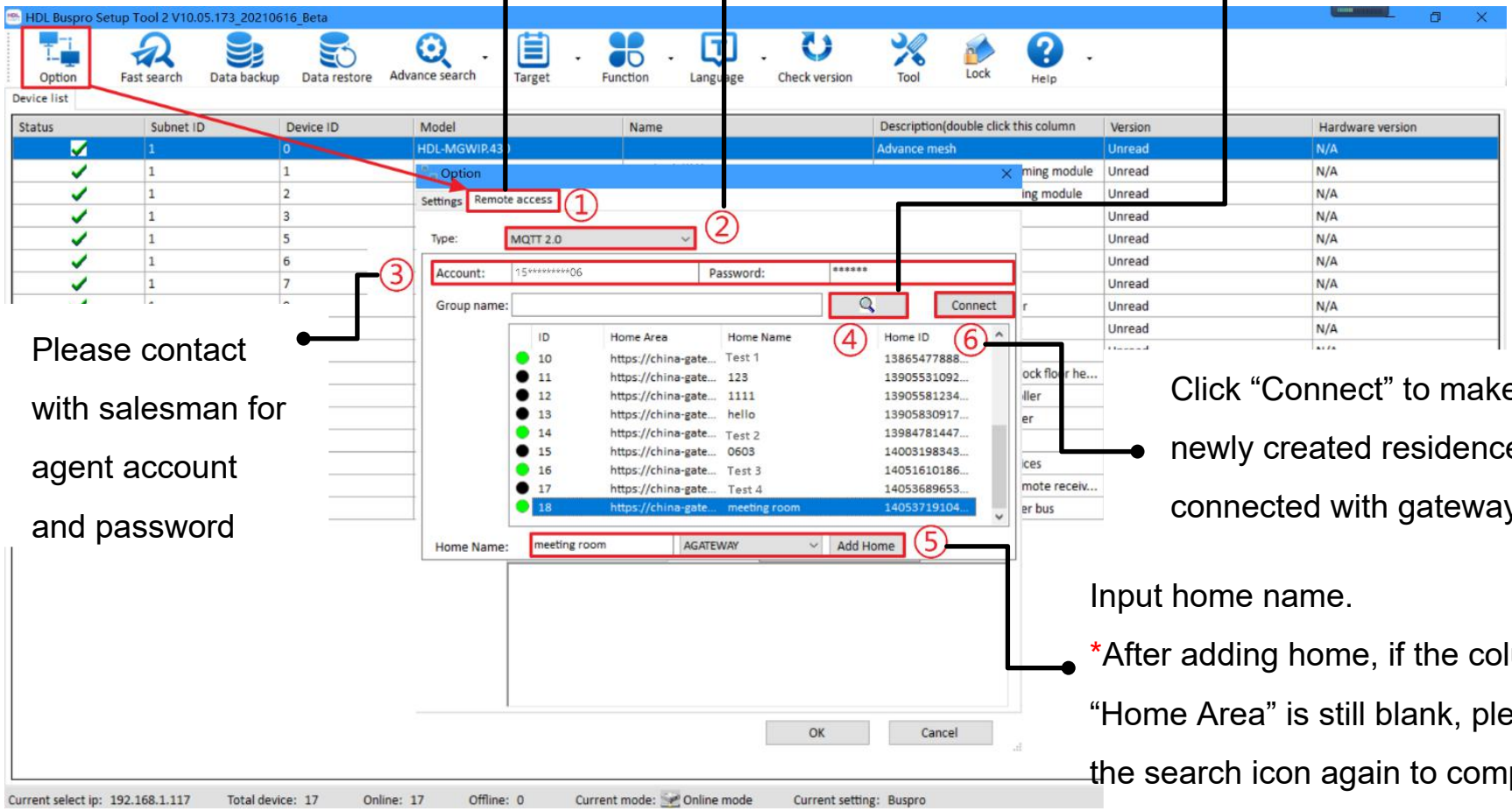


Step 3 —— Add residence as the followings:

Click “Option” → “Remote Access”

Select “MQTT 2.0”

Click the search icon, then you can see all residence created

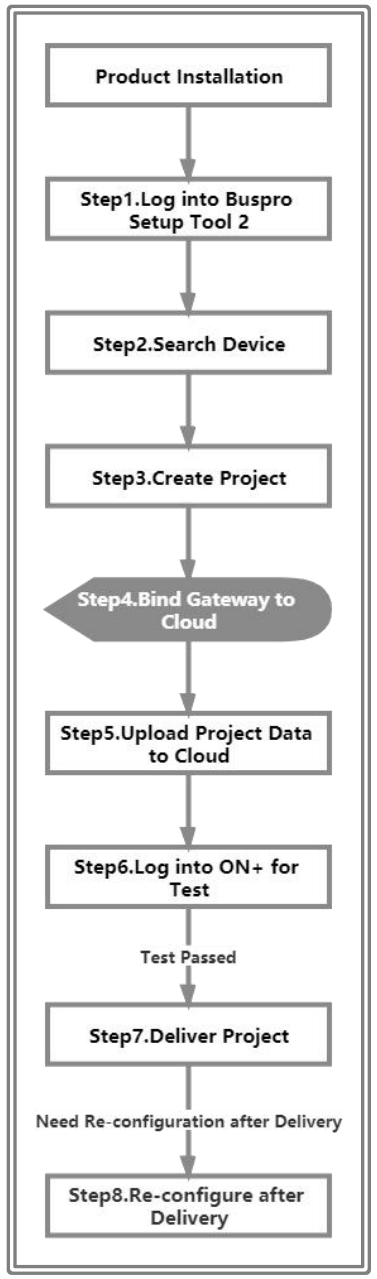


Please contact with salesman for agent account and password

Click “Connect” to make the newly created residence be connected with gateway.

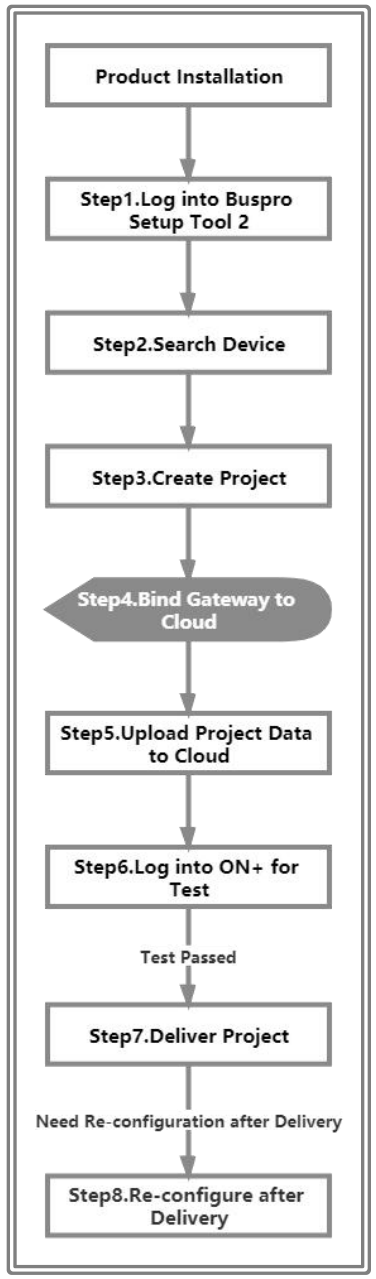
Input home name.

*After adding home, if the column “Home Area” is still blank, please click the search icon again to completely show the residence-related information.



Step 4 —— Bind the gateway to Cloud as the followings:

① Back to Buspro Setup Tool 2 homepage, double click the “Model” or “Description” column to enter configuration page



Step 4 —— Bind the gateway to Cloud as the followings:

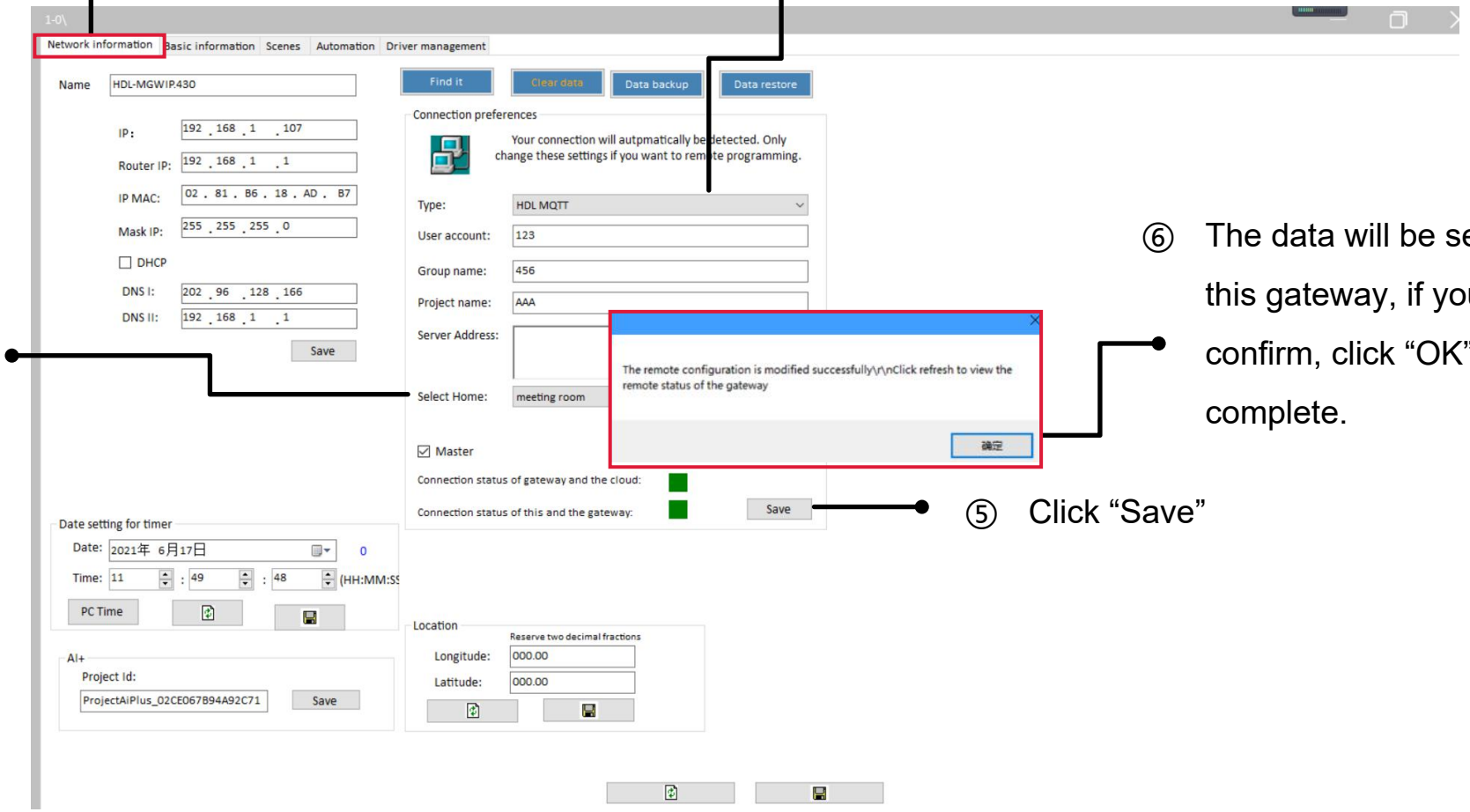
② Click “Network Information”

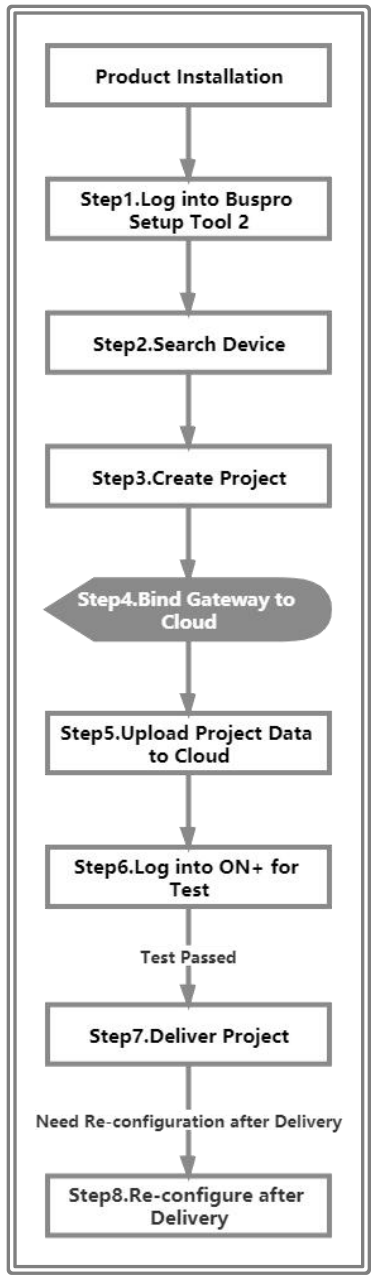
③ Select “HDL MQTT”

