

interact

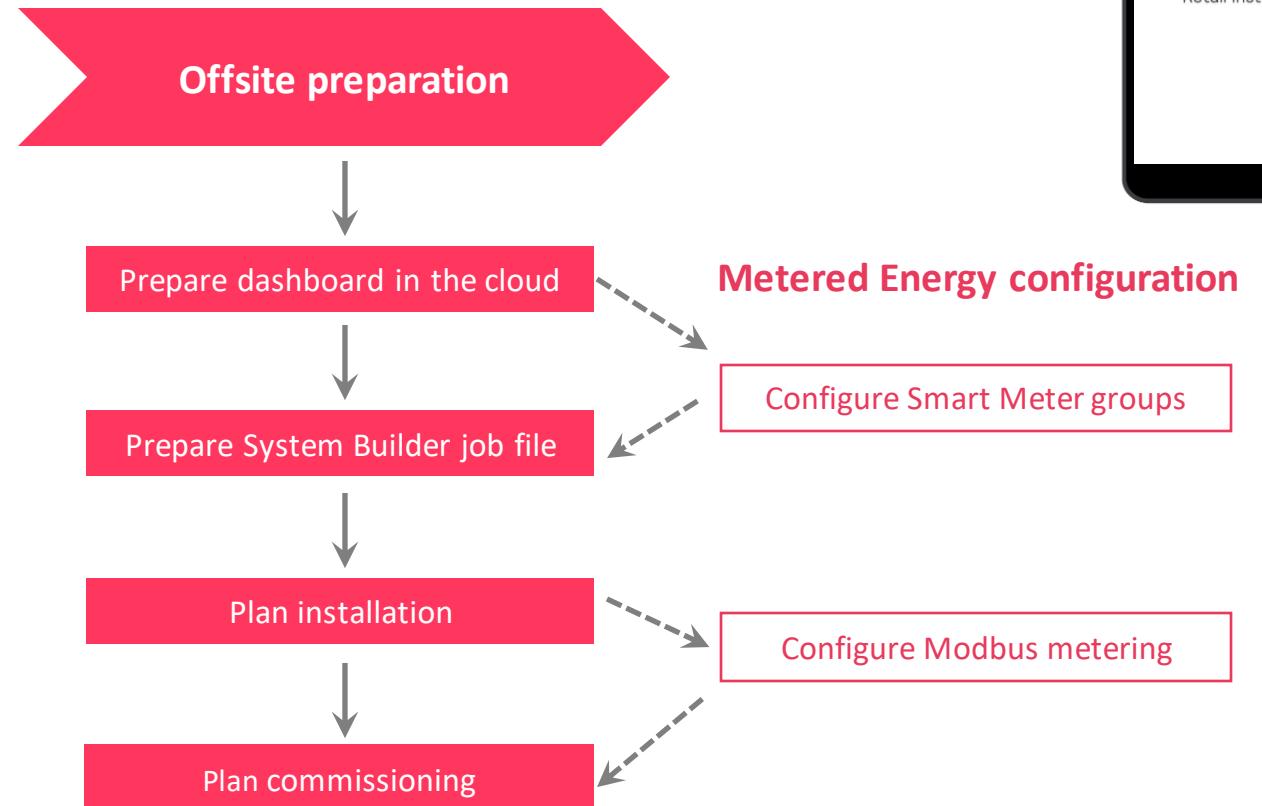
## **Commissioning: offsite preparation**

Architecture FLX - Multisite

### Learning objectives | Multisite offsite preparation

At the end of this lesson, you should be able to:

- Describe the steps required for the off-site commissioning process.
- Be familiarized with the tools needed for online commissioning.



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## Multisite offsite preparation | Naming convention alignment

It is extremely important to keep consistent naming convention, during entire preparation process.

The naming convention covers the **Areas**, **Child Areas**, **Scenes** and **Logical Channels**.

The convention is first aligned with the customer by means of the **Project Template** form, and defined per customer, not per store or format.

Then, the naming is being used during preparation of the Dashboard in the cloud, and later-on mirrored to the System Builder configuration.



### Project Template form

Area 1  
Sales Floor #2  
Define Child areas and Logical channels on page 7

Area 1 scenes	
Trading #1	All Off #5
Stocking #2	Hello #6
Cleaning #3	
Trading Eco #4	

Area 2  
Back of House #3  
Define Child areas and Logical channels on page 11

Area 2 scenes	
Trading #1	All Off #5
Stocking #2	
Cleaning #3	
Trading Eco #4	

Area 3  
Outdoor #4  
Define Child areas and Logical channels on page 13

Area 3 scenes	
All ON, Park D/N #1	
Sign On, Park+Fac D/N #2	
All D/N #3	
All Off #4	

### Dashboard – Cloud configuration

Name	Scenes
Sales Floor 7 nested areas	Trading Stocking Cleaning Trading Eco All Off Hello
Back of House 3 nested areas	Trading Stocking Cleaning Trading Eco All Off
Outdoor 2 nested areas	All ON, Park D/N Sign On, Park+Fac D/N All D/N All Off

Name	Number
IAR Multisite	
Unassigned Area	A1
Cash Registers	A21
Sales Floor	A2
Back of House	A3
Outdoor	A4
Main Sales Floor	A22
Bakery	A23
Fresh Food	A24

Num	Preset Name
1	Trading
2	Stocking
3	Cleaning
4	Trading Eco
5	All Off
6	Hello

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**Prepare dashboard  
in the cloud**

Architecture FLX - Multisite

### Interact Cloud | Prepare dashboard in the cloud

Multiple web browsers support the usage of the IAR Retail dashboard.

Google Chrome, Microsoft Edge, Mozilla Firefox, Apple Safari.

1. In the browser settings, change the cookies setting to **Allow all cookies**
2. Browse to the web page with the address: [www.eu.retail.interact-lighting.com](http://www.eu.retail.interact-lighting.com)
3. Login and follow the authentication steps.

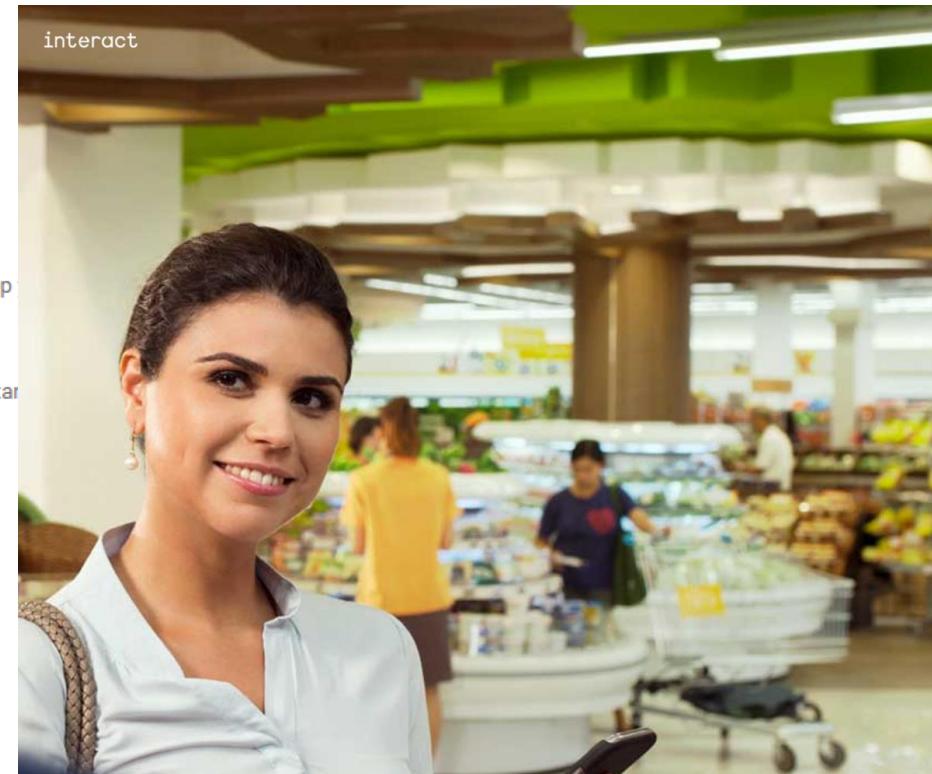


#### General settings

Allow all cookies

**1** Sites can use cookies to improve your browsing experience, for example, to keep to remember items in your shopping cart

Sites can use cookies to see your browsing activity across different sites, for example, to personalize ads



If you click 'Log in' you have read and agree to the  
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find a list of the used packages with their  
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English

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## Interact Cloud | Add parent areas

1. In the top menu, click **Configuration**
2. On the left pane, select **Area & Scenes**
3. Select **Format or None**
4. Click **Create new area**
5. Enter the **Parent Area name** and **ID** (align with Project Template form), and press **Save**
6. Repeat for all **Parent Areas**

Optionally enable **Day & Night Mode**

**Parent Area** ID alignment is suggested to be consecutive (Area IDs 2, 3, 4....), starting from ID 2

Areas & scenes

Search for an area

Name	Scenes
No data available	

SuperCenter

Create new area

Edit usage

Create new area

Enter the area ID

Enter the area name

5

Day & Night Mode

Day and night mode allows you to set a different light level during the day (after sunrise) and at night (after sunset).

The day and night mode will be activated at the right time automatically by the system.

Cancel **Save**

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## Interact Cloud | Add scenes

1. Hover over the action menu icon (⋮)
2. Click **Create new scene**
3. Enter the **Scene name and ID** (align with Project Template form), and press **Save**
4. Repeat for all **Scenes** within each **Parent Area**

**Scenes** ID alignment is suggested to be consecutive (Scene IDs 1, 2, 3....)



The screenshot shows the 'Areas & scenes' section of the Interact Cloud interface. On the left, there's a sidebar with icons for 'Areas & scenes' (selected), 'Assets', 'Light control', and 'Configuration'. The main area displays a table with three rows: 'Sales Floor' (0 nested areas), 'Back of House' (0 nested areas), and 'Outdoor' (0 nested areas). Each row has a three-dot menu icon on the right. A 'Create new area' button is located at the top right of this table. A red arrow labeled '1' points from the 'Sales Floor' row to the three-dot menu icon. A red arrow labeled '2' points from the 'Create new area' button to a 'Create new scene' button in a modal dialog. The dialog is titled 'Create new scene' and contains two input fields: 'Enter the scene id' with the value '1' and 'Enter the scene name' with the value 'Trading'. A red circle labeled '3' is placed over the 'Enter the scene name' field. At the bottom right of the dialog are 'Cancel' and 'Save' buttons.

## Interact Cloud | Add child areas

1. Click on the **Parent Area**, to show the list of child areas
2. Click **Create new child area**
3. Enter the **Child Area name** and **ID** (align with Project Template form), and press **Save**
4. Repeat for all **Child Areas**

It is suggested to assign **Child Area** ID, taking the ID of the **Parent Area** as a base.

For example: **Parent Area** ID = 2, **Child Area** ID's 21, 22, 23....



The screenshot shows the 'Child areas & logical channels' section for the 'Sales Floor' parent area. The table lists three areas: 'Sales Floor' (7 nested areas), 'Back of House' (3 nested areas), and 'Outdoor' (2 nested areas). The 'Sales Floor' row is circled with a red circle labeled '1'. A red arrow points from this row to a 'Create new child area' dialog box on the right.

Name	Scenes
Sales Floor 7 nested areas	Trading Stocking Cleaning Trading Eco All Off Hello
Back of House 3 nested areas	Trading Stocking Cleaning Trading Eco All Off
Outdoor 2 nested areas	All ON, Park D/N Sign On, Park+Fac D/N All D/N All Off

interact Assets Light control Configuration

Areas & scenes > Sales Floor

Child areas & logical channels

Search for a child area

Reorder Create new child area

Name Logical channels

No data available

Create new child area

Enter the child area ID  3

Enter the child area name

Cancel Save

The word "interact" in a lowercase sans-serif font, with a red 'i'.

## Interact Cloud | Add logical channels

1. Hover over the action menu icon (⋮)
2. Click **Create new logical channel**
3. Select the type of the **Logical Channel**
4. Enter the **Logical Channel name** and **ID** (align with Project Template form), and press **Save**
5. Repeat for all **Logical Channels** within each **Child Area**

It is suggested to use consecutive ID's, starting from ID 1



interact   Assets   Light control   Configuration

Areas & scenes > Sales Floor

Child areas & logical channels

Search for a child area

Reorder   Create new child area

Name	Logical channels
Cash Registers 0 logical channels	⋮
Main Sales Floor 0 logical channels	⋮
Bakery 0 logical channels	⋮
Fresh Food 0 logical channels	⋮
Meat 0 logical channels	⋮

1. Hover over the action menu icon (⋮) in the "Cash Registers" row.

2. Click "Create new logical channel".

3. Select "Dimming/Swi".

4. Enter "1" in the logical channel ID field and "Cash Register 1" in the logical channel name field, then click "Save".

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## Interact Cloud | Edit usage of areas, scenes and channels

In the **Parent Area**, or the **Child Area** view:

1. Click **Edit usage**
2. Use the check box to enable / disable Areas (**Parent Areas** or **Child Areas**)
3. Select the **Scenes** or **Logical Channels** to enable / disable them. Dark theme means that scene or channel is enabled
4. Click **Save**



The screenshot shows the 'Edit usage' interface for managing areas, scenes, and channels. The main view on the left lists areas: 'Sales Floor' (6 child areas), 'Back of House' (8 child areas), and 'Outdoor' (5 child areas). Each area has a 'Scenes' section with buttons for 'Trading', 'Stocking', 'Cleaning', 'Trading Eco', 'All Off', and 'Hello'. A red arrow points from step 1 to the 'Edit usage' button at the top right of the main view. A red box highlights the 'Scenes' section of the 'Sales Floor' area. A red callout box on the right shows a detailed view of the 'Scenes' section for 'Sales Floor', where 'Trading', 'Stocking', 'Cleaning', and 'Hello' are in dark mode (enabled), while 'Trading Eco' and 'All Off' are in light mode (disabled). Step 2 is marked with a red circle on the 'Sales Floor' row. Step 3 is marked with a red circle on the 'Trading', 'Stocking', 'Cleaning', and 'Hello' buttons. Step 4 is marked with a red circle on the 'Save' button at the bottom right of the callout box.