④ Select Home

⑤ Click “Save”

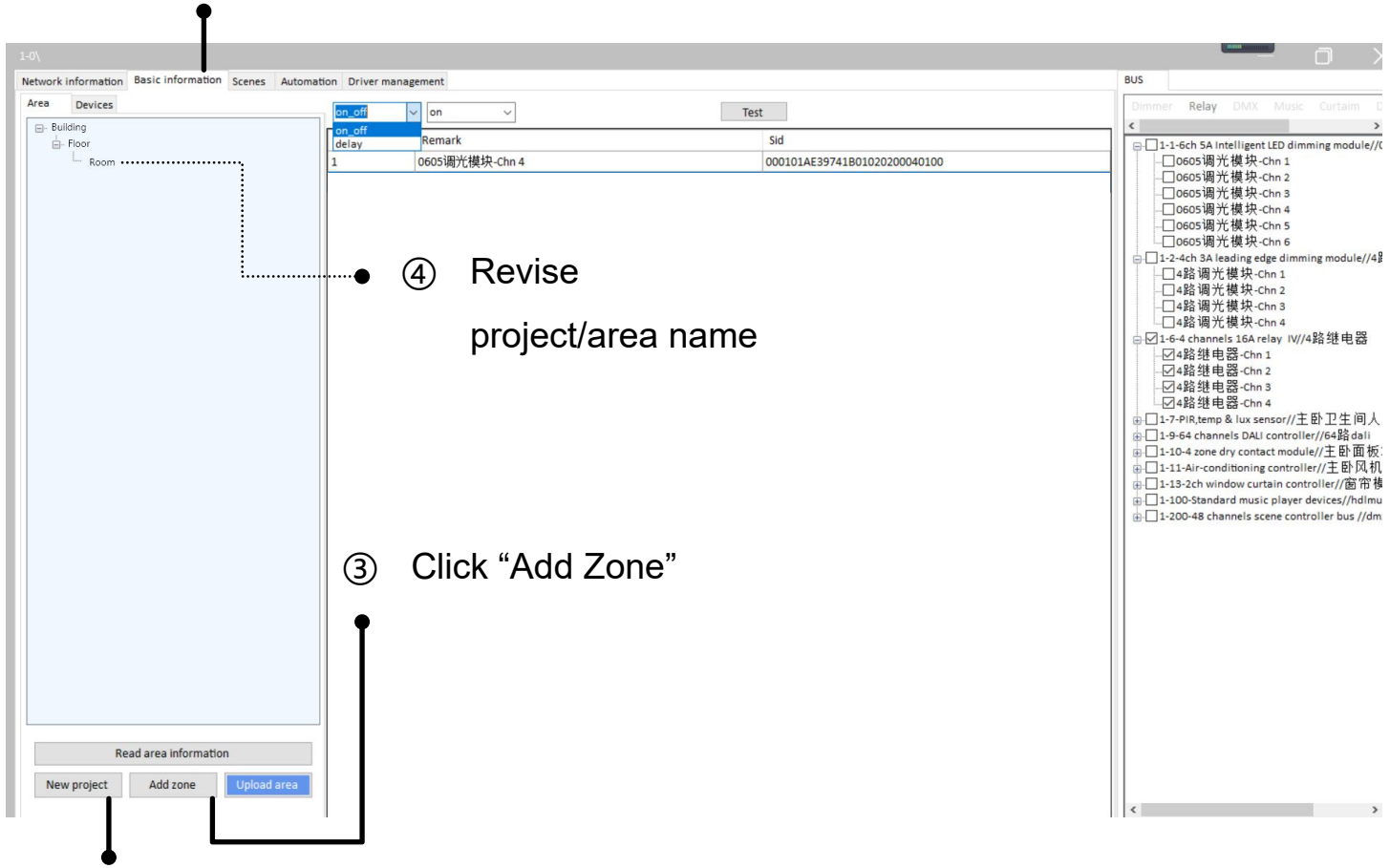
⑥ The data will be set to this gateway, if you confirm, click “OK” to complete.





Step 4 —— After binding the gateway to Cloud, proceed area setting as the followings:

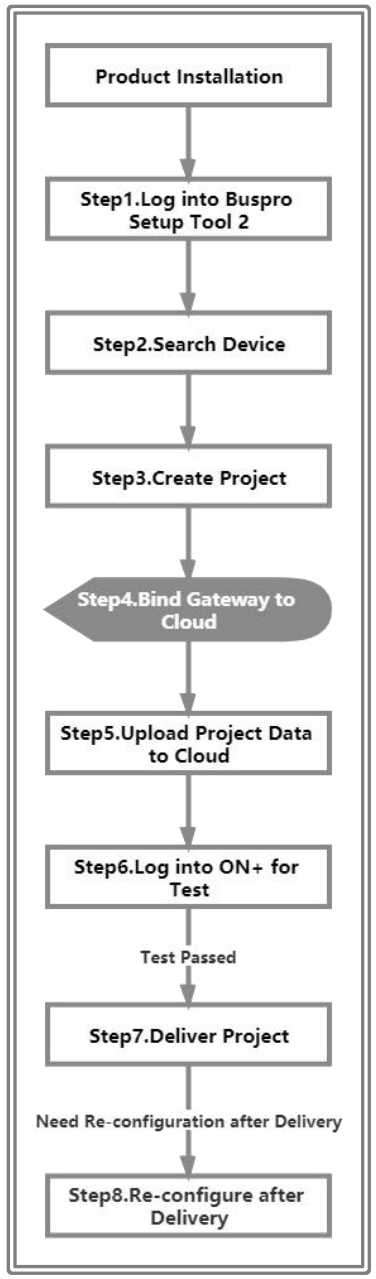
① Click “Basic Information” → “Area”



④ Revise project/area name

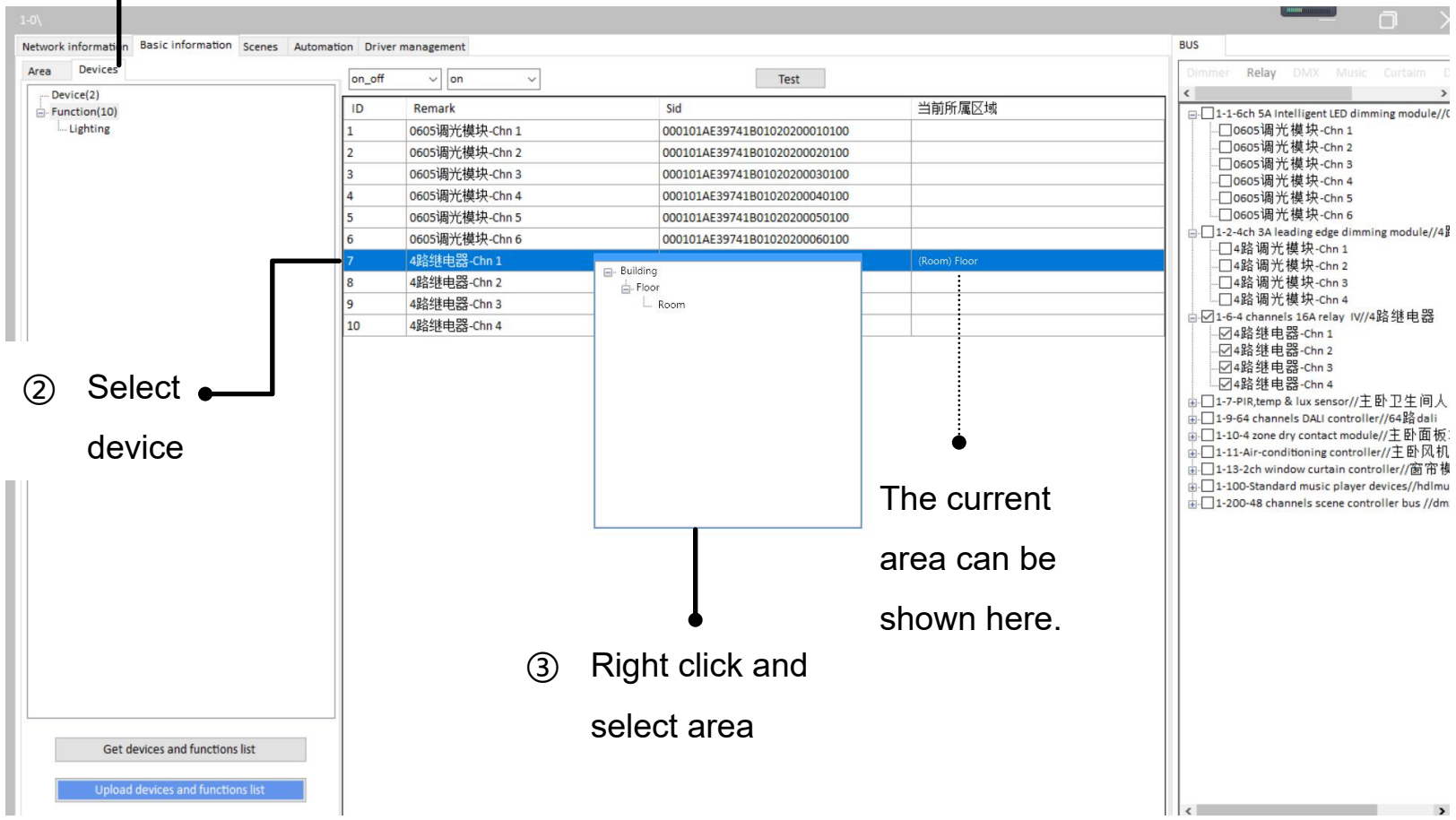
③ Click “Add Zone”

② Click “New Project”



Step 4 —— After binding the gateway to Cloud, proceed area setting as the followings:

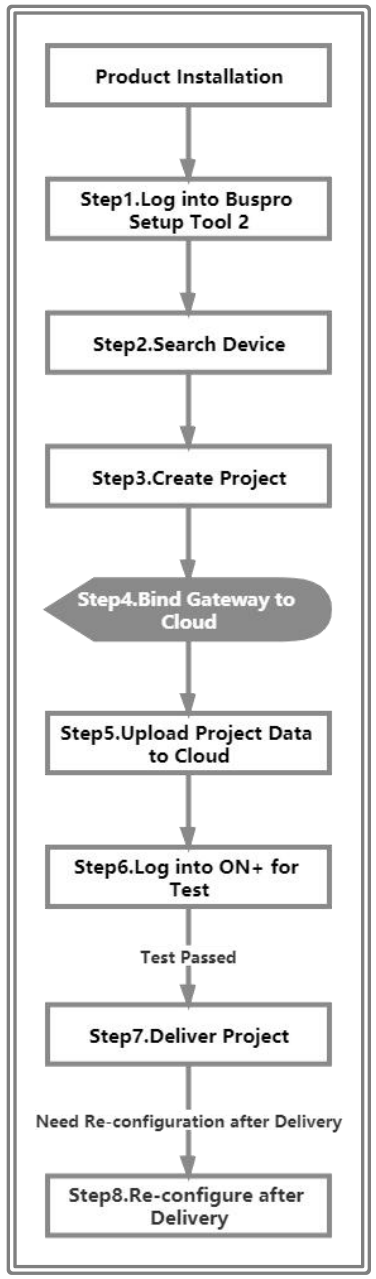
① Click and enter the “Devices” page, select the function.



② Select device

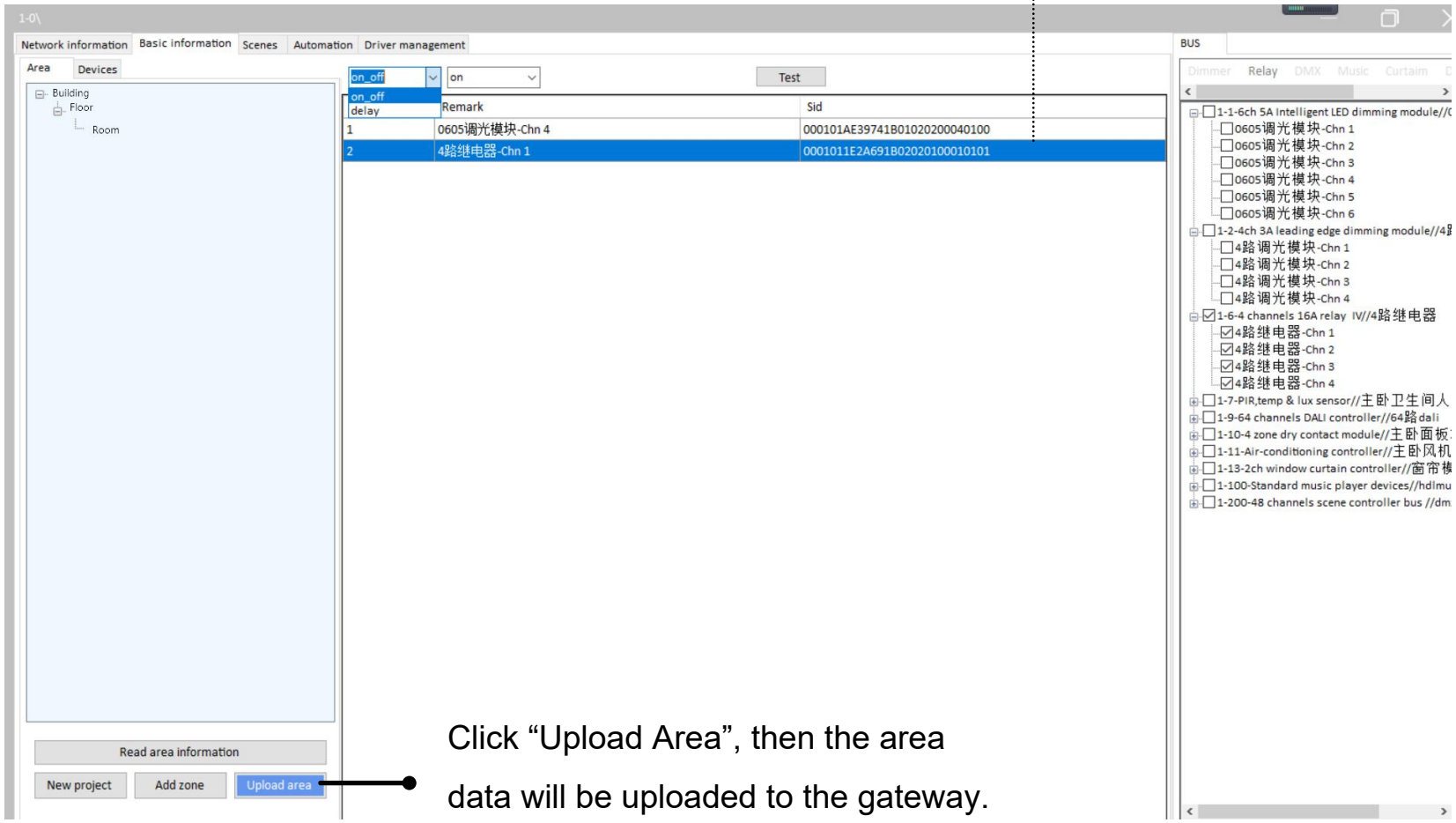
The current area can be shown here.

③ Right click and select area

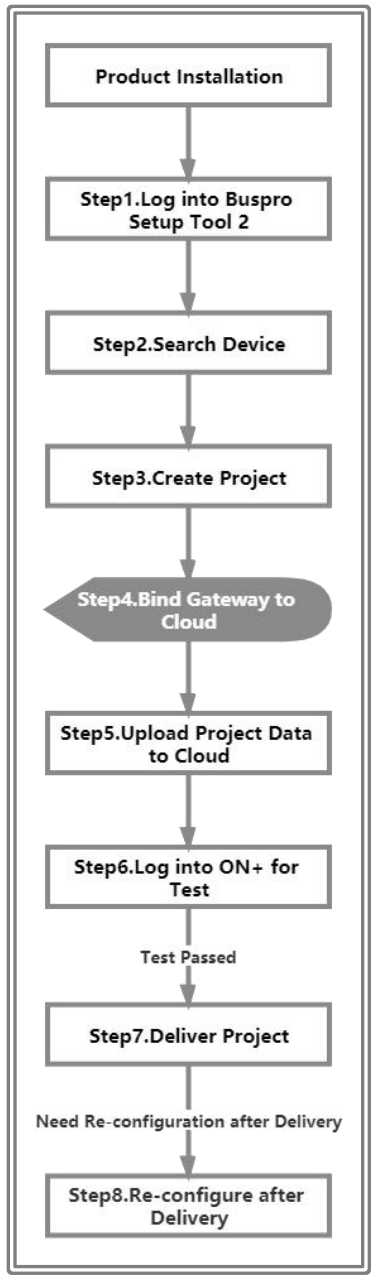


Step 4 —— After binding the gateway to Cloud, proceed area setting as the followings:

Back to the “Area” page, now the current area for the device you selected can be shown.



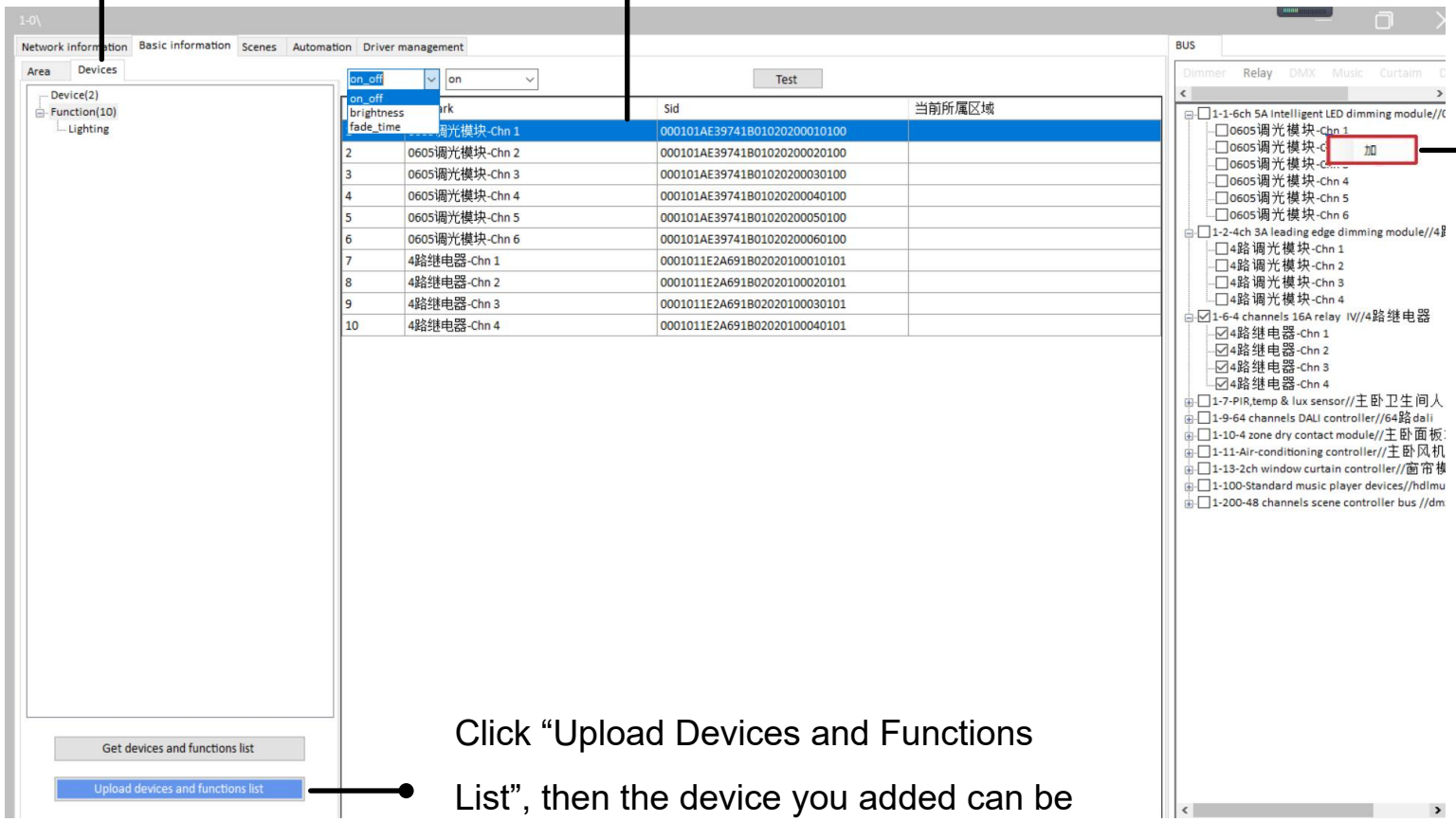
Click “Upload Area”, then the area data will be uploaded to the gateway.



Step 4 —— After binding the gateway to Cloud, proceed device setting as the followings:

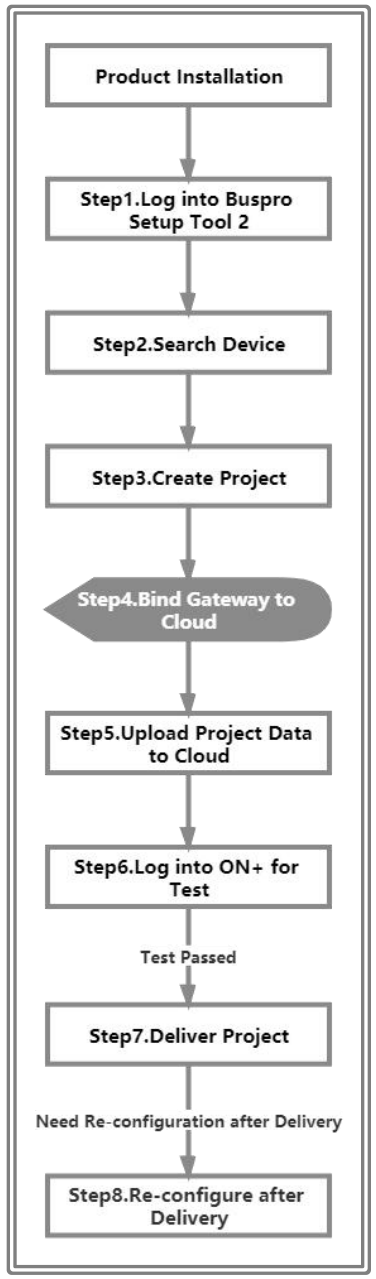
Click “Devices”

Now the device added can be shown here.



Select the device, right click and select “(加) Add”

Click “Upload Devices and Functions List”, then the device you added can be uploaded to the gateway.



Step 4 —— After binding the gateway to Cloud, proceed device testing as the followings:

① Click “Devices”