Name	Scenes
Sales Floor 6 child areas	Trading Stocking Cleaning Trading Eco All Off Hello
Back of House 8 child areas	Trading Stocking Cleaning Trading Eco All Off
Outdoor 5 child areas	All ON, Park D/N Sign On, Park+Fac D/N All D/N All Off

1 Create new area

2 3 4

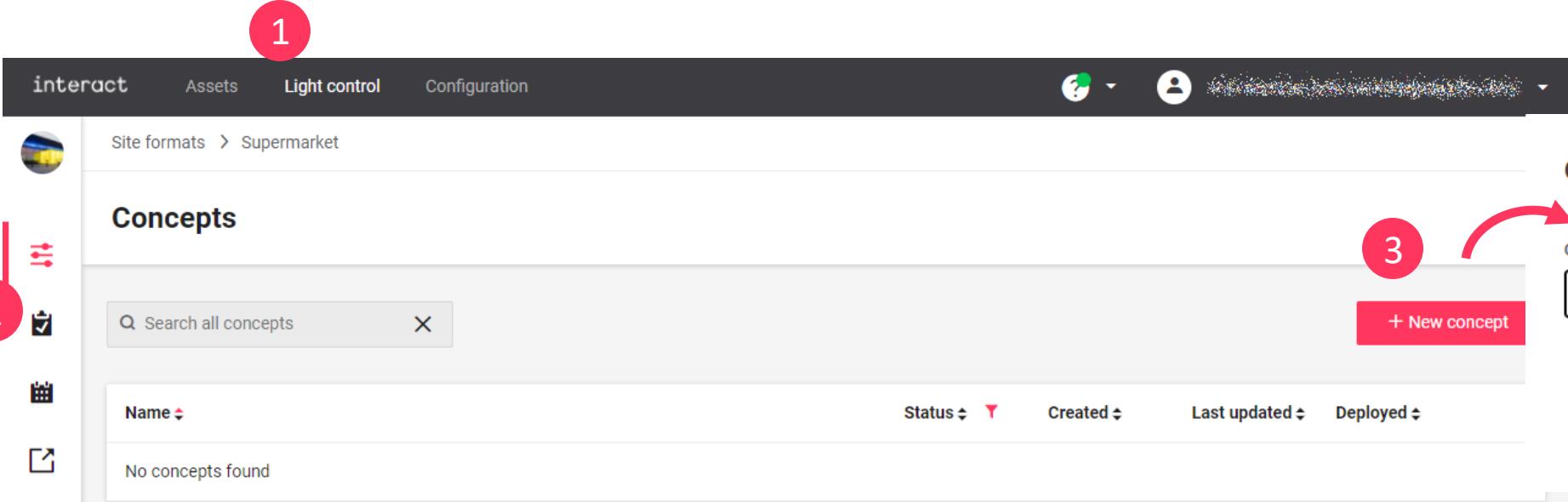
Name	Scenes
<input checked="" type="checkbox"/> Sales Floor 7 child areas	Trading Stocking Cleaning Trading Eco All Off Hello
<input checked="" type="checkbox"/> Back of House 8 child areas	Trading Stocking Cleaning Trading Eco All Off
<input checked="" type="checkbox"/> Outdoor 5 child areas	All ON, Park D/N Sign On, Park+Fac D/N All D/N All Off

## Interact Cloud | Create concept

For a new format and cloud configuration, there is a need to create default **concept**.

**Concept** is a set of different lighting scenes and channel levels, designed for each **Parent Area**.

1. In the top menu, click **Light control**
2. On the left pane, select **Concepts** 
3. Click **+New concept**
4. Give the concept a name and click **Create**



The screenshot shows the 'Concepts' page in the Interact Cloud interface. A red circle with the number '1' is on the 'Light control' menu item. A red circle with '2' is on the 'Concepts' icon in the left sidebar. A red circle with '3' is on the '+ New concept' button. A red circle with '4' is on the 'Create' button in the bottom right corner of the modal. The modal itself has a red border and contains the text 'Create a new concept' and 'Give the concept a name' with a text input field containing 'Standard'.

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## Interact Cloud | Edit concept 1/3

It is only possible to edit **concept**, with the status **Draft**. It is not possible to edit **Deployed** concepts

To modify settings of the deployed concept, **create a Clone** of the **Deployed concept** first, and then start editing.

1. Click on the name of a created concept
2. Click on the row of the **Parent Area** to start editing **concept** for that area



The screenshot shows the 'Concepts' page in the Interact Cloud interface. On the left, there is a sidebar with icons for Site formats, Concepts, Areas, and Reports. The main area shows a table of concepts. The first concept, 'Standard', is highlighted with a red circle containing the number '1'. A red arrow points from this circle to the second concept in the list, 'Sales Floor'. The 'Sales Floor' concept has a red circle containing the number '2' over it. The table columns are 'Name' and 'Status'. The 'Sales Floor' concept has 7 child areas and is in 'Draft' status. It has status buttons for Trading, Stocking, Cleaning, and Trading Eco, with 'All Off' and 'Hello' also available. The 'Back of House' concept has 2 child areas and is in 'Trading' status. The 'Outdoor' concept has 0 child areas and is in 'All ON, Park D/N' status.

Name	Status
Standard	Default Draft
Sales Floor 7 child areas	Trading Stocking Cleaning Trading Eco All Off Hello
Back of House 2 child areas	Trading Stocking Cleaning
Outdoor 0 child areas	All ON, Park D/N

## Interact Cloud | Edit concept 2/3

Start editing the light settings for the area:

1. Select a **Scene** to edit channel level settings
2. Switch the zone **ON** or **OFF**, using a toggle switch
3. Move the **dim slider** to adjust light level, or enter the value in the box
4. Use the **Master slider** to change the relative dim level of all zones that are switched to ON
5. Click **Save changes**
6. Repeat for the other scenes in the area
7. Repeat for the other **Parent Areas** in the concept

The screenshot shows the interact Cloud Light control interface. The top navigation bar includes 'interact', 'Assets', 'Light control', and 'Configuration'. The top right features a user profile and a 'Save changes' button. The main content area shows a breadcrumb path: Site for > Supermarket > Concepts > Standard > Areas > Sales Floor. A sidebar on the left contains icons for 'Assets' (camera), 'Scenes' (lightbulb), 'Areas' (checklist), 'Concepts' (document), and 'Configuration' (gear). The main area is divided into sections: 'Cash Registers' (with 'Cash Register 1' and 'Cash Register 2' sliders at 80%), 'Main Sales Floor' (with 'Sales Floor 1' slider at 75%, 'Sales Floor 2' slider at 0%, and 'Sales Floor 3' slider at 0%), and a 'Copy dim levels' button. Numbered circles (1-5) highlight specific controls: 1. The 'Trading' scene button in the scene selection menu. 2. The toggle switch for 'Sales Floor 2'. 3. The dim slider for 'Sales Floor 1'. 4. The master slider at the top of the main area. 5. The 'Save changes' button.

## Interact Cloud | Edit concept 3/3

When one of the **Parent Areas** has the **Day & Night Mode** enabled, a specific configuration for scenes applies.

1. Select a **Scene** to edit channel light settings
2. Click on the **Sun & Moon** icon, to activate the **day-night** setting. Two sliders show up, one for day, another for night.
3. Switch channels **ON** or **OFF**
4. Move the **dim sliders** to adjust light levels, for day and night.
5. Click **Save changes**
6. Repeat for the other scenes in the area, if the **Day & Night Mode** applies

**Day and Night** are determined by the Astro-clock functionality on the gateway

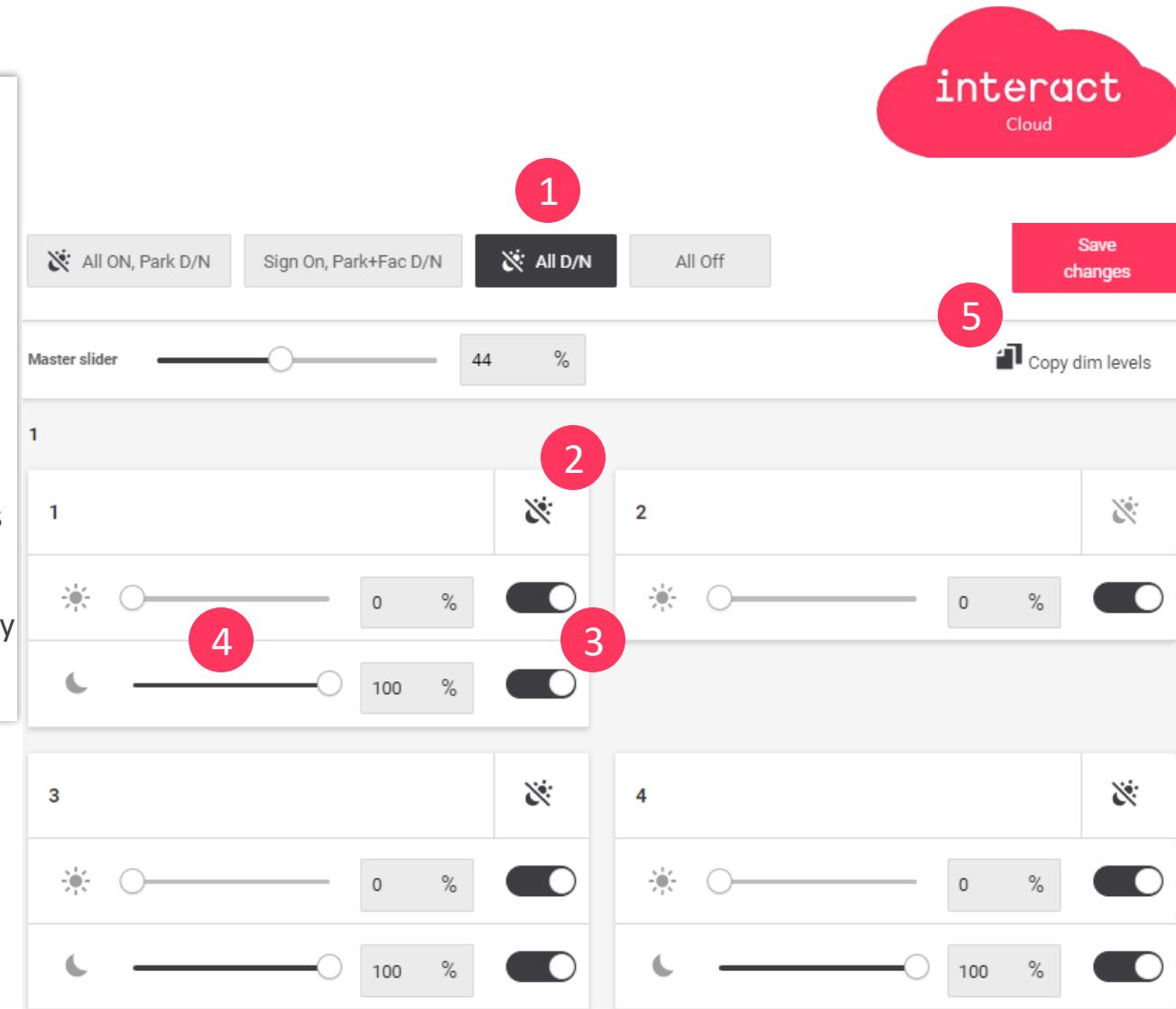
After sunrise, the Day setting is applied and after sunset, the Night setting.

Enter the area name  
Outdoor

 **Day & Night Mode**

Day and night mode allows you to set a different light level during the day (after sunrise) and at night (after sunset).

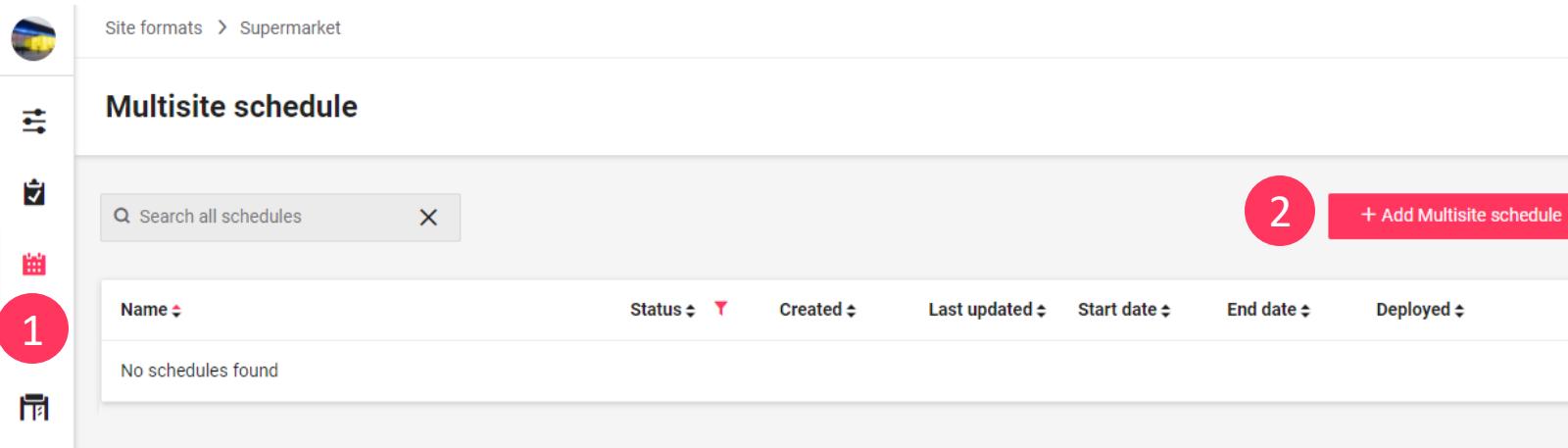
The day and night mode will be activated at the right time automatically by the system.