② Select function

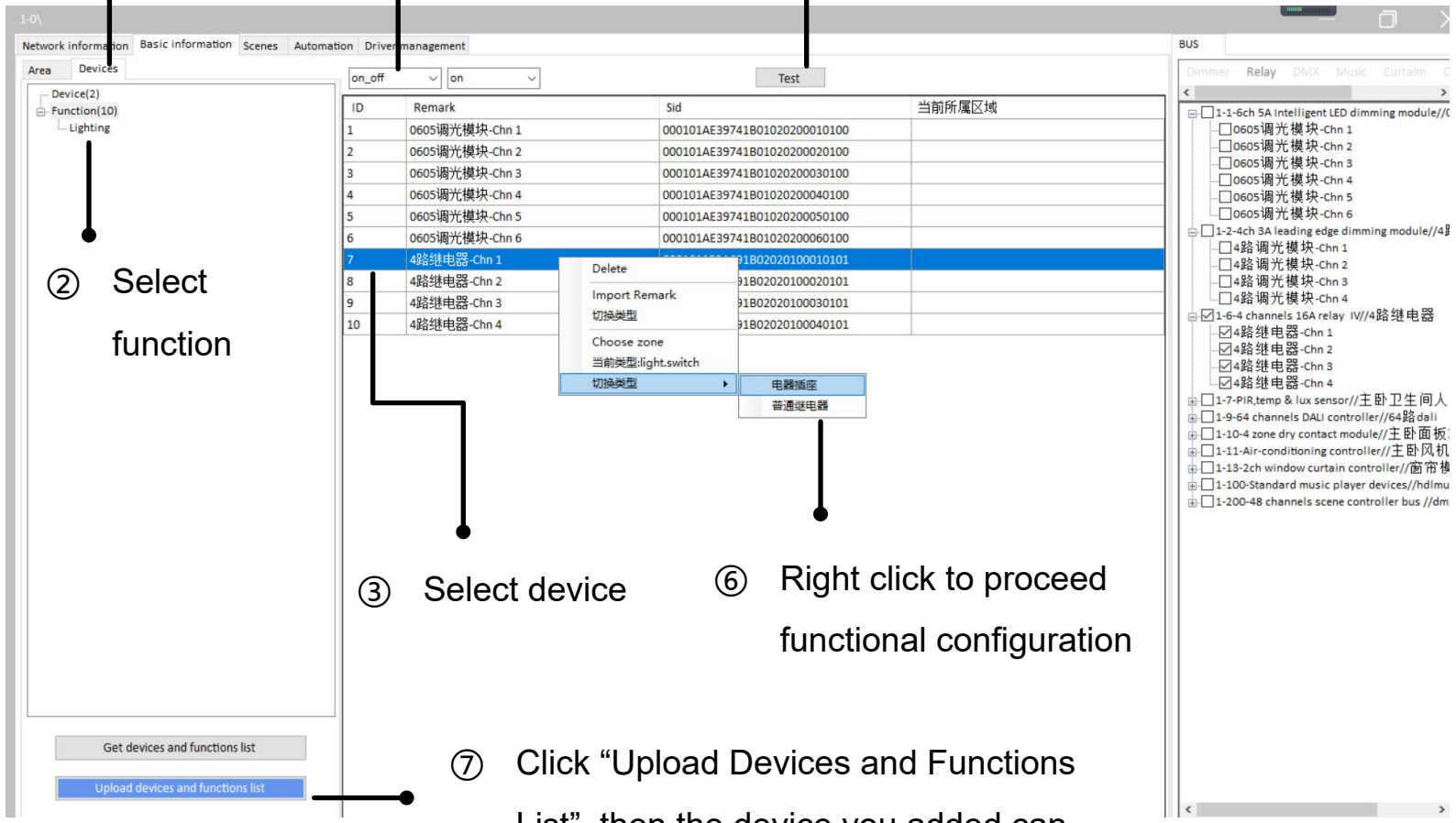
③ Select device

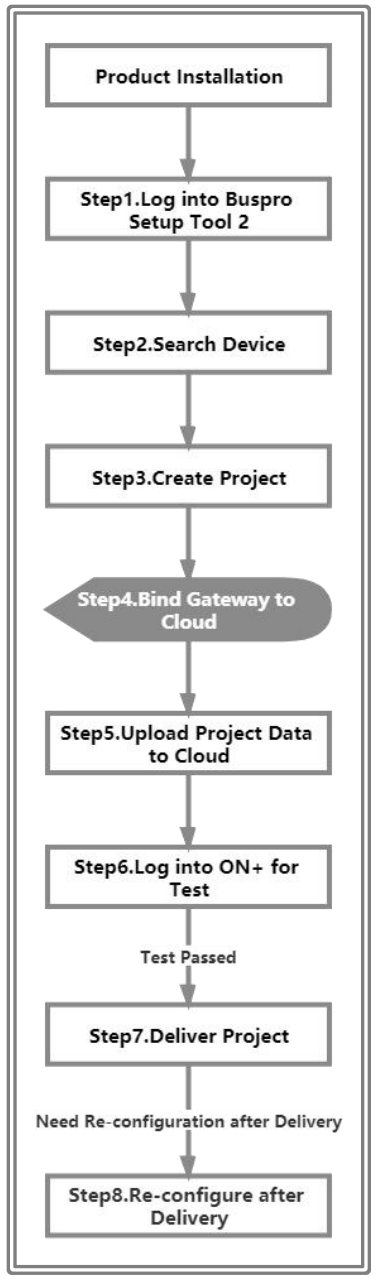
④ Proceed functional configuration

⑤ Click “Test”

⑥ Right click to proceed functional configuration

⑦ Click “Upload Devices and Functions List”, then the device you added can be uploaded to the gateway.

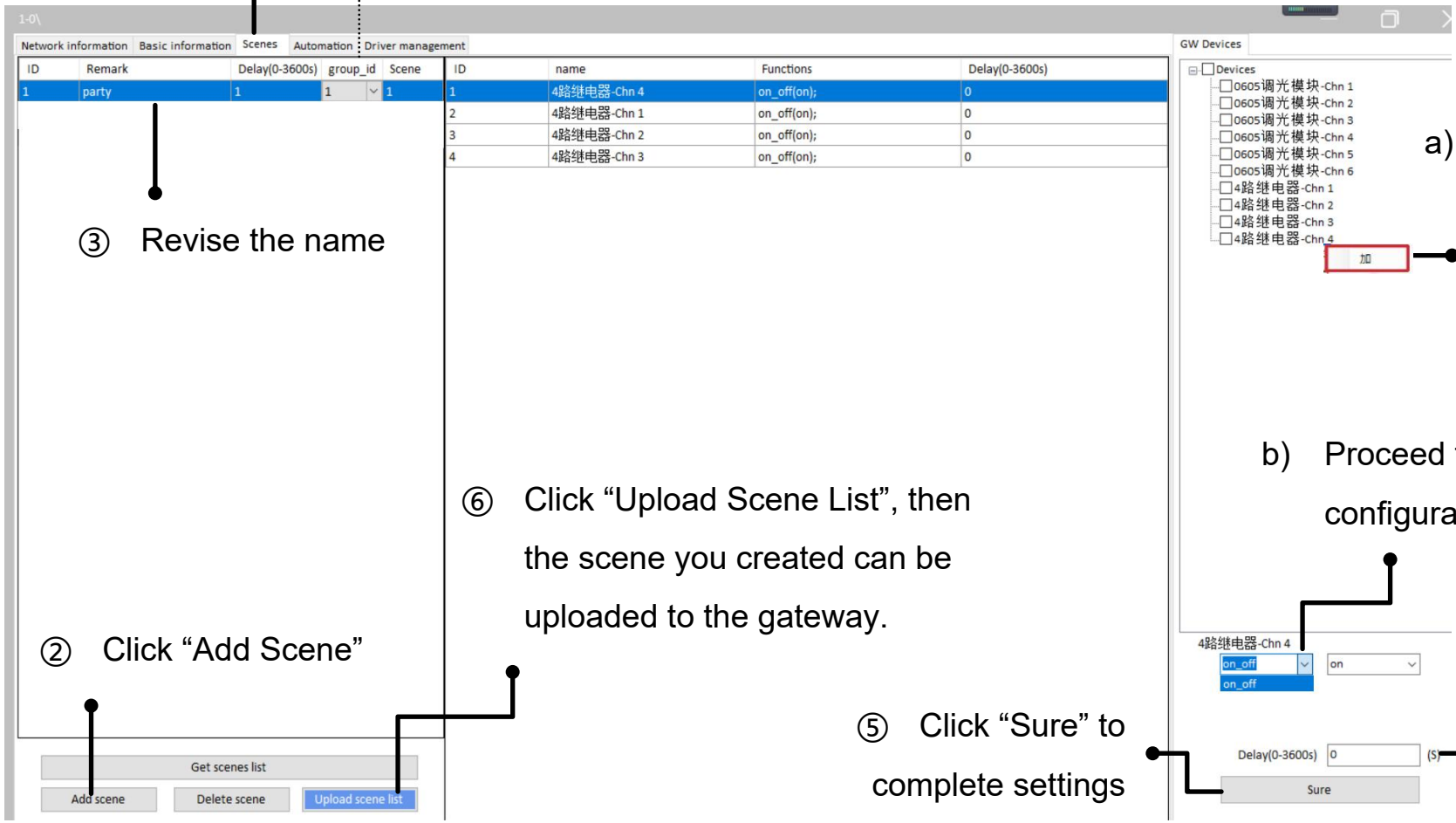




Step 4 —— After binding the gateway to Cloud, proceed scene setting as the followings:

① Click “Scenes” *As for “Group ID”, please skip to next page.

④ Complete scene configuration



③ Revise the name

a) Select device, right click and select “(加) Add”

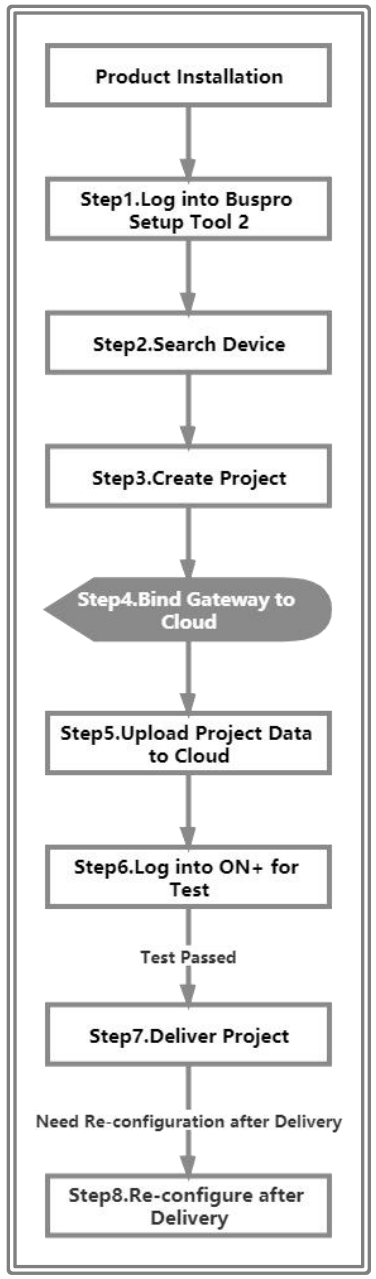
b) Proceed functional configuration

② Click “Add Scene”

⑥ Click “Upload Scene List”, then the scene you created can be uploaded to the gateway.

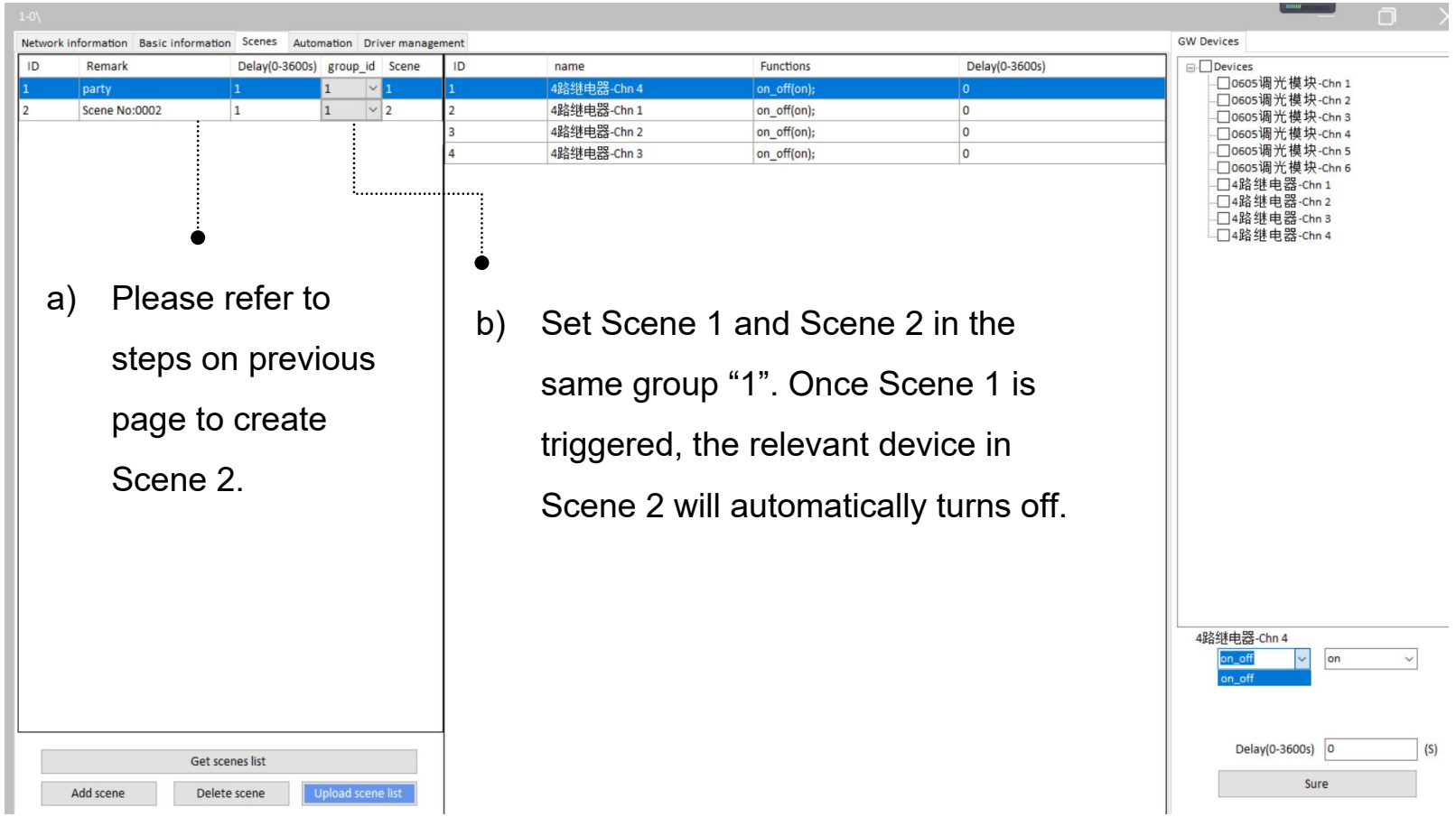
⑤ Click “Sure” to complete settings

c) Set delay time



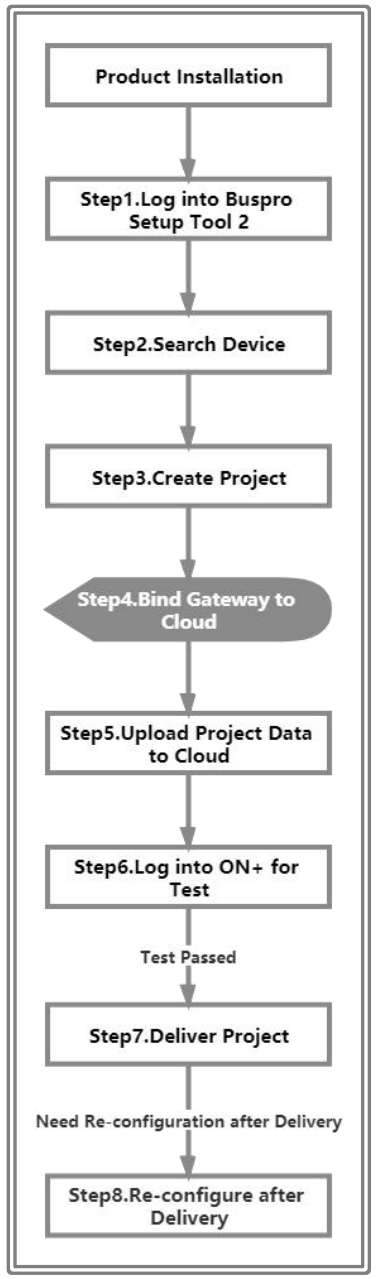
Step 4 —— After binding the gateway to Cloud, proceed setting scene group ID as the followings:

If Scene 1 and 2 are set in the same group, they will be mutually exclusive, i.e., when Scene 1 has been triggered, once Scene 2 will automatically shut down.