## Interact Cloud | Add schedule 1/3

Each format requires a default **schedule**.

1. In the Light control tab, on the left pane, select **Schedules** 
2. Click **+Add Multisite schedule**
3. Give the schedule a name and click **Save**



Site formats > Supermarket

## Multisite schedule

Search all schedules  X

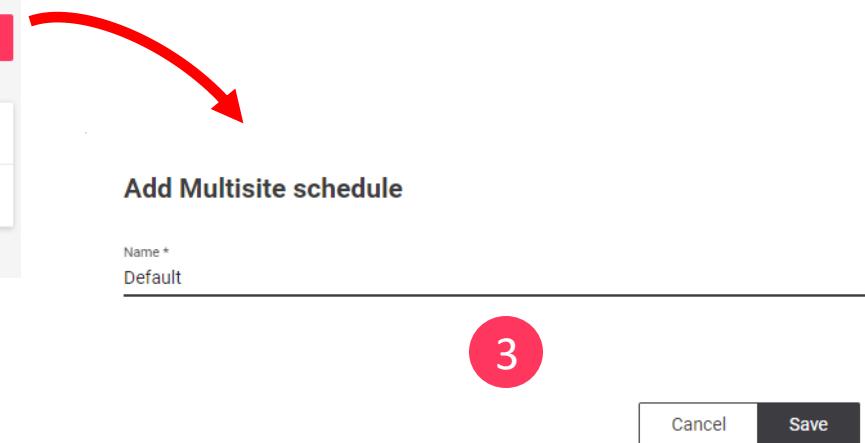
Name	Status	Created	Last updated	Start date	End date	Deployed
No schedules found						

1

2

+ Add Multisite schedule

A red arrow points from the "Add Multisite schedule" button on the main page to the "Add Multisite schedule" page on the right.



### Add Multisite schedule

Name \*  
Default

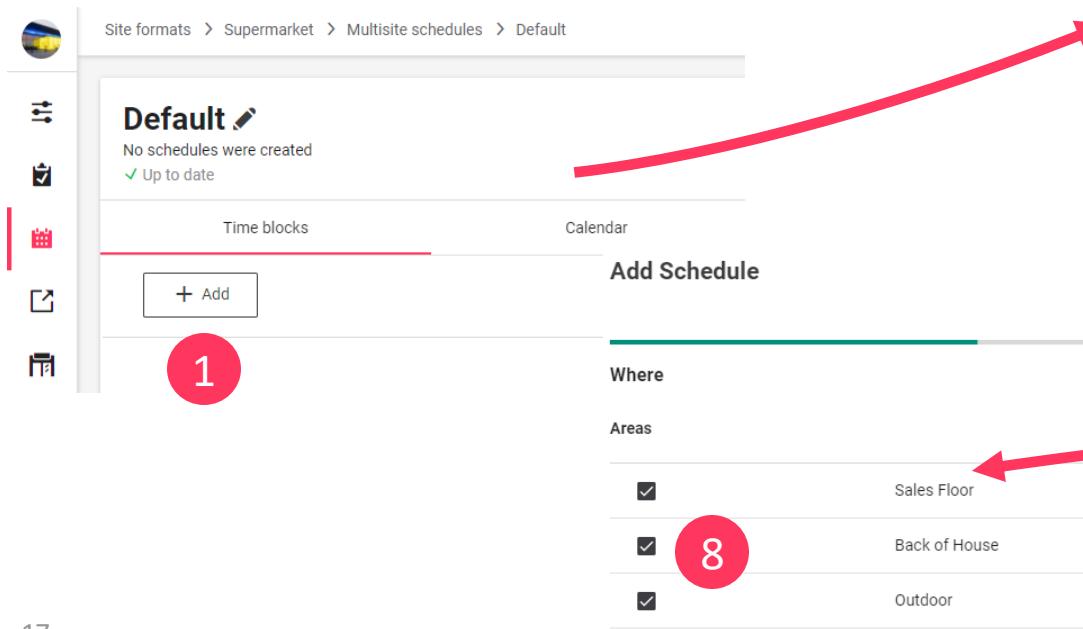
3

Cancel Save

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## Interact Cloud | Add schedule 2/3

1. Click **+Add** to start creating the schedule
2. Select the **Type** of event (Simple event, Holiday, Special event)
3. Click the calendar  to select the **Start date**
4. Click the calendar  to specify the **End date**
5. Clear/select the days for the **Weekly Pattern**
6. Clear/select the months for the **Monthly Pattern**
7. Click **Next**
8. Select to which **Areas** the schedule applies, then click **Next**



Site formats > Supermarket > Multisite schedules > Default

**Default** 

No schedules were created  Up to date

Time blocks  Calendar

**Add Schedule**

Where

**Areas**

- Sales Floor
- Back of House
- Outdoor

## Add Schedule

**When**  
Types \*  
Simple event

Start date \*  
9/12/2021

**Weekly Pattern**

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

**Monthly Pattern**

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

**Cancel** **Previous** **Next**

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Timed events: 0 out of 98  
Holidays: 0 out of 30  
Special events: 0 out of 30

## Interact Cloud | Add schedule 3/3

1. Enter the **Name** for the schedule (e.g., Standard Day)
2. Keep start time at **0:00** and click on the **Unknown** scene
3. Select the **Scene** and desired **Fade** time
4. Click the clock  to define the **Start time** and press **Add Action**
5. Select the **Scene** and **Fade** time
6. Repeat for other desired timeframes, then click **Next**
7. Verify created schedule, and click **Add**

Add Schedule

Holidays: 0 out of 30  
Special events: 0 out of 30

What  
Name \* Standard Day

Start time \* 00:00  Add action

Sales Floor	Unknown
Back of House	Unknown
Outdoor	Unknown

Selected action  
Start time \* 00:00 

Area	Scene	Fade
Sales Floor	Stocking	▼ 2 sec
Back of House	Stocking	▼ 2 sec
Outdoor	All D/N	▼ 2 sec

3

1

2

What  
Name \* Standard Day

Start time \* 07:00  Add action

Sales Floor	All Off	Stocking
Back of House	All Off	Stocking
Outdoor	All Off	All D/N

4

Selected action  
Start time \* 07:00 

Area	Scene	Fade
Sales Floor	Stocking	▼ 2 sec
Back of House	Stocking	▼ 2 sec
Outdoor	All D/N	▼ 2 sec

5

6

Summary  
Standard Day - Simple event  
8 October 2021

Standard Day  
Sun, Mon, Tue, Wed, Thu, Fri, Sat

Sales Floor	All Off	Stocking	Trading	Cleaning
Back of House	All Off	Stocking	Trading	Cleaning
Outdoor	All D/N	All D/N	All Off	Sign On, Park+Fac D/N

00:00 07:00 09:00 21:00

7

Cancel Previous Add



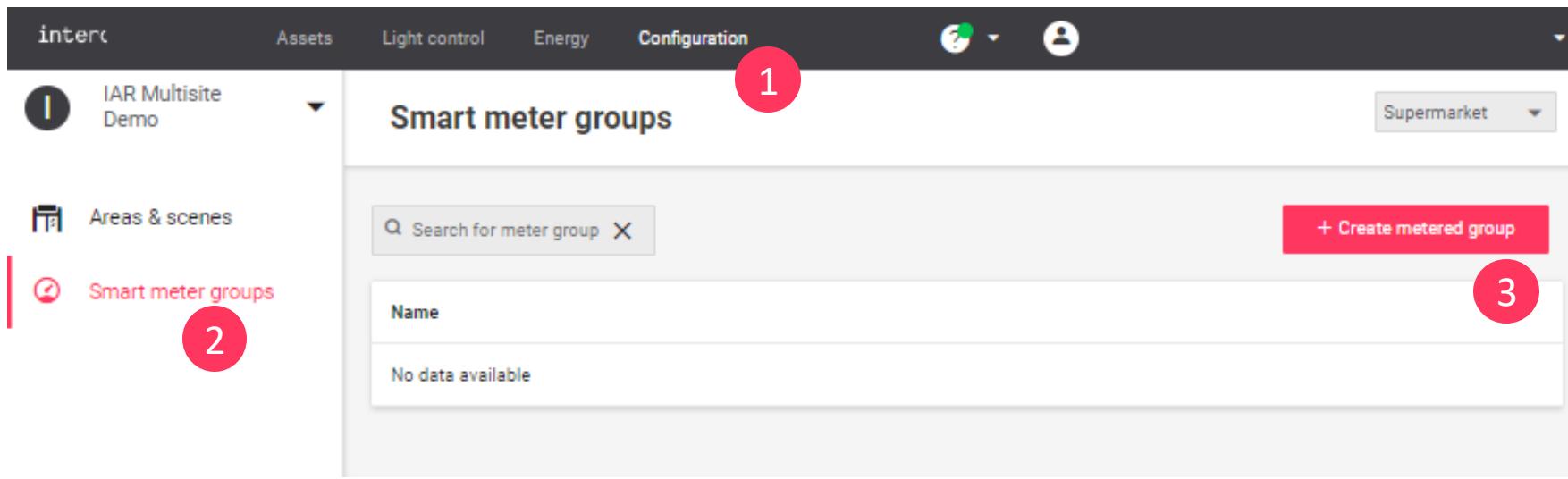
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Cloud

## Interact Cloud | Add Smart meter groups

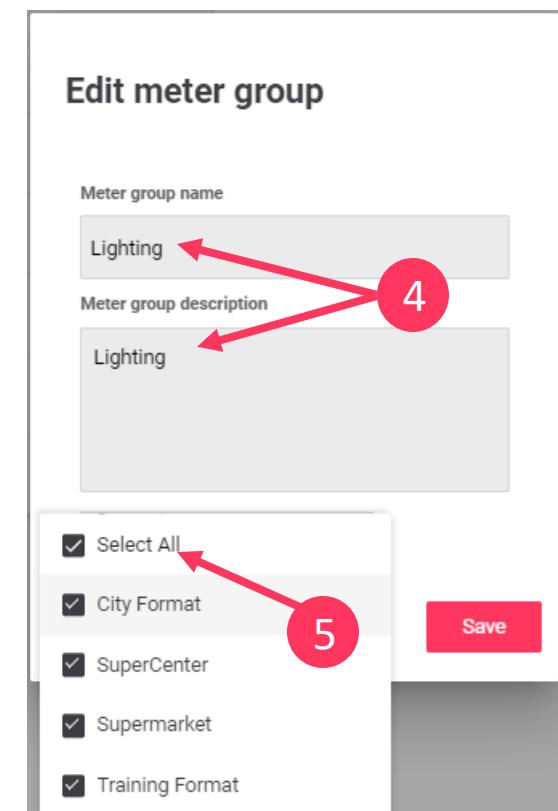
This step is only required when **smart meters** are used in the project to measure energy consuption.

To configure **Smart meter groups** in the Multiste dashboard:

1. Go to the **Configuration** tab.
2. On the left menu, select **Smart meter groups**.
3. Click **Create metered group** to create one.
4. Enter a **Group name** for the metered group and provide a **Group description**.
5. Click the dropdown and select **Select All**. Click **Save**.
6. Add all required Smart meter groups (power zones) by repeating the steps above.



The screenshot shows the Multisite dashboard interface. The top navigation bar includes tabs for 'Assets', 'Light control', 'Energy', and 'Configuration'. The 'Configuration' tab is highlighted with a red circle labeled '1'. The left sidebar has items for 'IAR Multisite Demo' (selected), 'Areas & scenes', and 'Smart meter groups' (highlighted with a red circle labeled '2'). The main content area is titled 'Smart meter groups' and contains a search bar, a 'Create metered group' button (highlighted with a red circle labeled '3'), and a table with one row showing 'No data available'.



The screenshot shows the 'Edit meter group' dialog box. It includes fields for 'Meter group name' (containing 'Lighting', highlighted with a red circle labeled '4') and 'Meter group description' (containing 'Lighting'). Below these is a dropdown menu with several checkboxes: 'Select All' (highlighted with a red circle labeled '5'), 'City Format', 'SuperCenter', 'Supermarket', and 'Training Format'. A 'Save' button is located at the bottom right.

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# **Prepare System Builder job file**

Architecture FLX - Multisite

### System Builder | Design Mode 1/2

**System Designer** is a tool which streamlines the process for generating control system design.

In order to use System Designer, a **technician license** for **System Builder** is required.

It's highly recommended to study the dedicated **User Guide** first:

in **System Builder** click **Help → User Guides** and select the **System Designer User Guide**.

To start with project design:

1. Click **Design icon D** to start the **System Designer Mode**
2. Follow all the steps of the **Design Assistant**



## System Builder | Design Mode 2/2

Take care for the following attention points:

3. In point 10. Group Fixtures:

- Use **Draw DALI Cable** to connect the DALI controlled luminaires, both broadcast and addressable.
- Use **Draw Fixture Group** for switchable luminaires

4. Make sure created **Universes** are linked with a **Distribution Board** by the cables

5. In point 12. Draw **Child Areas** give names and assign ID's.. This must be consistent with the **Interact Cloud** configuration, and the **Project Template** form

To close the **System Designer** tool, click again the **Design icon** 

**10. Group Fixtures**

**Fixture grouping methods**

- 1) Select one or more fixtures, then right-click a selected fixture and select **Group Fixtures** (shortcut key C) or select **Group to DALI universe** (shortcut key D). To select multiple fixtures, hold down the Ctrl key and click each fixture icon or click and drag to draw a box around multiple fixture icons.
- 2) Use the **Draw Fixture Group** or **Draw DALI Cable** tools under the **Draw Line** icon on the **Floor Plan** toolbar.

**Draw Fixture Group** 

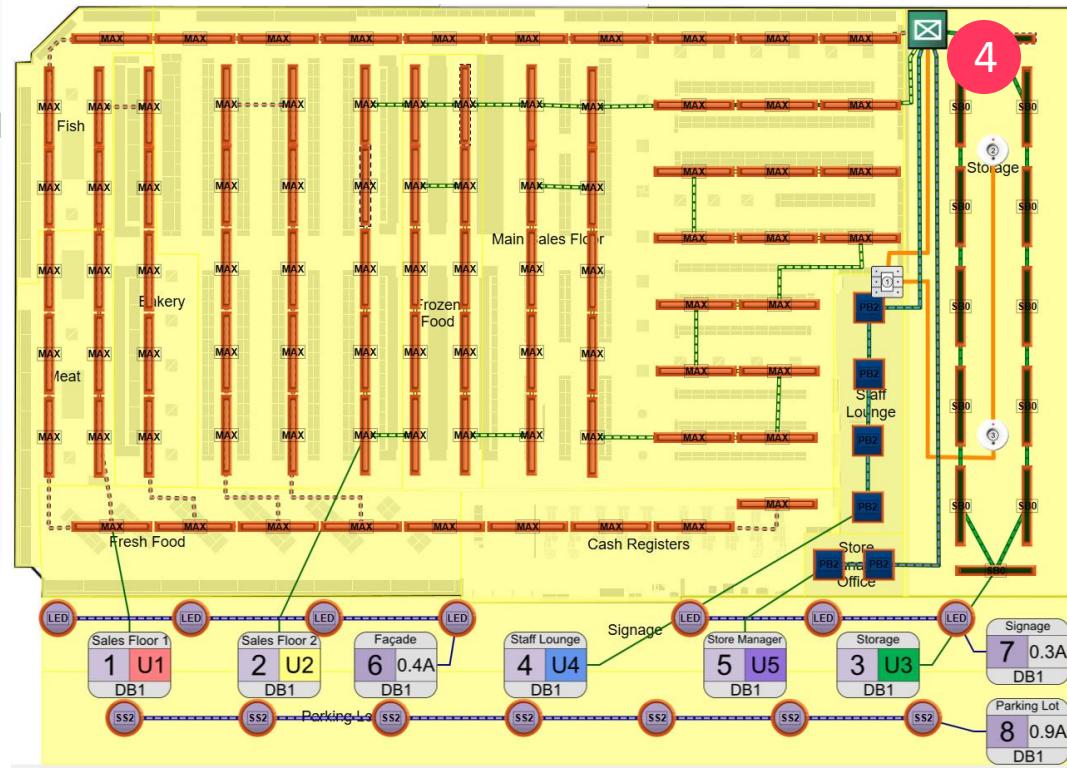
**Area Selection**

**Tree** **List**

Name	Number
Unassigned Area	1
IAR-multisite_Plan	
<b>Cash Registers</b>	<b>21</b>
Main Sales Floor	22
Bakery	23
Fresh Food	24
Meat	25
Frozen Food	26
Fish	27
Store Manager Office	31
Staff Lounge	32
Storage	33
Signage	41
Parking Lot	42

**Draw Area** 



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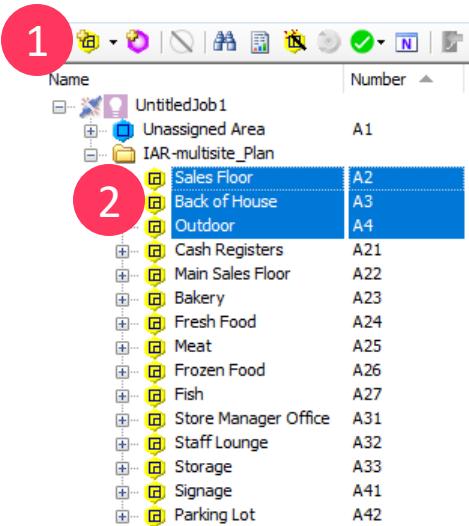
## System Builder | Finalize logical configuration and hierarchy

## Create Parent Areas

1. In the **Areas** view, click  **Insert New Area**
2. Create the **Parent Areas**. Use the same name's and ID's as in the **Interact Cloud** and the **Project Template** form

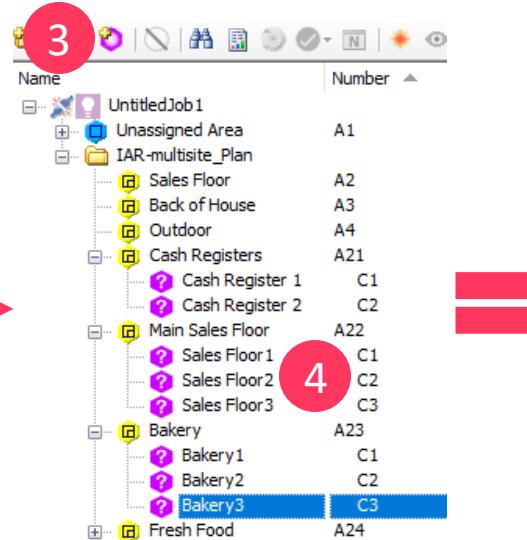
Create and rename Logical Channels

3. In the **Areas** view, select the desired **Child Area**, and click  **Insert New Channel**. Create all logical channels, mirroring the **Interact Cloud** configuration thus the **Project Template** form.
4. Rename all channels in all **Child Areas**, and make sure to use identical **ID numbers**, as configured in the **Interact Cloud** and the **Project Template**.



1

2



3

4

## Child areas &amp; logical channels

Name	Logical channels
Cash Registers	Cash Register 1, Cash Register 2
Main Sales Floor	Sales Floor 1, Sales Floor 2, Sales Floor 3
Bakery	Bakery1, Bakery2, Bakery3

Child area naming (e.g. Cash registers, Main sales floor, Bakery, ...)	Logical channel naming (e.g. Cash Register 1, Sales Floor 1, ...)
Cash Registers #21	Cash Register 1
Cash Registers #21	Cash Register 2
Main Sales Floor #22	Sales Floor 1 #1
Main Sales Floor #22	Sales Floor 2 #2
Main Sales Floor #22	Sales Floor 3 #3
Bakery #23	Bakery1 #1
Bakery #23	Bakery2 #2
Bakery #23	Bakery3 #3

## System Builder | Set Base Link Area and channel load

In the **offsite preparation**, it's only possible to set channel **Base Link Areas** and **Loads** for **broadcast and relay controllers**. Configuration of enumerated channels is a part of an *Onsite commissioning*, which will be covered in the next training module.

1. In the **System** view, open the tree of the Load Controllers and select a controller.
2. On the **Outputs** tab in the column **Base Link Area**, enter the number of the **Parent Area**, the Physical channel links to. (It is also possible to draw BLA on the **Floor Plan View**)
3. In the column **Load (Watts)**, fill in calculated channel load
4. Set physical channel **Power Category** to **Lighting**

System View

Name

- UntitledJob1
  - Load Controllers
    - DDRC420FR
    - DDBC1200** (highlighted)
    - DDBC120-DALI (Groceries)
    - DDBC120-DALI (Fresh)
  - User Interfaces
  - Sensors

Areas System Building

Device Properties Outputs Presets Tasks Sliders Details

Show Columns ▾

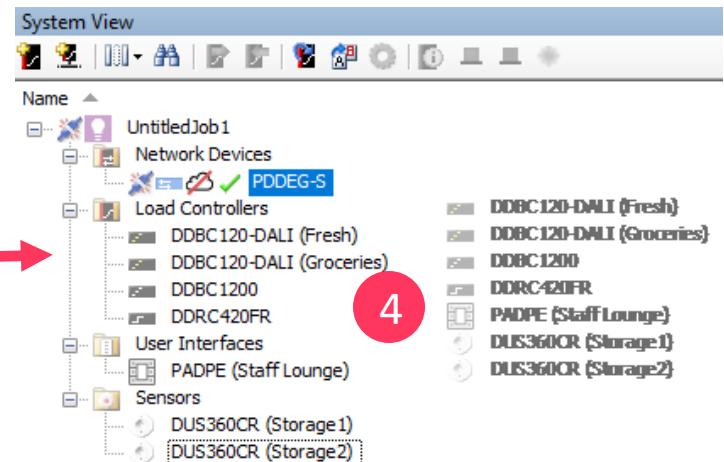
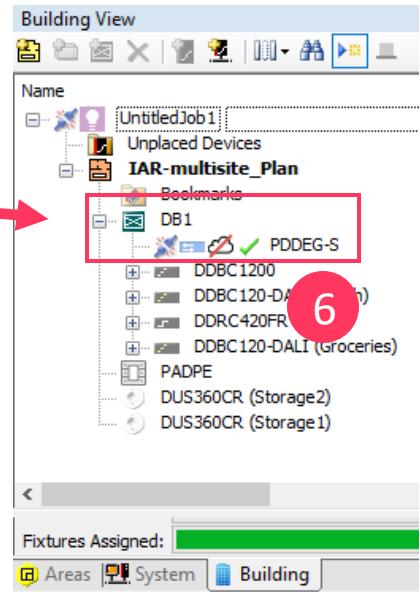
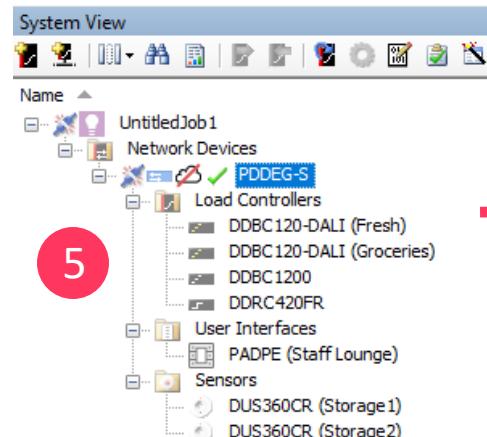
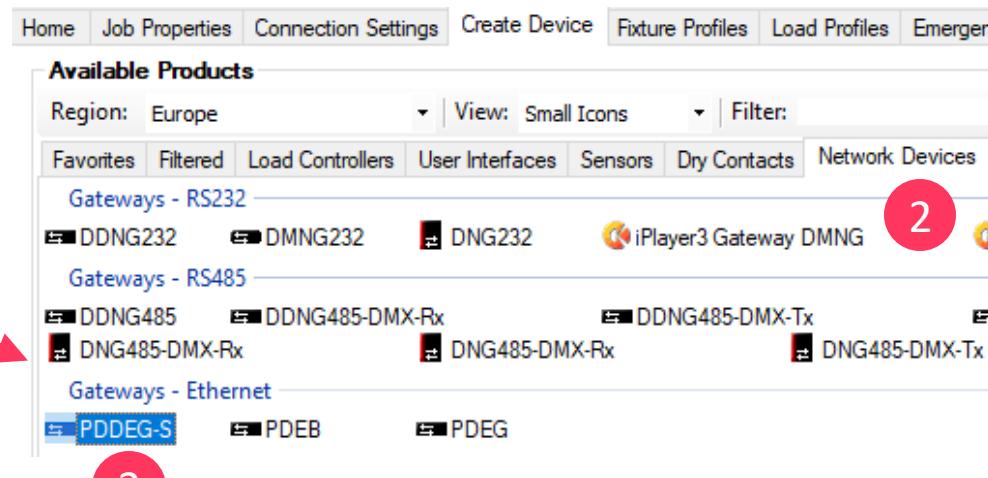
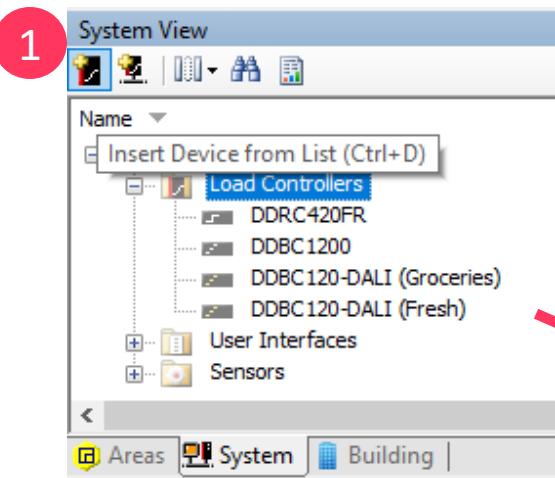
Number	Name	Area	Channel	Load (Watts)	Power Category	Flash	Switching	Duplicate	Dimming Curve	Base Link Area
1	#3 - Storage	33	1	120	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	3
2	#4 - Staff Lounge	32	1	240	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	3
3	#5 - Store Manager	31	1	180	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	3
4	Spare	1	4	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
5	Spare	1	5	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
6	Spare	1	6	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
7	Spare	1	7	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
8	Spare	1	8	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
9	Spare	1	9	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
10	Spare	1	10	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
11	Spare	1	11	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled
12	Spare	1	12	0	Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	Disabled

## System Builder | PDDEG-S Gateway 1/5

Add the site gateway

1. In the System view, click  **Insert Device from List**
2. Select the **Network Devices** tab
3. Under **Gateways – Ethernet**, double-click the **PDDEG-S**, to add it to the project topology
4. Press **Shift** to multiselect all Load controllers, User interfaces and Sensors
5. Move the devices under the **PDDEG-S**.
6. In the **Building View**, Drag & Drop **PDDEG-S** under **Distribution Board (DB1)**

Project topology is now created.



interact

## System Builder | PDDEG-S Gateway 2/5

## Configure 100 Simple Event schedules, 30 public holidays and 30 special events

1. In the **System** view, select the **PDDEG-S**
2. On the **Schedules** tab, check if there are **100 Undefined Schedules** available. Make sure that all schedules are **disabled**, and the schedule type is **Simple Event**
3. Click **Set Public Holidays**
4. Add **30 New Public Holidays**. Make sure all are **disabled**. Click **Ok**
5. Click **Set Special Events**
6. Add **30 New Special Events**. Make sure all are **disabled**. Click **Ok**

System View

Device Properties Connection Settings Create Device **Schedules** Bridge Address Ranges Ports Routing Hue Bridges Rhythm Send Metrics Users Switches Area Cascading

Schedules Set Location And Time Zone Set Public Holidays Set Special Events Synchronise to System Manager

19 Undefined Schedule

1. UntitledJob1  
PDDEG-S  
Load Controllers  
DDBC120-DALI (Fresh)  
DDBC120-DALI (Grocer)  
DDBC1200  
DDR420FR  
User Interfaces  
PADPE (Staff Lounge)  
Sensors  
DUS360CR (Storage1)  
DUS360CR (Storage2)

2. 3. 5.