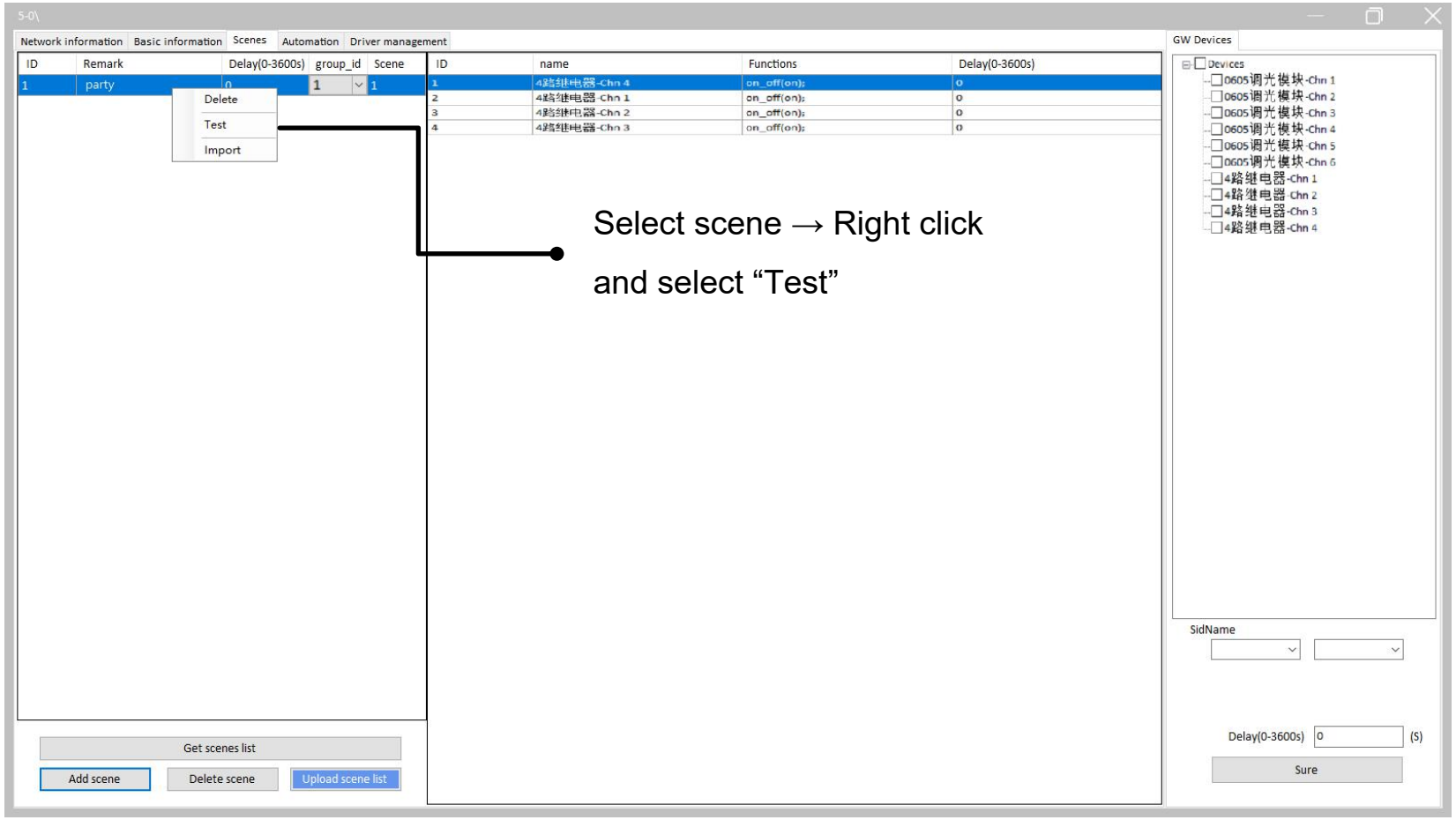


a) Please refer to steps on previous page to create Scene 2.

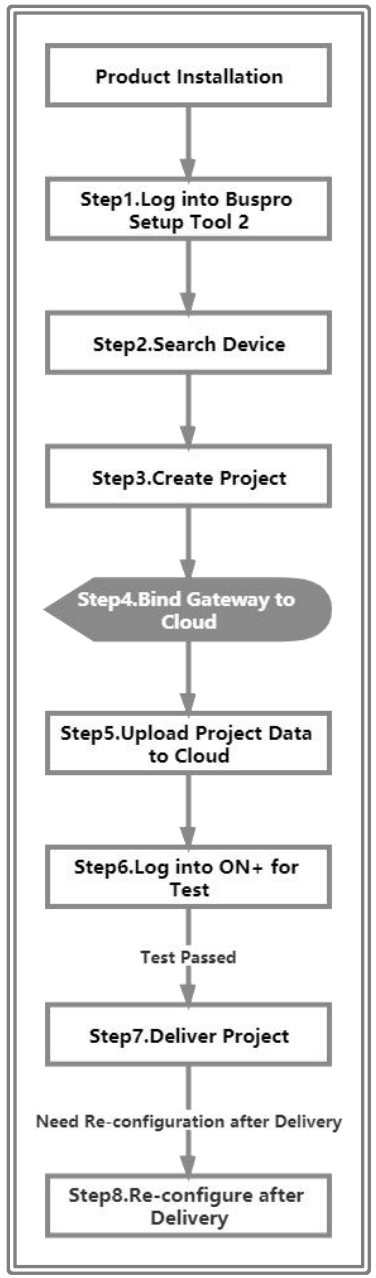
b) Set Scene 1 and Scene 2 in the same group “1”. Once Scene 1 is triggered, the relevant device in Scene 2 will automatically turns off.



Step 4 —— After scene settings, proceed scene testing as the followings:



Select scene → Right click and select “Test”

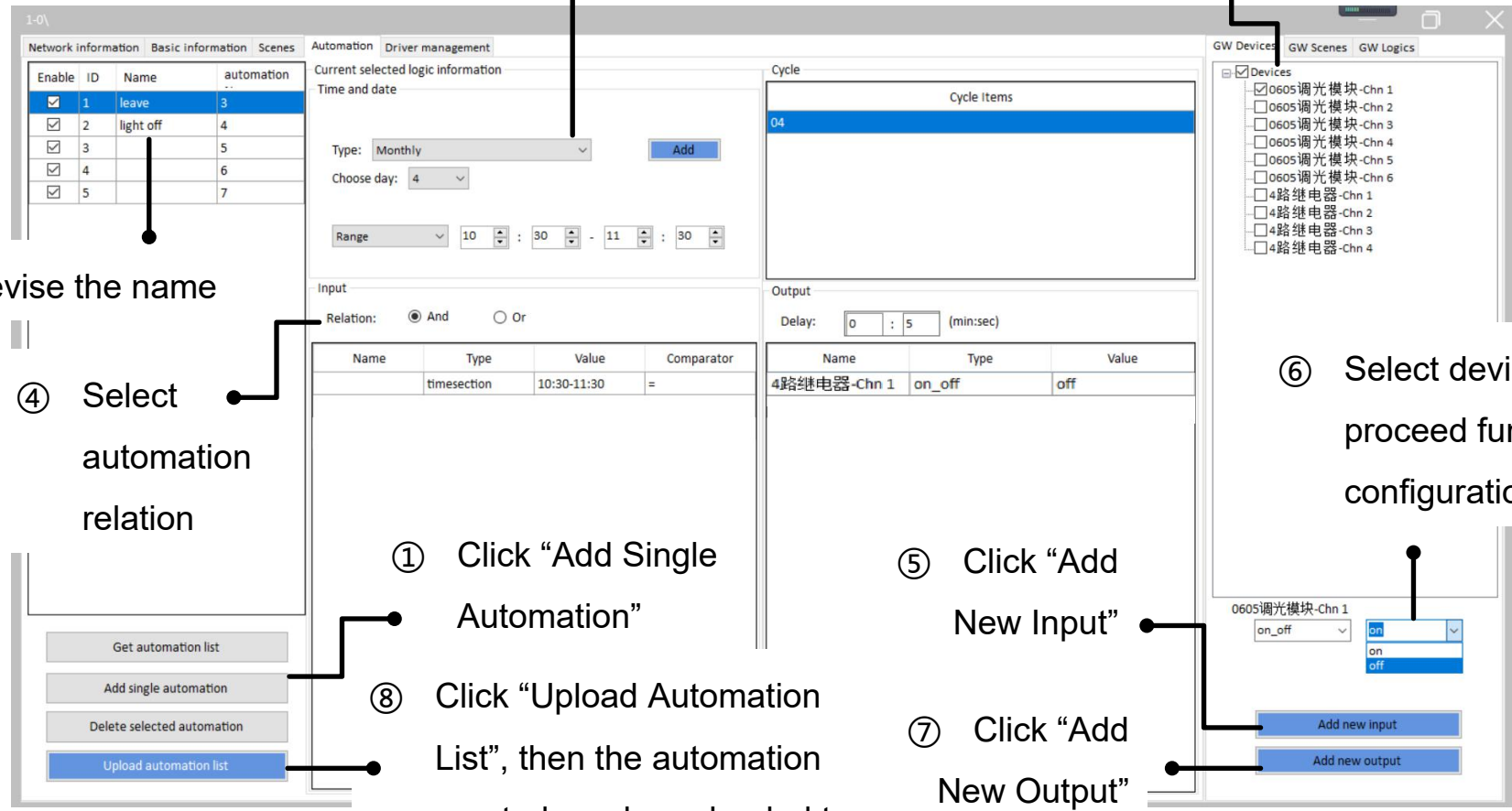


Step 4 —— After binding the gateway to Cloud, proceed automation setting.

As below example shown, create automation “the 4th of the month, from 10:30 to 11:30, automatically turn off ‘4路继电器-Chn 1’”.

③ Set time condition. E.g., select the 4th of the month, from 10:30 to 11:30

④ Select device



② Revise the name

④ Select automation relation

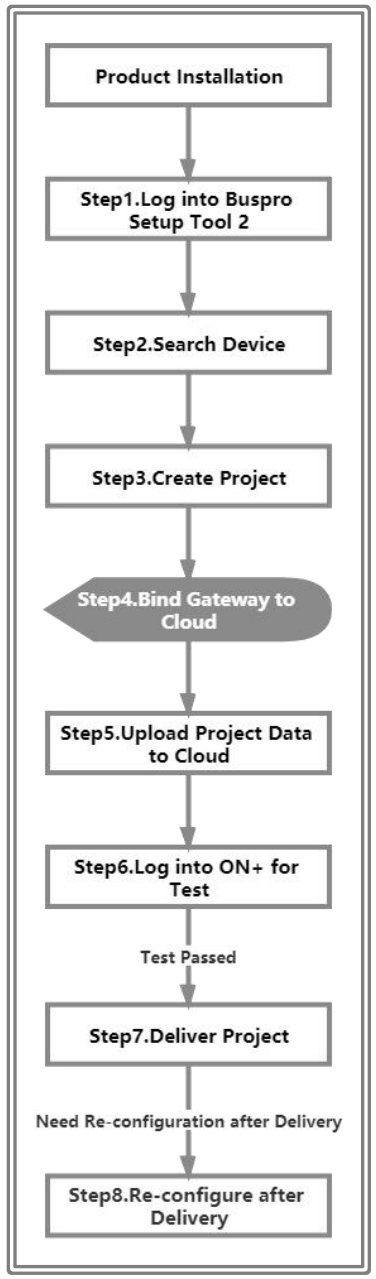
① Click “Add Single Automation”

⑧ Click “Upload Automation List”, then the automation created can be uploaded to the gateway.