**Schedule Properties**  
Name: Undefined Schedule  
Number: 1  
 Enabled  
 Disable until the beginning of 04 Dec 2019  
 Unused  
**Date and time**  
Begin: 04 Dec 2019  
 End  
Days of the week: All  
Configure  
Dates of the month: All  
Configure  
Weeks of the month: All  
Configure  
Months of the year: All  
Configure  
**Public holidays**  
Special events to include: None  
Configure  
Special events to exclude: None  
Configure  
**Schedule Type**: Simple Event  
Start at: 09:00:00  
**Start Actions**  
Edit Actions

New Schedule Duplicate Run Delete

Edit Public Holidays

Add Delete Import Export

New Public Holiday - Disabled - 15 Oct 2021  
New Public Holiday (1) - Disabled - 15 Oct 2021  
New Public Holiday (10) - Disabled - 15 Oct 2021  
New Public Holiday (11) - Disabled - 15 Oct 2021  
New Public Holiday (12) - Disabled - 15 Oct 2021  
New Public Holiday (13) - Disabled - 15 Oct 2021  
New Public Holiday (14) - Disabled - 15 Oct 2021  
New Public Holiday (15) - Disabled - 15 Oct 2021  
New Public Holiday (16) - Disabled - 15 Oct 2021  
New Public Holiday (17) - Disabled - 15 Oct 2021  
New Public Holiday (18) - Disabled - 15 Oct 2021  
New Public Holiday (19) - Disabled - 15 Oct 2021  
New Public Holiday (2) - Disabled - 15 Oct 2021

Name:   
Date:   
 Recurs every year  
 Enabled

4

Ok

Edit Special Events

Add Delete Import Export

New Special Event - Disabled - 15 Oct 2021  
New Special Event (1) - Disabled - 15 Oct 2021  
New Special Event (10) - Disabled - 15 Oct 2021  
New Special Event (11) - Disabled - 15 Oct 2021  
New Special Event (12) - Disabled - 15 Oct 2021  
New Special Event (13) - Disabled - 15 Oct 2021  
New Special Event (14) - Disabled - 15 Oct 2021  
New Special Event (15) - Disabled - 15 Oct 2021  
New Special Event (16) - Disabled - 15 Oct 2021  
New Special Event (17) - Disabled - 15 Oct 2021  
New Special Event (18) - Disabled - 15 Oct 2021  
New Special Event (19) - Disabled - 15 Oct 2021  
New Special Event (2) - Disabled - 15 Oct 2021

Name:   
Start Date:   
End Date:   
 Recurs every year  
 Enabled

6

Ok

interact

## System Builder | PDDEG-S Gateway 3/5

1. On the **Schedules** tab, click **Set Location And Time Zone**
2. Specify **Country** and **City** reflecting the correct time zone for the site. Click **OK**
3. On the **Ports** tab, in the IPv6 configuration, **disable default multicast** and **unicast** services
4. Clear **Route RS485 and Default Multicast Service** checkbox, on the **Routing** tab
5. Make sure to keep default **Web Socket Port** and **Routing** settings
6. On the **Users** tab, leave the default user properties for the admin user

Device Properties | Connection | Create Device | Schedules | Bridge Address Ranges | Ports

Schedules Set Location And Time Zone Set Public Holidays Set Special Events

Synchronise to System Manager

19 Undefined Schedule

New Schedule Duplicate Run Delete

System Builder - Set Device Location And Time Zone

Location

Country: GERMANY (2)

City: Hamburg

DMS Latitude: 53°33' NORTH | DMS Longitude: 9°58' EAST

Time Zone: (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna

Has Daylight Saving:  | Time Zone Offset (min): -60

Daylight Saving Start: Last | Sunday | March | 02:00:00

Daylight Saving Stop: Last | Sunday | October | 03:00:00

Daylight Saving Adjustment (min): -60

Set as Default | OK | Cancel

IPv6

IPv6 user defined ports	Enabled
IP Address	::
Gateway	::
Subnet prefix length	64
DNS server	::
Alternative DNS server	::
Send on default multicast service	<input checked="" type="checkbox"/> Enabled
UDP default multicast port	<input checked="" type="checkbox"/> Disabled
UDP default unicast port	<input checked="" type="checkbox"/> Disabled

Device Properties | Connection Settings | Create Device | Schedules | Bridge Address Ranges | Port Editor | Routing | Hue Bridges | Phy

New Routing | Delete Routing | Copy | Paste |  Route RS485 and Default Multicast Service

Enable	From	To
<input checked="" type="checkbox"/>	Web Socket Port 1, Trunk	Comm Port 1, Spur
<input checked="" type="checkbox"/>	Comm Port 1, Spur	Web Socket Port 1, Trunk
<input checked="" type="checkbox"/>	Internal Messages	Web Socket Port 1, Trunk
<input checked="" type="checkbox"/>	Metrics Collection	Web Socket Port 1, Trunk

Schedules | Bridge Address Ranges | Port Editor | Routing | Hue Bridges | Rhythm Send | Metrics | Users | Switches | Are

Add | Delete

Name	admin
------	-------

User Properties

Name	admin
Password	*****
Enable	True

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## System Builder | PDDEG-S Gateway 4/5

1. On the **Device Properties** tab, check the setting: *Authentication required for: CGI Only*
2. Enable **Batch Reporting** feature.
3. Configure **30 special event and public holiday records**. Raise name length to **32 bytes**.

Ethernet Applications	
Web server	Enabled
Secure connection (HTTP / HTTPS)	HTTPS
Authentication required for	CGI Only
Starting web page	index.html
Web server caching	Enabled
CGI Timeout (milliseconds)	5000
Batch Reporting	Enabled
Batch Reporting interval (minutes)	Default
Scheduler	
Event schedule	Enabled
Reserved event schedule records	100
Reserved task length (bytes)	80
Grace Period (minutes)	0
Reserved event schedule name (bytes)	32
Reserved special event records	30
Reserved special event name (bytes)	32
Reserved public holiday records	30
Reserved public holiday name (bytes)	32

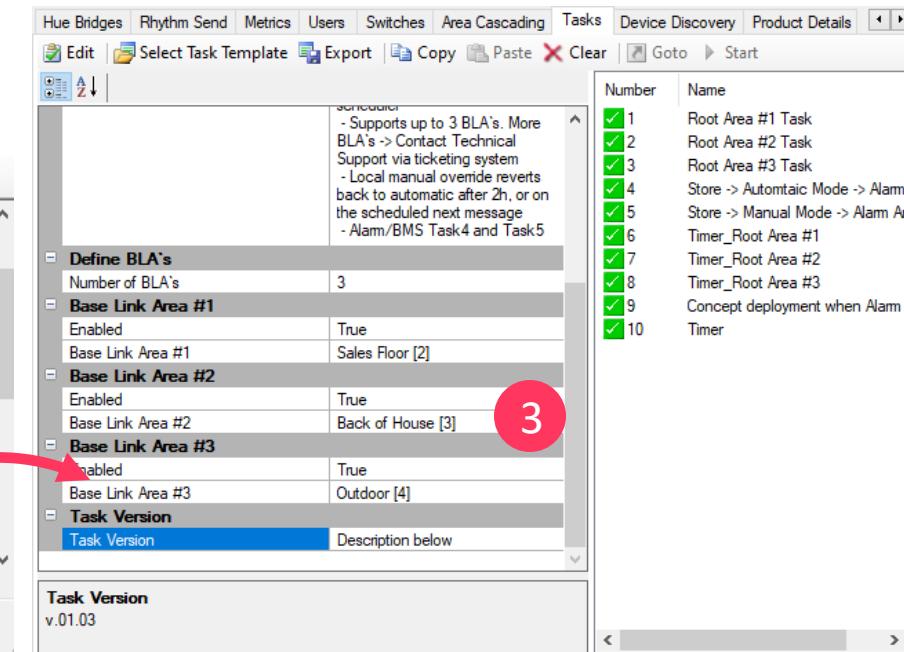
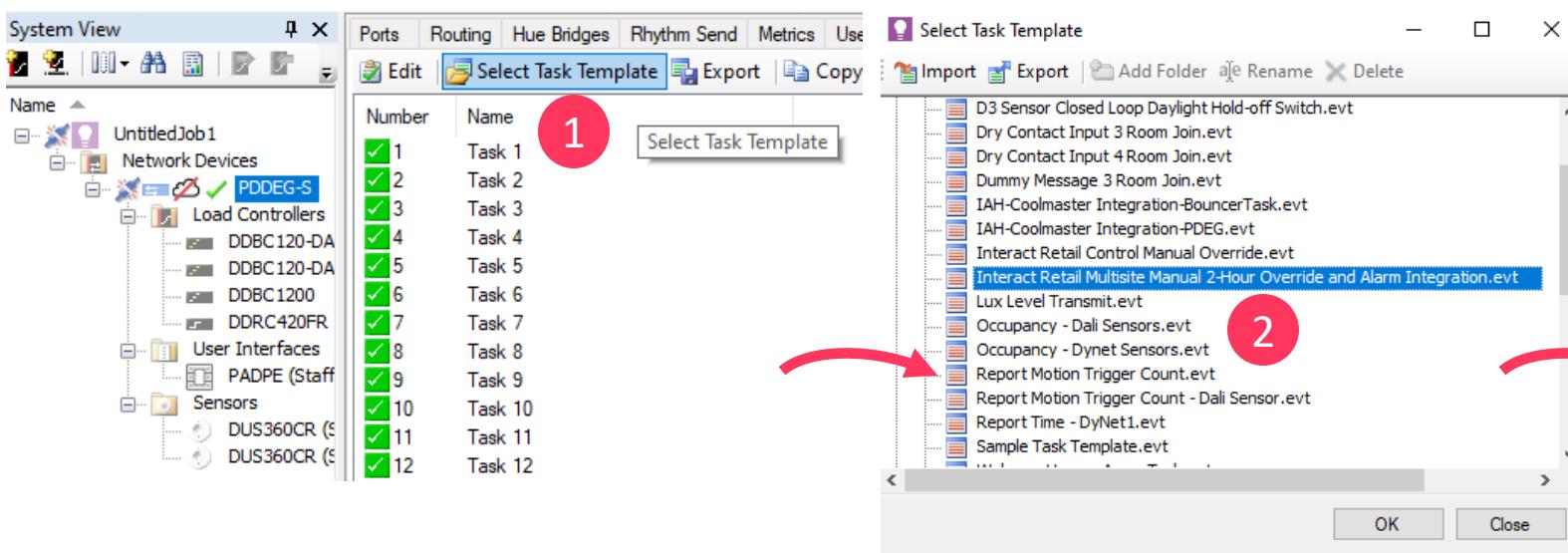
## System Builder | PDDEG-S Gateway 5/5

For integration of **Manual Override** and **Alarm**, use dedicated Dynalite program (Task)

1. On the Tasks tab, click **Select Task Template**
2. Select **Multisite Manual 2-Hour Override and Alarm Integration.evt** task. Click **OK**
3. Define **Base Link Areas** to which **Manual Override** feature applies.

Configuration of **BMS** and **Alarm**, must be finalized on the **Dry Contact** device.

More information can be found in the official **Multisite Commissioning Guide**



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## System Builder | Additional configurations – Alarm Integration

### Integrate Alarm, via the Dry Contact Inputs (DDMIDC8)

The **Dry Contact** interface, can provide integration with **Alarm systems**.

Specific configuration must be followed, in order to enable this functionality.

To integrate with an external **Alarm system**:

1. Multisite **Manual 2-Hour Override and Alarm Integration Task** must be applied on **PDDEG-S**
2. Dry Contact Input used for the Alarm integration should be configured with a **Custom function**, and **Join Byte 0x85**
3. Configure following **input actions**:
  - **Start task 5** on the PDDEG-S device, when the **Alarm** is being **armed**
  - **Start Task 4** on the PDDEG-S device, when the **Alarm** is being **disarmed**

**General**

Name: IAR Multisite - Manual Override Task with Alarm/BMS integration  
 Description: Manual Override task with Alarm/BMS Integration for IAR Multisite proposition - version 1.03

\*\*\*IMPORTANT NOTES!\*\*\*

- works with PDDEG-S V2
- Sunset/Sunrise schedules must occupy number 1&2 in the scheduler
- Supports up to 3 BLA's. More BLA's -> Contact Technical Support via ticketing system
- Local manual override reverts back to automatic after 2h, or on the scheduled next message
- Alarm/BMS Task4 and Task5 must be triggered and configured on the Dry-Contact integration device

Number	Name
1	Root Area #1 Task
2	Root Area #2 Task
3	Root Area #3 Task
4	Store -> Automait Mode -> Alarm Dis...
5	Store -> Manual Mode -> Alarm Armed
6	Timer_Root Area #1
7	Timer_Root Area #2
8	Timer_Root Area #3
9	Concept deployment when Alarm Armed
10	Timer

**General**

Name: Alarm Armed / Disarmed  
 Switch: Enabled

**Logical Address**

Logical Area: Sales Area [2]  
 Channel: All Channels [0]  
 Join: 85  
 BLA: Disabled

**Advanced**

Enable when panel disabled: False  
 Trigger at startup: False  
 Proxy channel index: 4

**Function**

Function: Custom  
 Standard function name: No match

Press actions	Preset - Preset: 4, Fade: 00:00:02.000; Task control - Execution type: Start task, Device code: 0xC3, Box number: 1, Task number: 5
Release actions	Preset - Preset: 3, Fade: 00:00:02.000; Task control - Execution type: Start task, Device code: 0xC3, Box number: 1, Task number: 4
Extended press actions	Preset - Preset: 4, Fade: 00:00:02.000; Task control - Execution type: Start task, Device code: 0xC3, Box number: 1, Task number: 5
Extended release actions	Preset - Preset: 3, Fade: 00:00:02.000; Task control - Execution type: Start task, Device code: 0xC3, Box number: 1, Task number: 4

Task control | Execution type: Start task, Device code: 0xC3, Box number: 1, Task number: 5

Alarm armed

**Task control**

Control type: Start task  
 Device code: Ethernet Gateway Supervisor V2 (0xC3)  
 Box number: 1  
 Task number: 5

Task control | Execution type: Start task, Device code: 0xC3, Box number: 1, Task number: 4

Alarm disarmed

**Task control**

Control type: Start task  
 Device code: Ethernet Gateway Supervisor V2 (0xC3)  
 Box number: 1  
 Task number: 4

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## System Builder | Additional configurations – Manual 2-Hour Override

Configure Manual Override on the Dry Contact Inputs (DDMIDC8)

There are some specific configurations on the **User interface**, which need to be applied in order to enable key integrations and features.

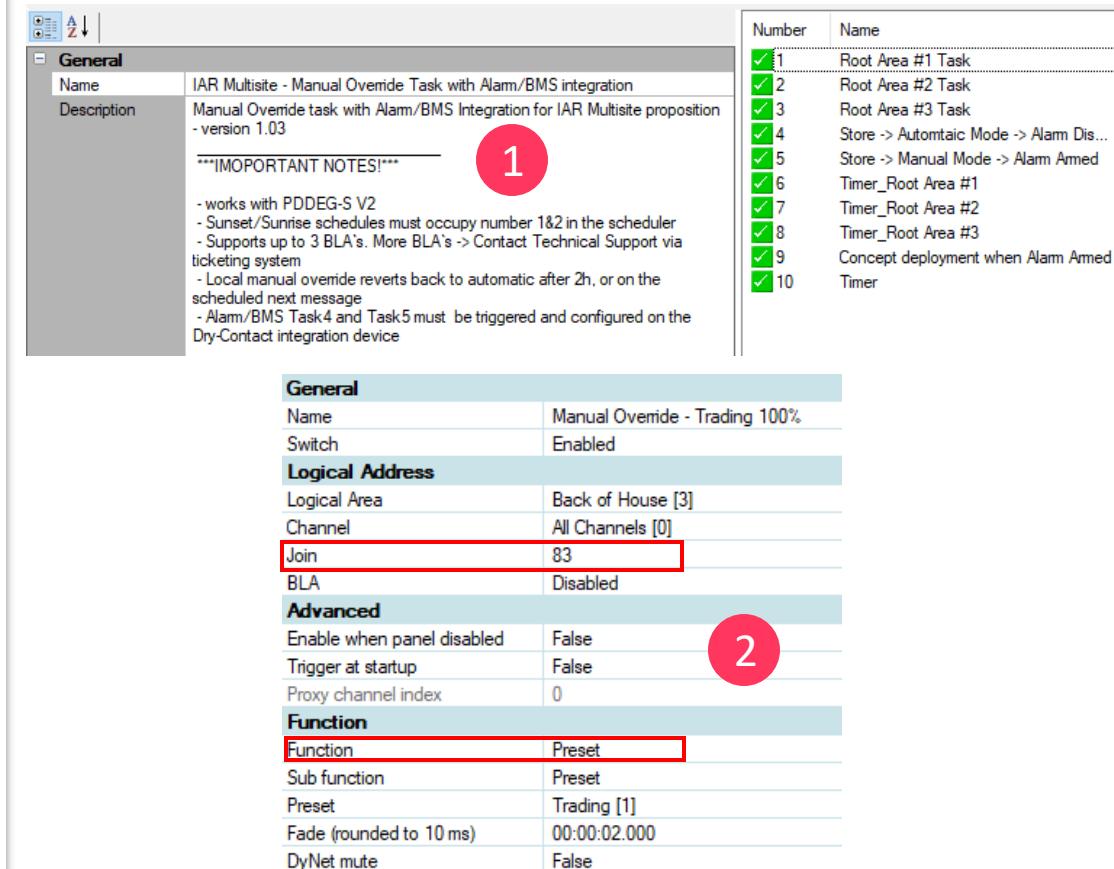
One of these is **Manual 2-Hour Override**, which provides functionality to overrule the scheduled scene with a different preset, for a maximum of two hours.

To enable the Manual 2-Hour Override feature:

1. Multisite **Manual 2-Hour Override and Alarm Integration Task** must be applied and configured on **PDDEG-S**
2. **Dry Contact Input** used for the **Manual Override**, must be configured with a **Preset** function and a **Join Byte 0x83**

Each **preset** message, with the **join byte of 0x83**, will trigger 2-hour timer.

After 2 hours, system reverts to the previously scheduled scene.



The screenshot shows two main configuration panels. The top panel is for a task named 'IAR Multisite - Manual Override Task with Alarm/BMS integration'. It includes a description of the task, a note about important notes, and a list of bullet points detailing its functionality. A red circle with the number '1' highlights the task configuration. The bottom panel is for a dry contact input configuration. It shows fields for General settings (Name: 'Manual Override - Trading 100%', Switch: 'Enabled'), Logical Address (Logical Area: 'Back of House [3]', Channel: 'All Channels [0]', Join: '83', BLA: 'Disabled'), Advanced settings (Enable when panel disabled: 'False', Trigger at startup: 'False', Proxy channel index: '0'), and a Function section (Function: 'Preset', Sub function: 'Preset', Preset: 'Trading [1]', Fade (rounded to 10 ms): '00:00:02.000', DyNet mute: 'False'). A red circle with the number '2' highlights the dry contact input configuration.

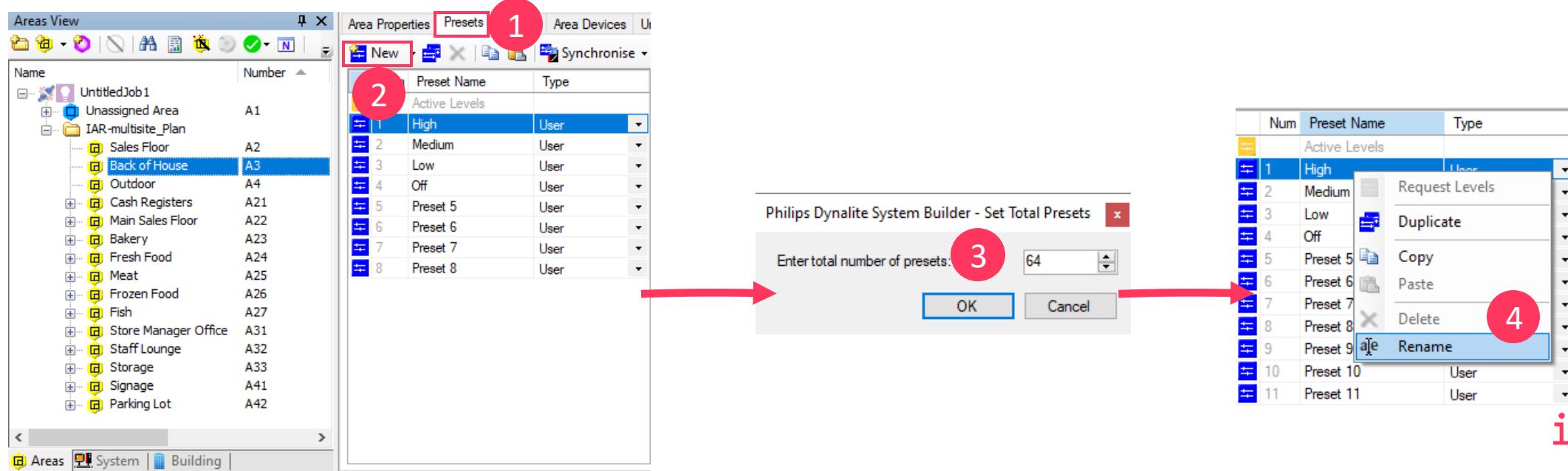
Number	Name
1	Root Area #1 Task
2	Root Area #2 Task
3	Root Area #3 Task
4	Store -> Automtaic Mode -> Alarm Dis...
5	Store -> Manual Mode -> Alarm Armed
6	Timer_Root Area #1
7	Timer_Root Area #2
8	Timer_Root Area #3
9	Concept deployment when Alarm Armed
10	Timer

## System Builder | Preset placeholders

In order for the customer to recall and create their own **Scenes**, create empty **Presets** as **placeholders** for new cloud scenes.

1. In the **Areas** view, select **Parent/Child** area. Select the tab **Preset Editor**
2. On the tab Preset Editor, select **New** - and **Set Total Presets**
3. Enter the total number of **64** presets and click **OK**
4. Right-click on the Preset and select **Rename**, to rename the Preset

Remember to do this per **Parent Area** and all **Child Areas** assigned to them in System Builder.



## System Builder | Preset names

Align **Preset names** with **Scene names** and **ID** created in the **Interact Cloud**.

Naming must be consistent with the **Project Template** form.

Repeat for **all Presets** in all **Parent** and **Child** areas.

interact Cloud

Name	Scenes
Sales Floor 7 child areas	Trading, Stocking, Cleaning, Trading Eco, All Off, Hello
Back of House 8 child areas	Trading, Stocking, Cleaning, Trading Eco, All Off
Outdoor 5 child areas	All ON, Park D/N, Sign On, Park+Fac D/N, All D/N, All Off

**Project template**

Area 1	Area 1 scenes
Sales Floor #2	Trading #1, All Off #5
Define Child areas and Logical channels on page 7	
Stocking #2	Hello #6
Cleaning #3	
Trading Eco #4	
Area 2	Area 2 scenes
Back of House #3	Trading #1, All Off #5
Define Child areas and Logical channels on page 11	
Stocking #2	
Cleaning #3	
Trading Eco #4	

Num	Preset Name	Type
1	Trading	User
2	Stocking	User
3	Cleaning	User
4	Trading Eco	User
5	All Off	User
6	Preset 6	User
7	Preset 7	User

## System Builder | Additional configurations – User Interfaces

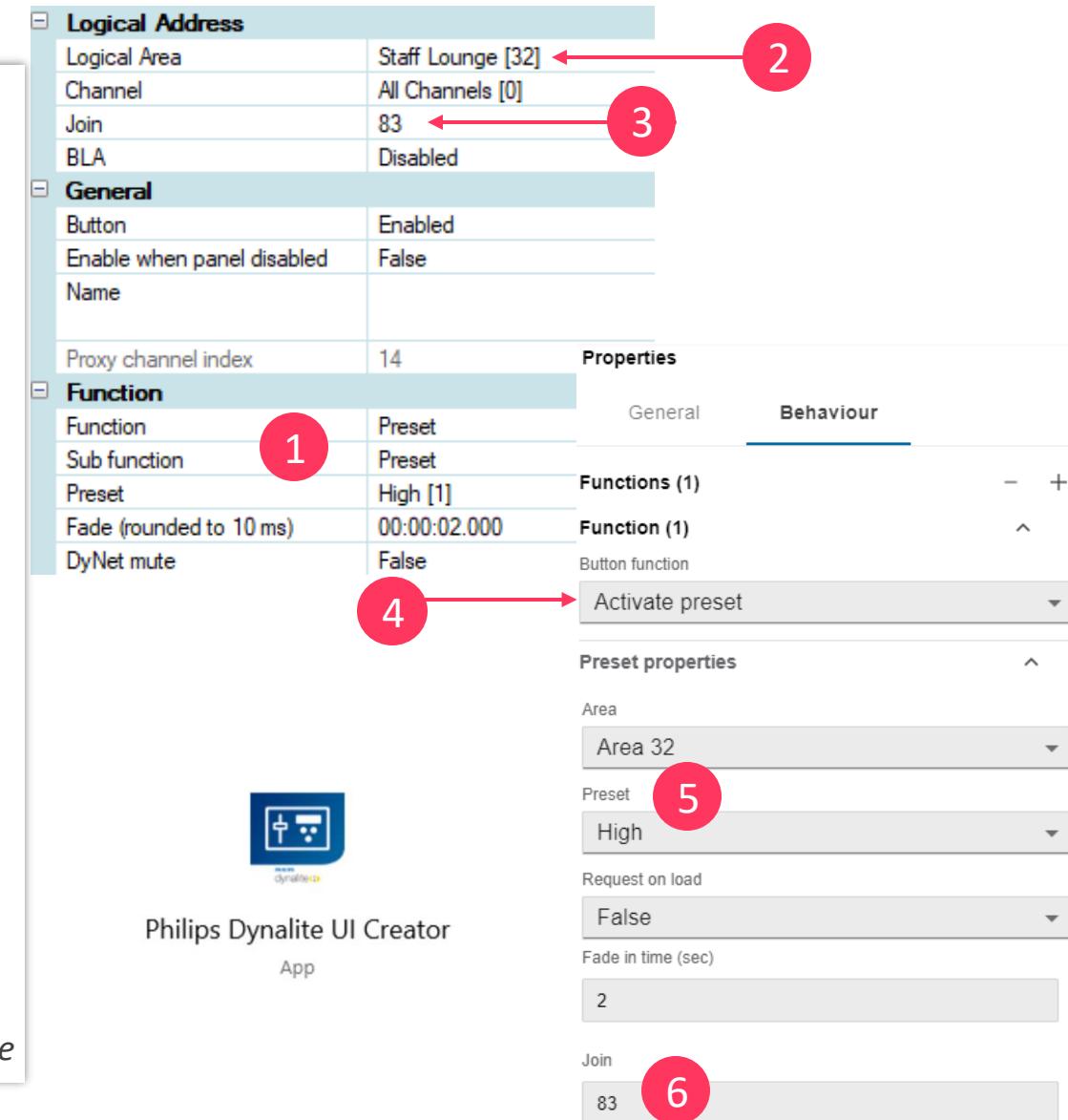
### Antumbra and Revolution panels – specific configuration

1. Configure buttons with a preset action
2. Buttons can be configured to control **Parent Areas** (BLA's) or **Child Areas**
3. Configure **Join byte** to **0x83** to enable the **2-hour manual override**, in case corresponding task has been configured on the PDDEG-S gateway

### Touch screen – specific configuration

4. Using **PDTS UI Creator**, configure buttons with an **Activate preset** function
5. PDTS buttons can be configured to control **Parent Areas** (BLA's) or **Child Areas**. For each button define desired Preset
6. Configure **Join byte** to **0x83** to enable the **2-hour manual override**, in case corresponding task has been configured on the PDDEG-S gateway

When upgrading *Store Flex (Storewise)* system, follow the *Technical Notes* available on the *Signify Partner Portal* with regards to *PDTS* or *DTP100* configuration.