⑤ Click “Add New Input”

⑦ Click “Add New Output”

⑥ Select device again, then proceed functional configuration



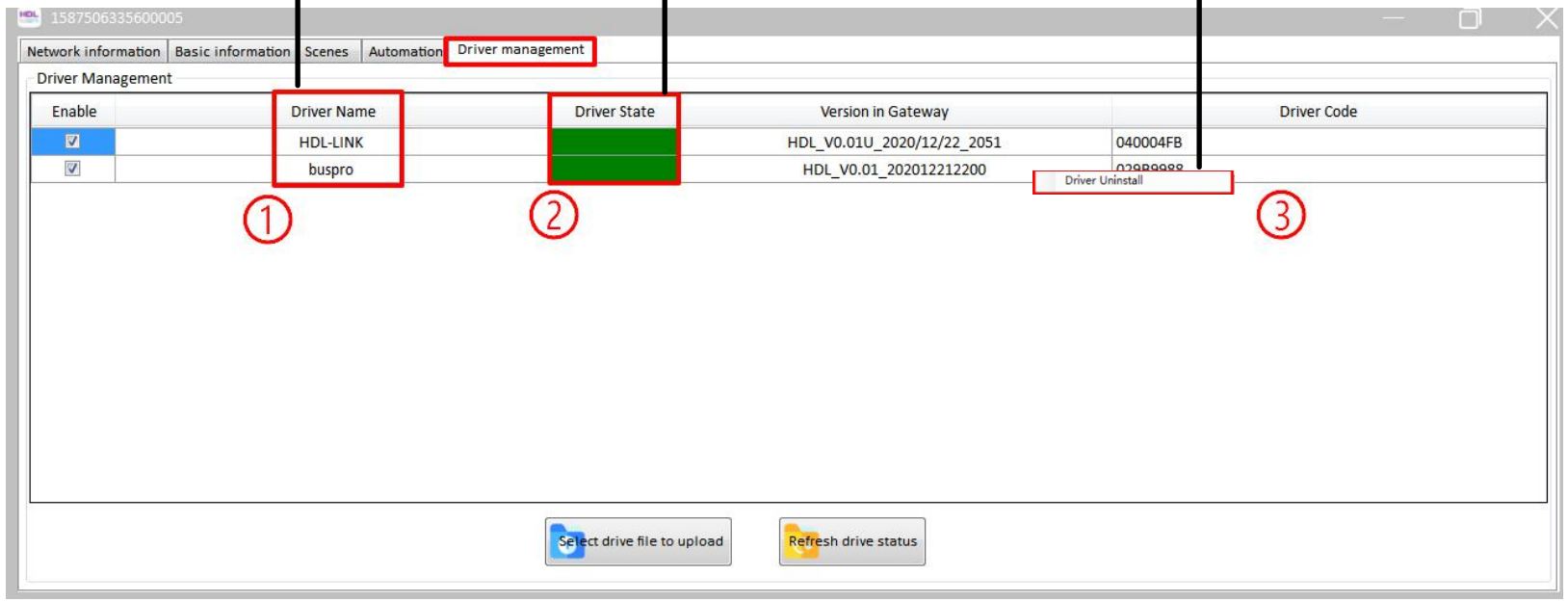
Step 4 —— After binding the gateway to Cloud, click the tab "Driver Management" to check and manage driver.

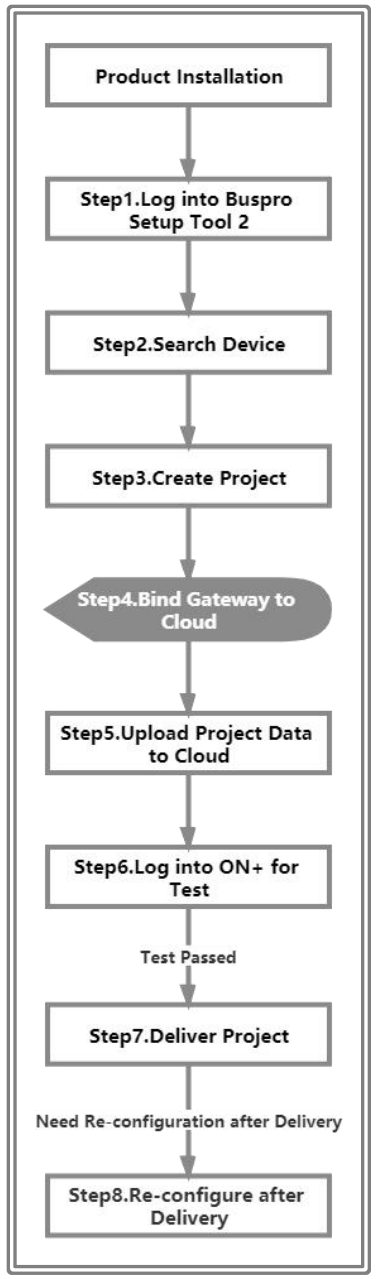
HDL-LINK is core driver. Buspro is system software developed by HDL.

*Please DO NOT disable or uninstall them.

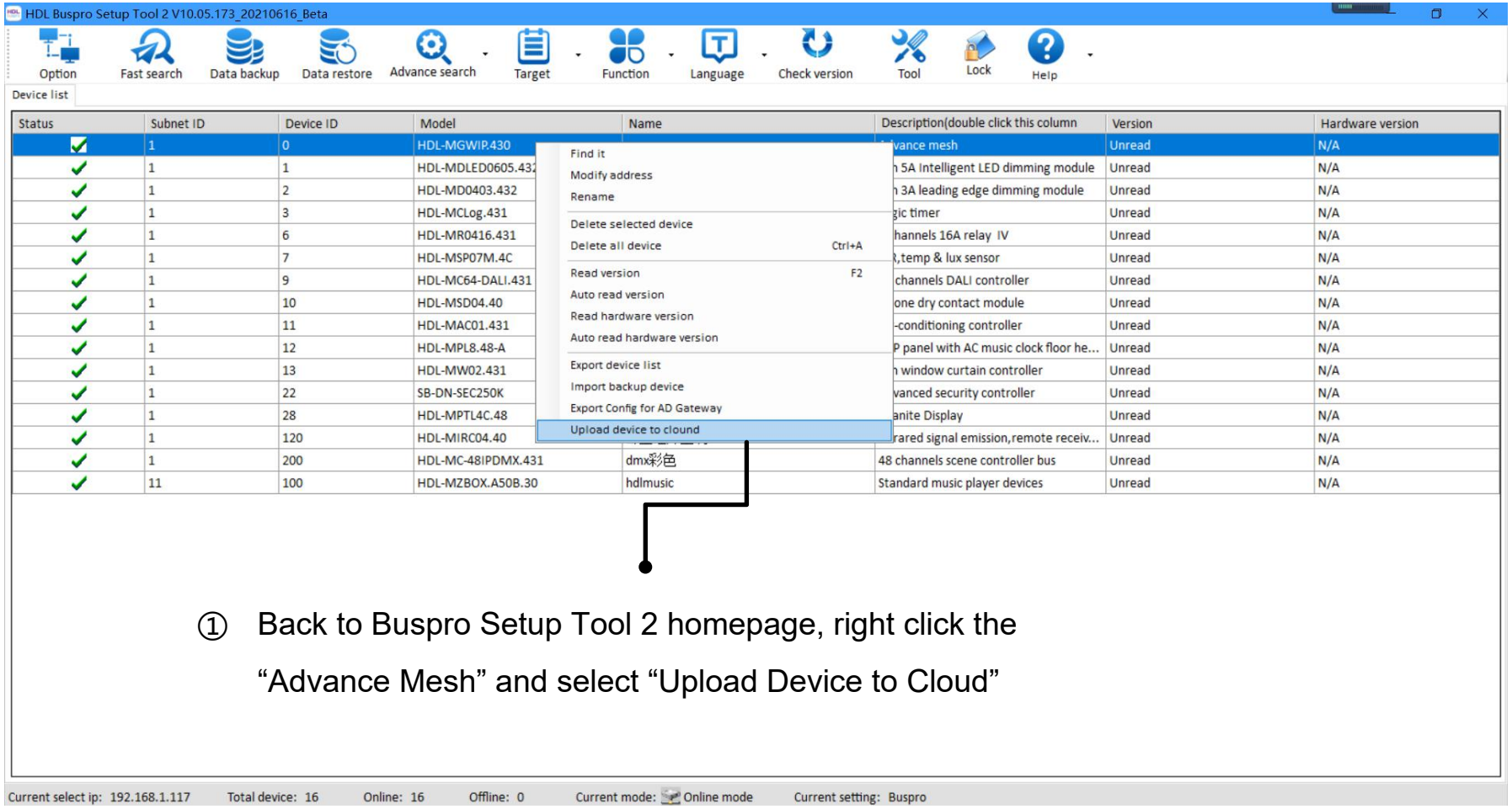
Green means that the driver runs normally; red means that the drivers fail to run because of software faults.

If needed, select one of the drivers then right click to choose "Driver Uninstall".

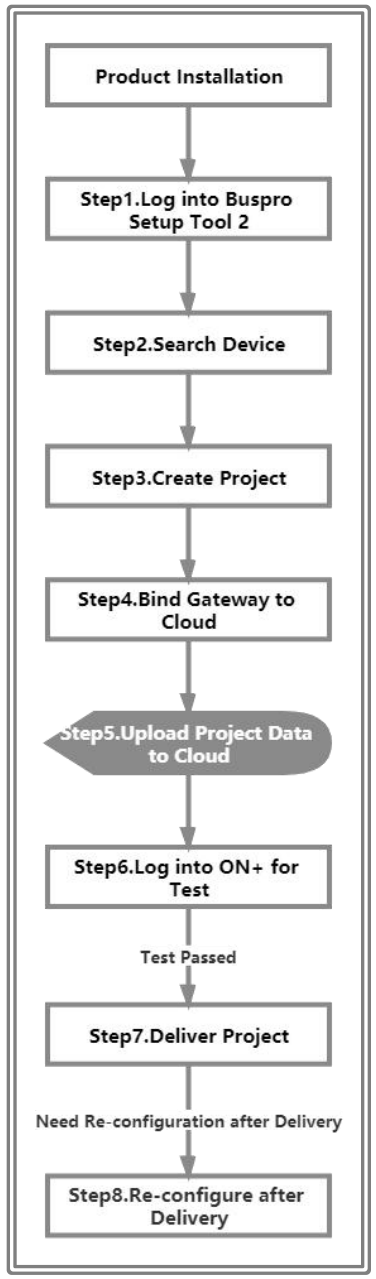




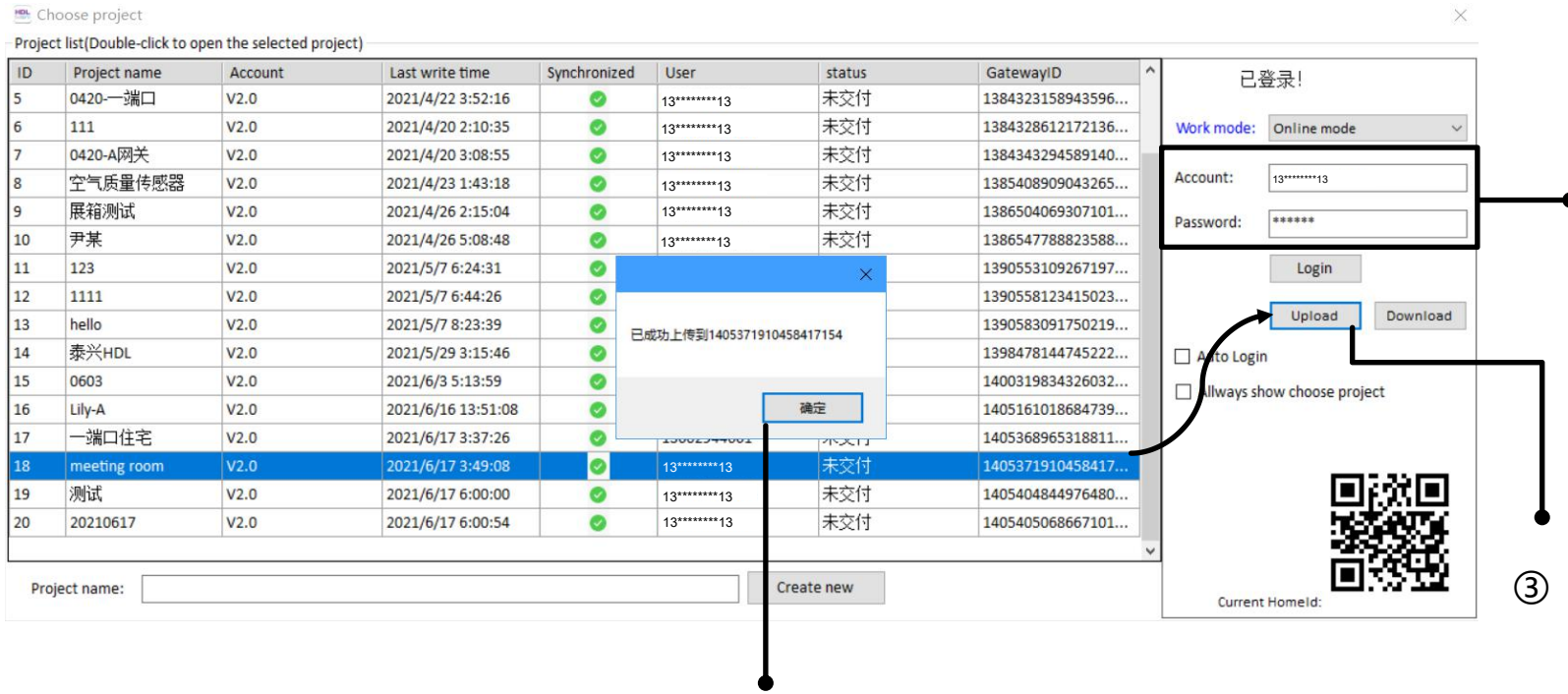
Step 5 —— Upload all data of the gateway to Cloud.



① Back to Buspro Setup Tool 2 homepage, right click the "Advance Mesh" and select "Upload Device to Cloud"



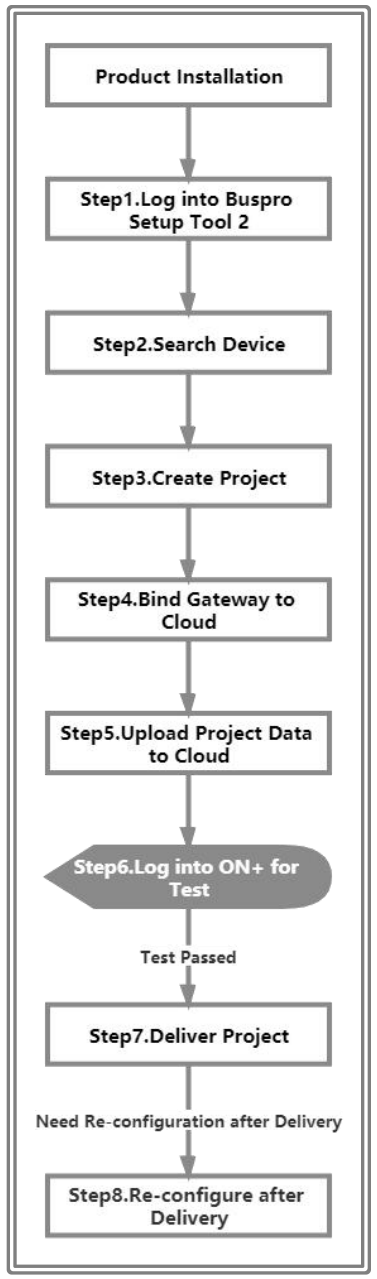
Step 5 —— Upload all data of the gateway to Cloud.



② Contact with salesman for agent account and password.

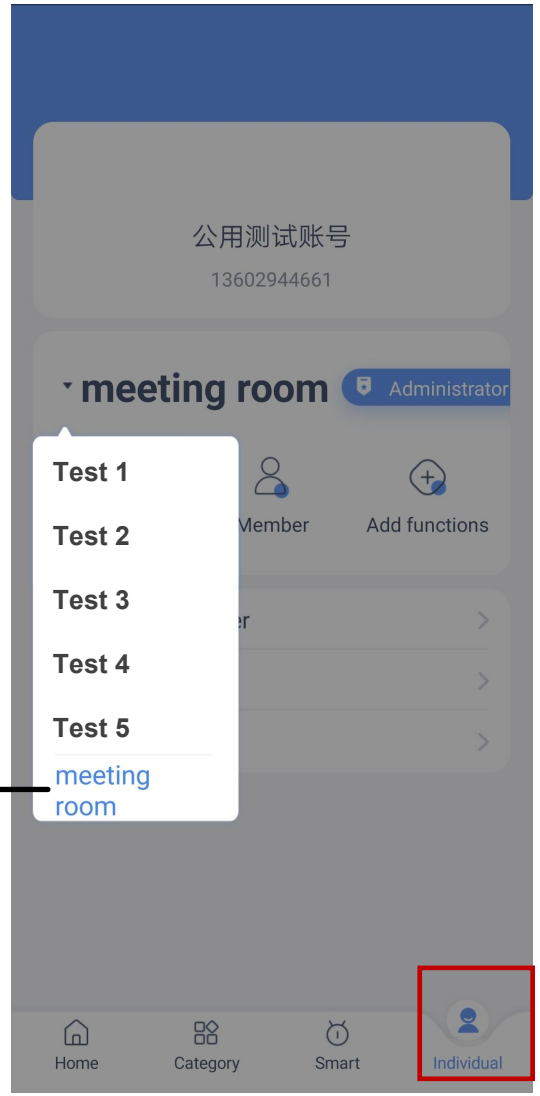
③ Select the project for residence you would like to upload, then click “Upload”.

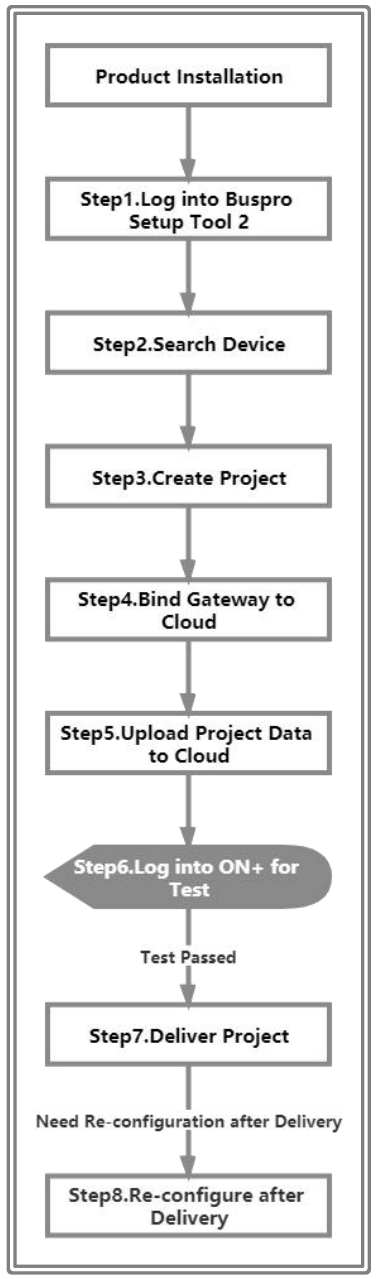
④ Click “确定(sure) to complete



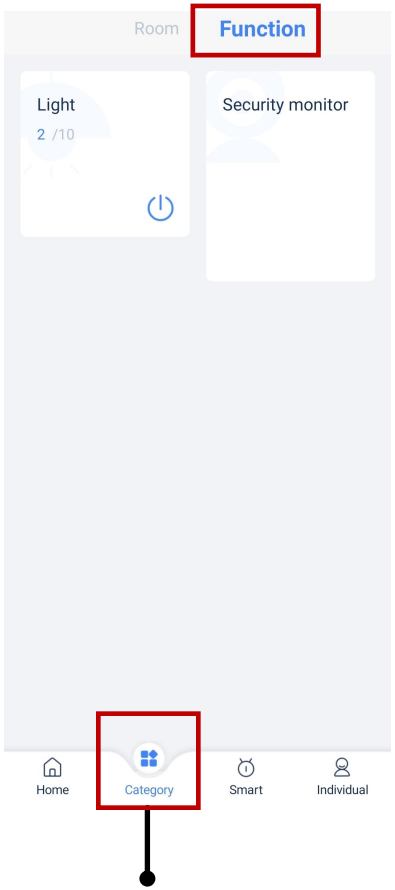
Step 6 —— After uploading all data of the gateway to Cloud, you can use ON+ APP to proceed device configuration and remote control, as the below steps shown:

Click the tab “individual” to select your desired residence.





Step 6 —— After uploading all data of the gateway to Cloud, you can use ON+ APP to proceed device configuration and remote control, as the below steps shown:

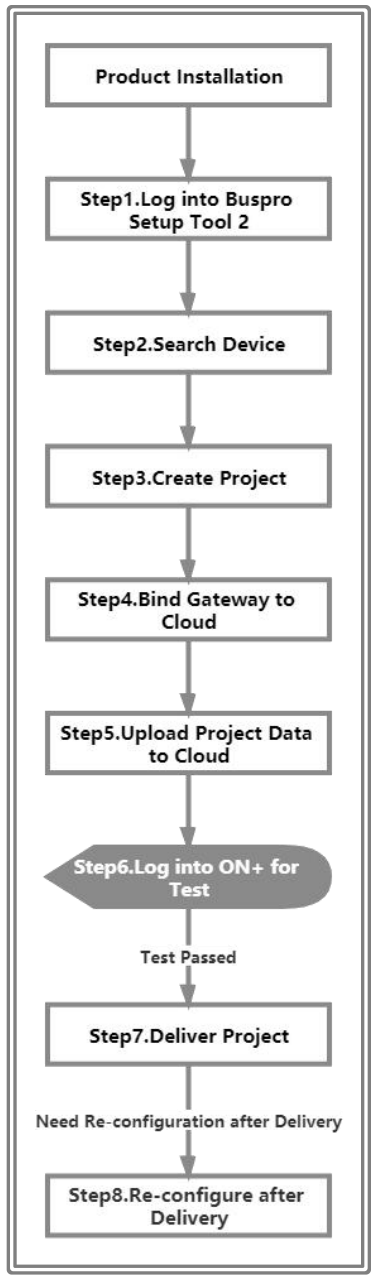


Click this icon to set the function as favorites

Click this icon to turn on/off

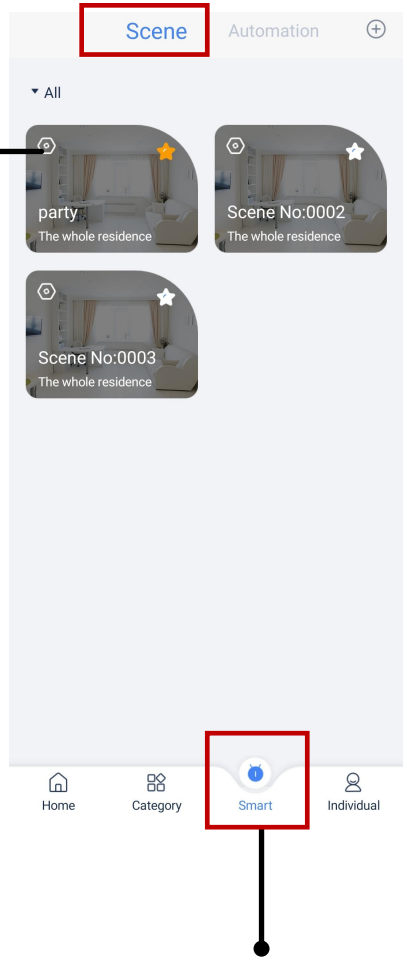
Click “Category” → “Function” → “Light” to proceed functional configuration and remote control for lighting and dimmer devices.

Click “Home” → “Function”, now you can see the function you set as favorites.