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## System Builder | Additional configurations – Sensors 1/2

Motion control – specific configuration

1. Specify if the sensor should control a **Parent Area** (BLA) or a **Child Area**
2. For **motion control**, configure **Join byte** to **0x81**
3. When configuring the sensor to the **Child Area**, **set the link** with the correct BLA
4. Modify and configure specific sensor settings, if required.
5. Create the desired number of presets and assign actions
6. **Always use** at least 1 minute **Resend Inhibit Period** to avoid over-flooding the DyNet network

Logical Address	
Logical Area	Store Manager Office [31]
Channel	All Channels [0]
Join	81
BLA	3

Motion Control	
Motion control	Enabled
Presets wraparound	Disabled
Single sensor Area c...	True
Enable flags	FFFF
Motion detector	Enabled
LED output on motion	Enabled

Timing	
Action delay period	00:00:10
Resend inhibit period	00:01:00
Timeout	00:10:00

Preset	Name	Enabled	On Motion	Delay Period	On No-Motion
1	High	<input checked="" type="checkbox"/>	Preset - Preset: 1, Fade: 00:00:02.000	Resend Inhibit Period	Preset - Preset: 3, Fade: 00:00:02.000
2	Medium	<input type="checkbox"/>	No action	None	No action
3	Low	<input checked="" type="checkbox"/>	Preset - Preset: 1, Fade: 00:00:02.000	Resend Inhibit Period	Preset - Preset: 4, Fade: 00:00:02.000
4	Off	<input checked="" type="checkbox"/>	Preset - Preset: 1, Fade: 00:00:02.000	None	No action

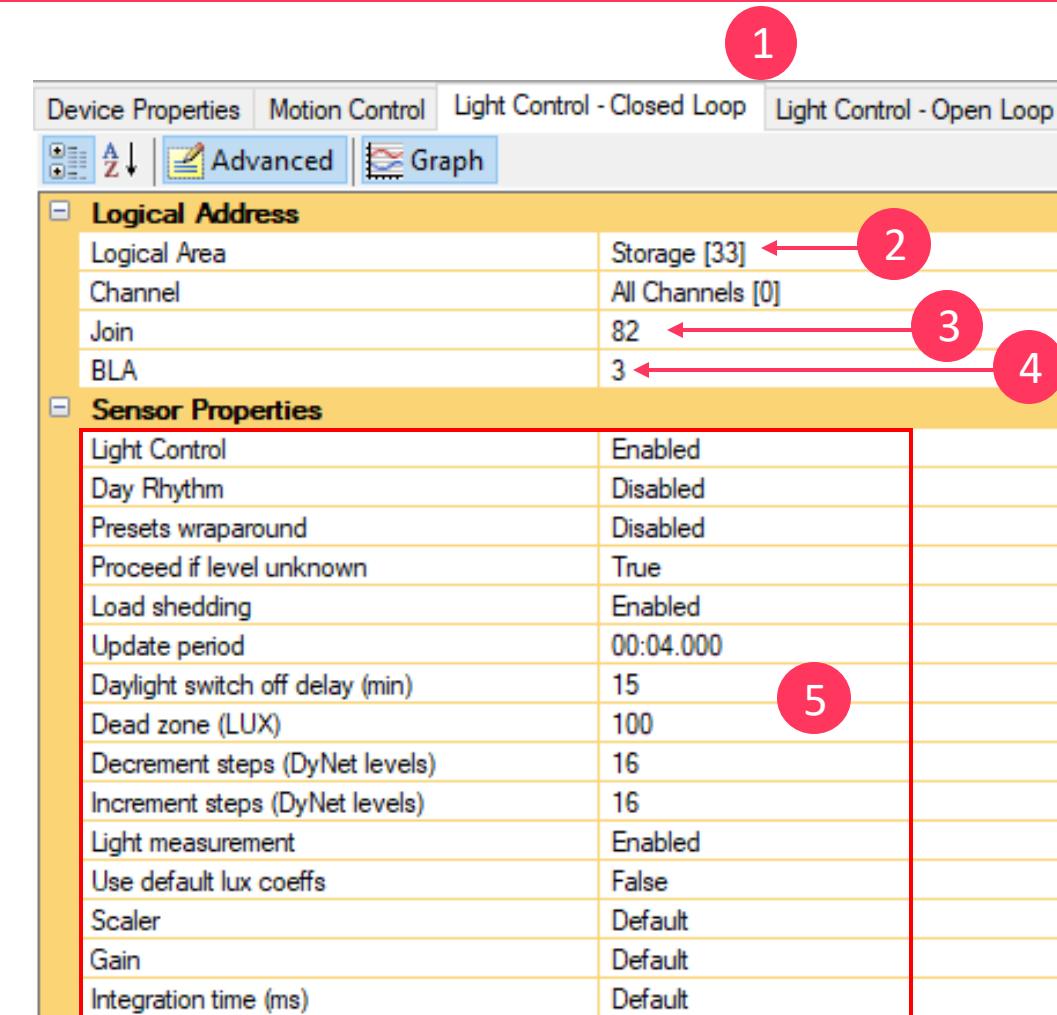
## System Builder | Additional configurations – Sensors 2/2

Daylight sensing – specific configuration

1. Select Daylight Harvesting mode: **Closed** or **Open Loop**
2. Specify, if the sensor should control a **Parent Area** (BLA) or a **Child Area**
3. Configure **Join byte** to **0x82**
4. When configuring the sensor to the **Child Area**, set the link with the correct BLA
5. Modify and configure specific sensor settings if required
6. Create the desired number of presets (closed loop) or define bands (open loop) with agreed settings

Closed Loop			
Preset	Name	Enable	Target Level (Lux)
1	High [1]	<input checked="" type="checkbox"/>	400
2	Medium [2]	<input checked="" type="checkbox"/>	400
3	Low [3]	<input checked="" type="checkbox"/>	400
4	Off [4]	<input checked="" type="checkbox"/>	400

Open Loop	
Band	Low Level (Lux)
0	0
1	1000
2	2000



Device Properties		Motion Control	Light Control - Closed Loop	Light Control - Open Loop
A	Z	Advanced	Graph	
<b>Logical Address</b>				
Logical Area				Storage [33] <span style="color: red;">2</span>
Channel				All Channels [0]
Join				82 <span style="color: red;">3</span>
BLA				3 <span style="color: red;">4</span>
<b>Sensor Properties</b>				
Light Control				Enabled
Day Rhythm				Disabled
Presets wraparound				Disabled
Proceed if level unknown				True
Load shedding				Enabled
Update period				00:04.000
Daylight switch off delay (min)				15
Dead zone (LUX)				100 <span style="color: red;">5</span>
Decrement steps (DyNet levels)				16
Increment steps (DyNet levels)				16
Light measurement				Enabled
Use default lux coeffs				False
Scaler				Default
Gain				Default
Integration time (ms)				Default

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## System Builder | Additional configurations – unique naming

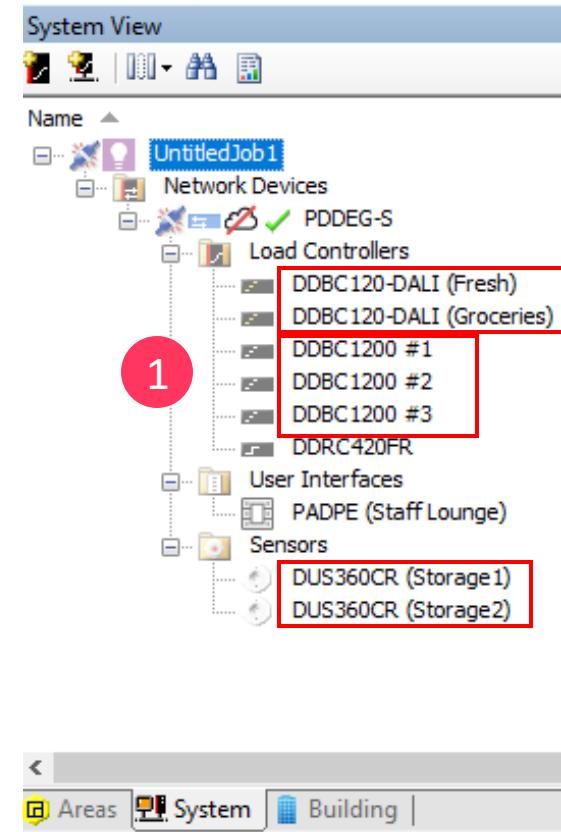
### Rename Devices

When the same type of device exists multiple times in the system, make sure to **change the name and make it unique.**

1. In the **System** view, right-click on the **Device** and select **Rename**.

Assign unique names, for example:

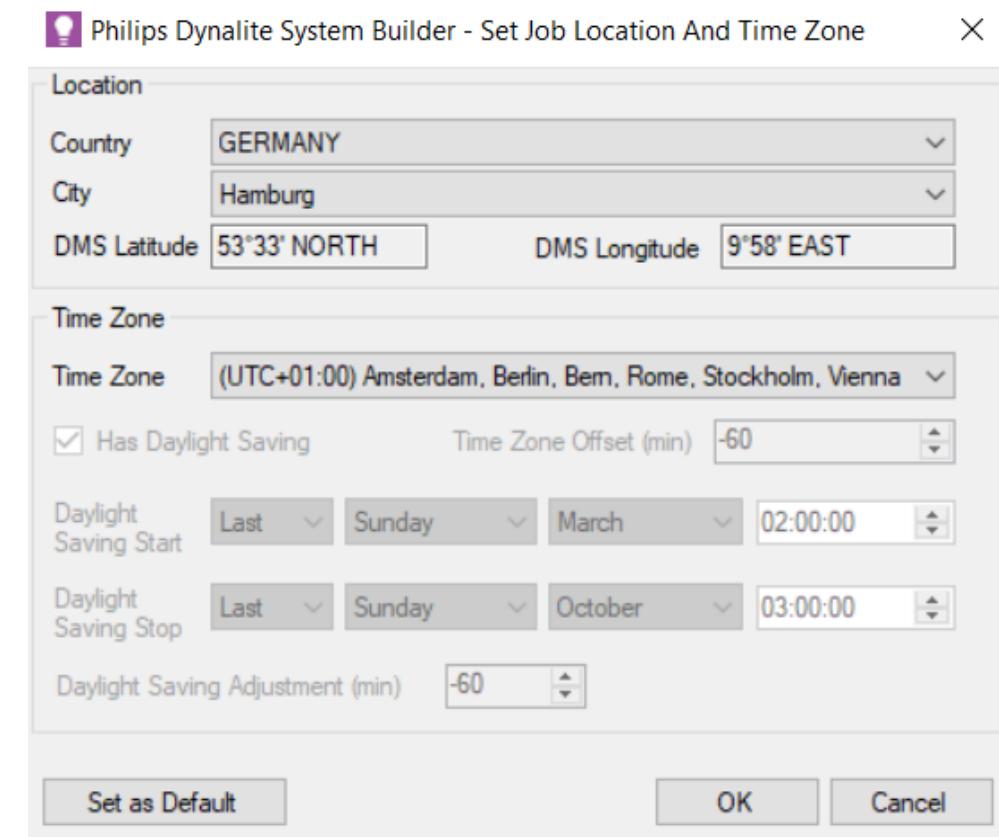
- **3xDDBC1200** → DDBC1200 #1, DDBC1200 #2, DDBC1200 #3
- **2xDUS360CR** → DUS360CR (Storage1), DUS360CR (Storage2)
- **2xDDBC120** → DDBC120-DALI (Fresh), DDBC120-DALI (Groceries)



**System Builder** | Mandatory configuration – Job Time Zone

Last step is to double check that Job file Location and Time Zone match the same settings than the PDDEG-S. For that:

1. Go to Tools from the top bar menu.
2. Select Set Location and Time Zone.
3. Edit the settings if needed to match the project gateway.
4. Click OK to ensure the change applies.