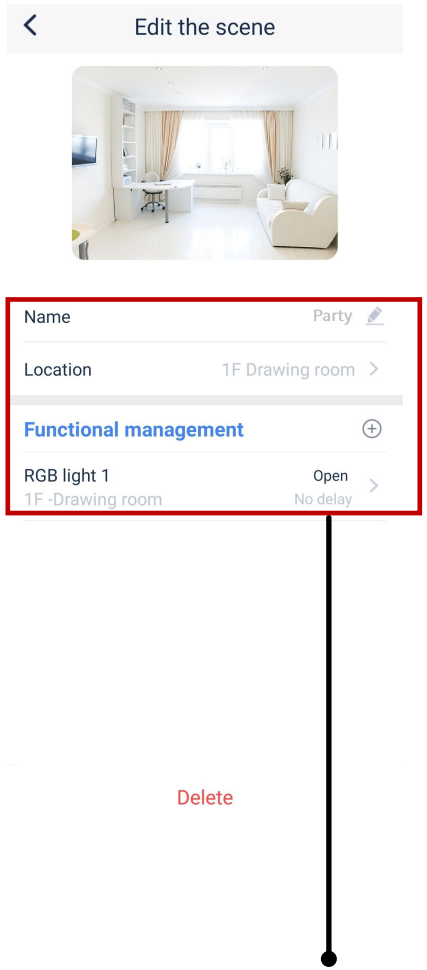


Step 6 —— After uploading all data of the gateway to Cloud, you can use ON+ APP to proceed device configuration and remote control, as the below steps shown:

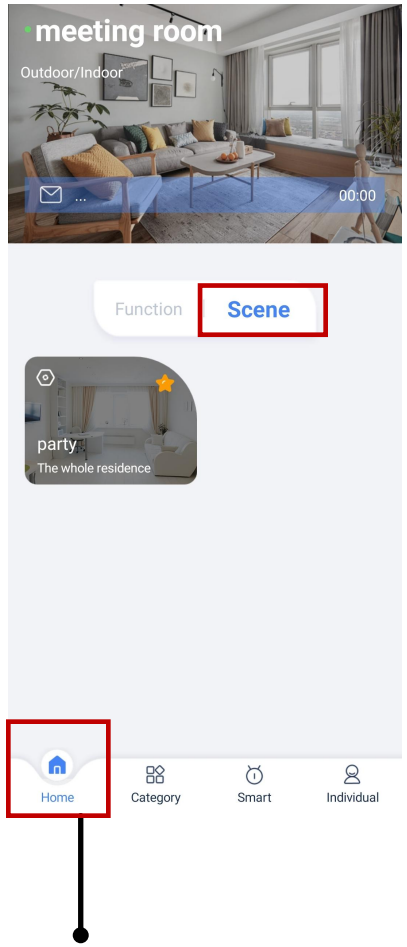
Click this icon to proceed scene editing



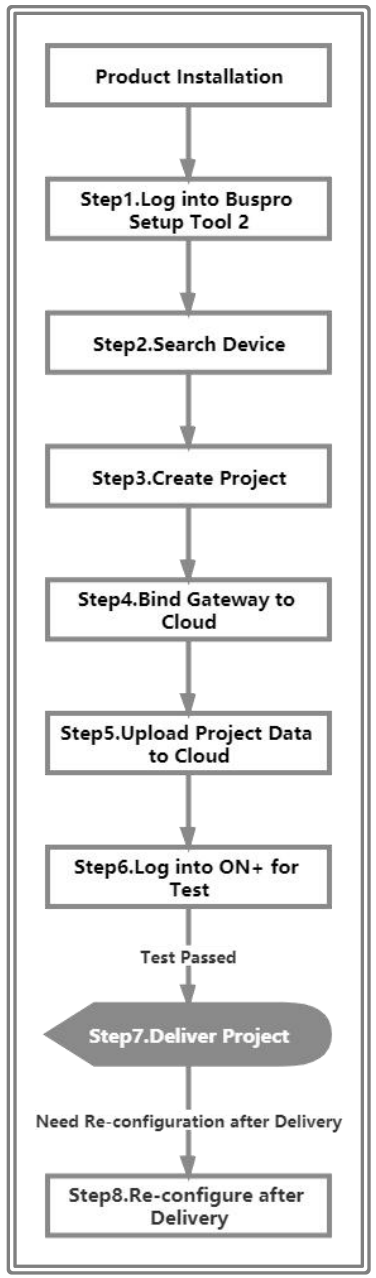
Click “smart” → “Scene”, now you can see all of the scenes created



Edit Scene

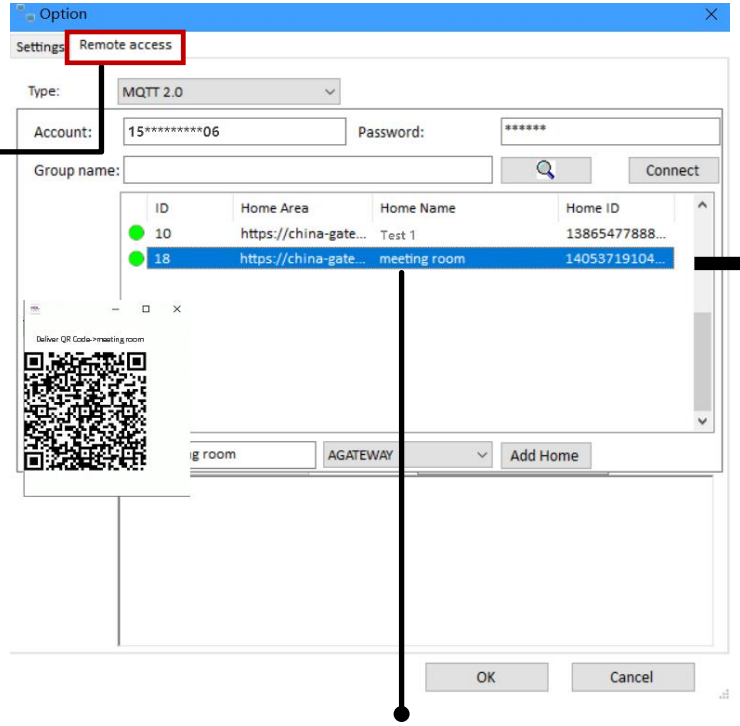


Click “Home” → “Scene”, now you can see the scene you set as favorites.



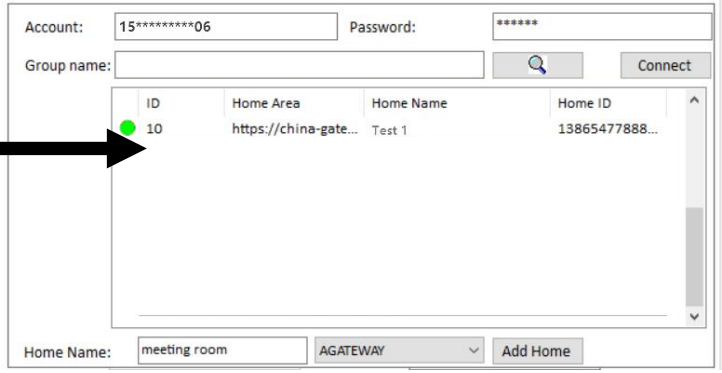
Step 7 —— Back to Buspro Setup Tool 2, proceed project delivery.

Before Delivery



① Click “Option” → “Remote Access”

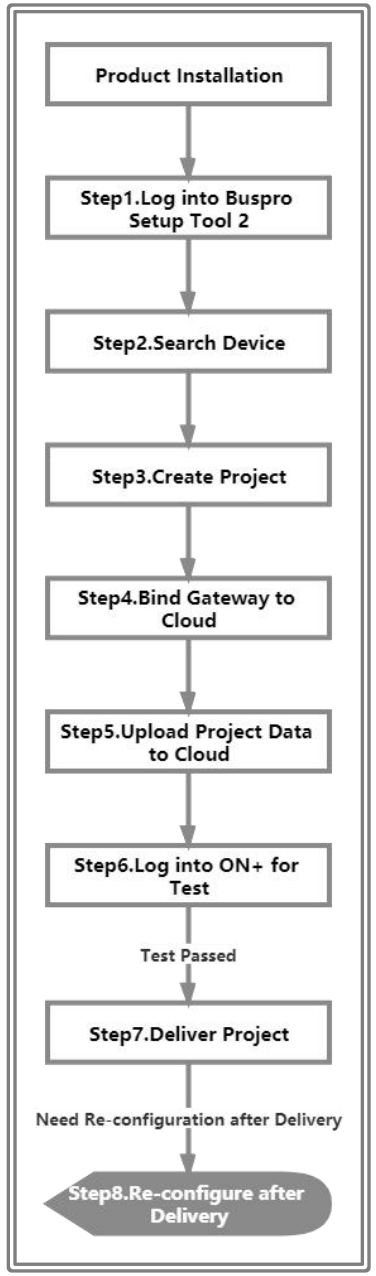
After Delivery



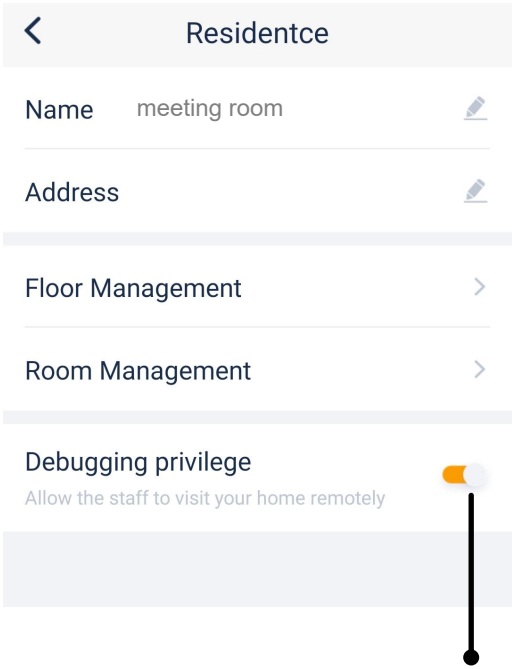
② Select the project you would like to deliver, right click to get deliver QR code.

Once the code is scanned successfully by the owner, the project is formally delivered.

*The project delivered will not be shown in Buspro Setup Tool 2.

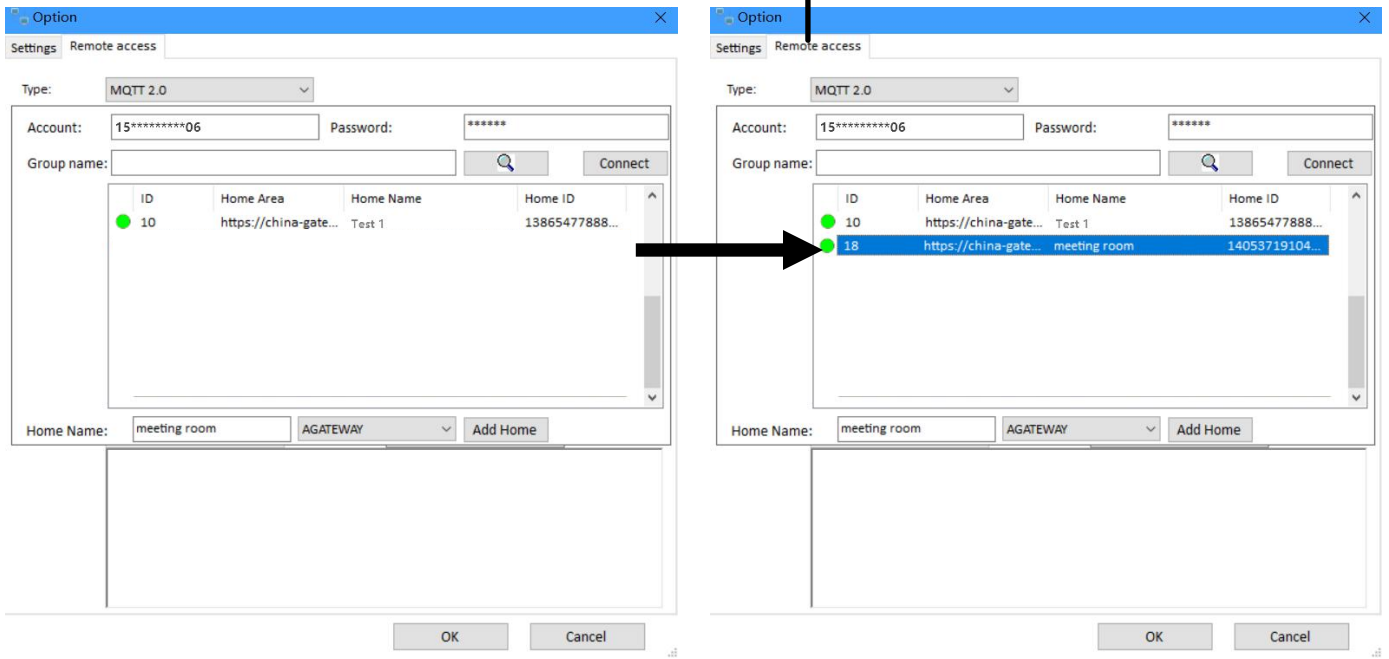


Step 8 —— After project delivery, if needed, you can turn on the "Debugging privilege" via ON+ APP, then back to Buspro Setup Tool 2 to proceed debugging and re-configuration.



① Enter "Residence" → Turn on "Debugging privilege"

② Click "Option" → "Remote Access", the project delivered can be shown again.



Before Turning on "Debugging privilege"

After Turning on "Debugging privilege"

*After turning on "Debugging privilege", the authorization belongs to the previous debugging personnel by default; i.e., new personnel is still not allowed to proceed re-configuration for the project delivered.