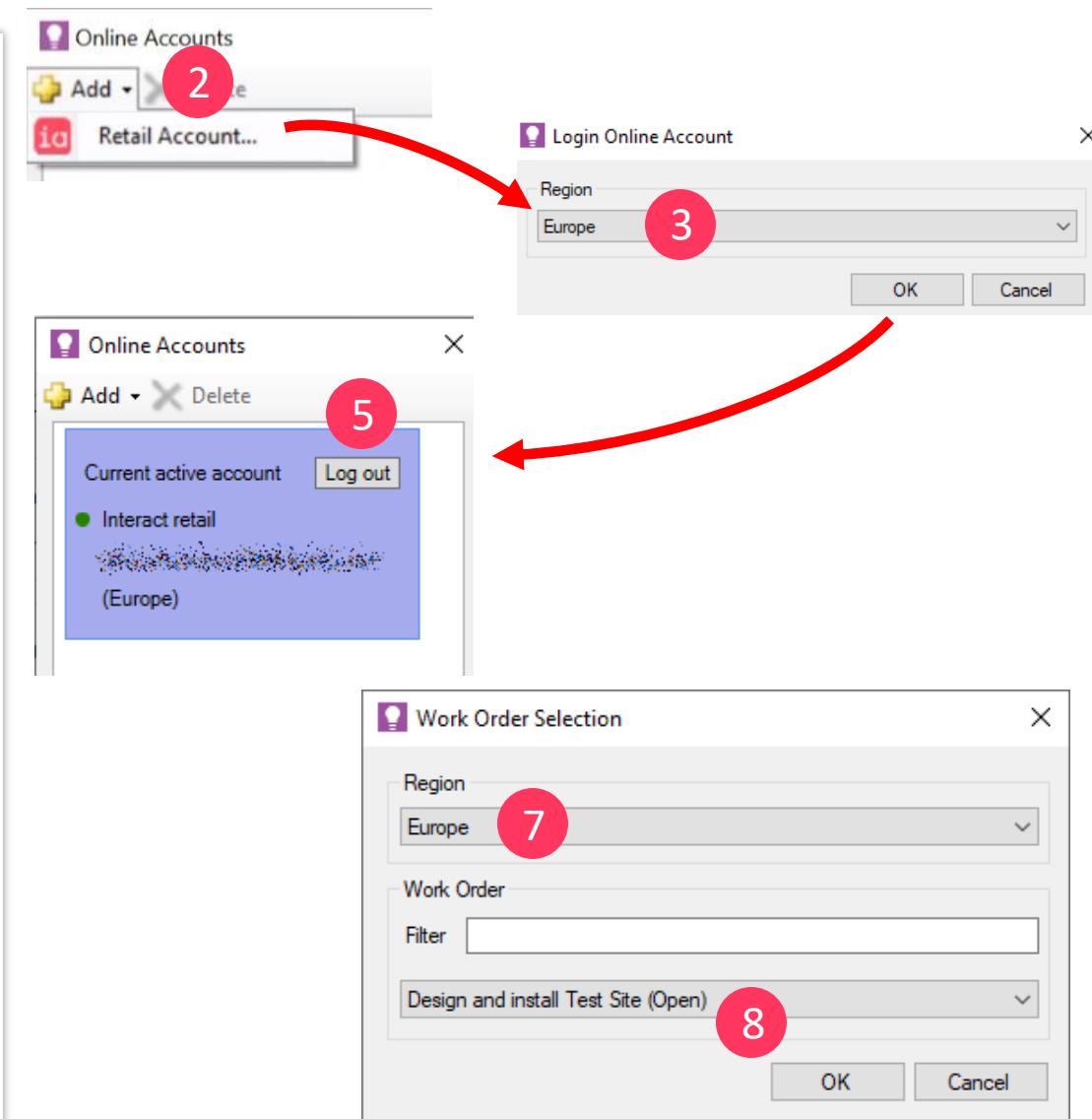


## System Builder | Save job data to the cloud

### Login to the cloud

The **user account** must be registered in **Microsoft Azure Active Directory** before you can login to the **Retail Account**.

1. On the **Tools** menu, click **Online Accounts**
2. Click **Add**, and select **Retail Account**
3. Select **Europe** as a region, and click **OK**
4. Select your account to login to. If required, fill in your password
5. Account has been linked with Interact cloud



### Save job file to the cloud

6. On the **File** menu, click **Save As** and select **Save Job To Cloud**
7. In the **Work Order Selection** menu, select the Region: Europe
8. Find and choose applicable work order, then click **OK**

Wait until the file is successfully saved to the cloud. Confirm this in the **Application** logs

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**Configure metered energy**

Architecture FLX - Multisite

### Multisite metered energy | Introduction

Configuration of energy metering is only required when smart meters are used to measure energy consumption. Otherwise, this step can be skipped.

Before you start creating the configurations for metered energy, make sure to:

- Obtain and read the most recent documentation of the selected meter
- Make sure that you understand the specifications of the selected meter and how to implement it.
- Always follow the installation manual of the meter; contact the support line of the manufacturer of the meter in case of any questions



### Multisite metered energy | Preparation

In order to configure Metered Energy, following components are required:

#### System Builder

- Latest version, available on [Dynalite.com](https://www.dynalite.com)
- **Technician** license → [Support.controls@signify.com](mailto:Support.controls@signify.com)

#### Firmware

- PDDEG-S version: 1.23 or higher
- PDEG/PDEB version: 3.58 or higher



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## Multisite metered energy | Preparation

## Offsite preparation

- .
- .
- .

2

## Prepare System Builder job file

- Start with System Designer mode
- Finalize logical hierarchy
- Set Base Link Areas and channel loads
- Configure PDDEG-S Gateway
- Create preset placeholders
- Configure Manual Override, BMS and Alarm integrations
- Configure controllers, sensors, UI's
- Configure Job file time zone
- **Save job file to the Cloud and close it.**

A

**Step A** – generic Multisite Offsite System Builder job file preparation**Step B** – additional Metered Energy configurations**B1**: Modbus RS 485**B2**: Modbus IP**Important:** to configure **Metered Energy**, Step A must be accomplished prior to Step B

## Metered Energy configurations

## Modbus RS485 (RTU)

**or**

## Modbus IP (TCP)

**B1**

- **Open job file from the Cloud**
- Additional PDDEG-S configurations
- Add and configure Modbus Meters
- Add and configure PDEG/PDEB/DDNG485
- Save job file to the Cloud

B2

interact

interact

# **Configure Modbus RS485 metering with PDEB/PDEG**

Architecture FLX - Multisite

## Metered energy - Modbus RS485 | Additional PDDEG-S configurations

Ensure System Builder job file is closed before running these steps:

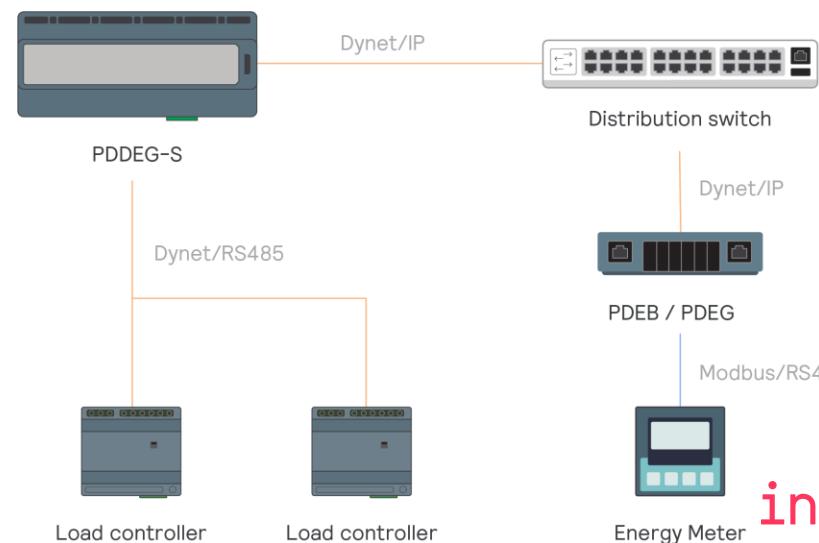
1. Open Job file from the Cloud.
2. In the System View, click on PDDEG-S.
3. On the Ports tab, change the setting **Use static IP address** to **True**. Specify static IP address, Subnet mask and network Gateway IP address.
4. On the Ports tab, create an additional IPv4 Server Port, configured as shown on the picture.
5. Ensure all routs are configured in the Routing tab.

IPv4	
IPv4 ports	Enabled
Use static IP address	True
IP Address	192.168.1.20
Gateway	192.168.1.1
Subnet mask	255.255.255.0
DNS server	8.8.8.8

Port	Type, Index	Connection	Description
Comm Port 1	1, 1	Spur	Baudrate: 9600
IPv4 Port 1	2, 1	Spur	TCP Server, Port: 50000
Web Socket 1 / ...	5, 1	Trunk	

Port	
Port type	DyNet2
Mode	Server
Port Number	50000
Protocol	TCP
Flags	
Secure port	False
Connection	Spur
Area zero transmit	Disabled
Sign on at start up	Enabled

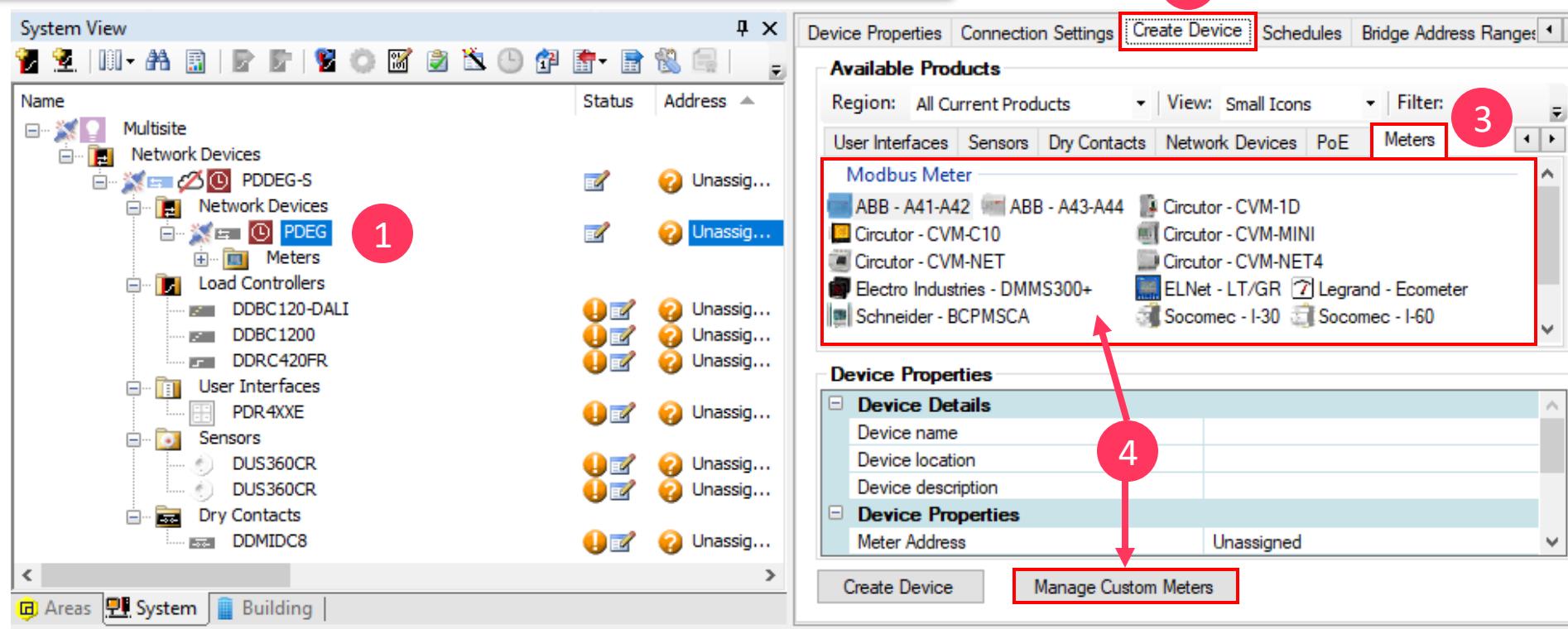
New Routing			
Enable	From	To	Filters
<input checked="" type="checkbox"/>	IPv4 Port 1, Spur, TCP Server, Port: 50000	Web Socket Port 1 / Cloud Connection , Trunk	No filter
<input checked="" type="checkbox"/>	Web Socket Port 1 / Cloud Connection , Trunk	IPv4 Port 1, Spur, TCP Server, Port: 50000	No filter
<input checked="" type="checkbox"/>	Internal Messages	Web Socket Port 1 / Cloud Connection , Trunk	No filter
<input checked="" type="checkbox"/>	Internal Messages	IPv4 Port 1, Spur, TCP Server, Port: 50000	No filter
<input checked="" type="checkbox"/>	IPv4 Port 1, Spur, TCP Server, Port: 50000	IPv4 Port 1, Spur, TCP Server, Port: 50000	No filter
<input checked="" type="checkbox"/>	Metrics Collection	Web Socket Port 1 / Cloud Connection , Trunk	No filter
<input checked="" type="checkbox"/>	Internal Messages	Comm Port 1, Spur	No filter
<input checked="" type="checkbox"/>	Comm Port 1, Spur	Web Socket Port 1 / Cloud Connection , Trunk	No filter
<input checked="" type="checkbox"/>	Web Socket Port 1 / Cloud Connection , Trunk	Comm Port 1, Spur	No filter
<input checked="" type="checkbox"/>	Metrics Collection	IPv4 Port 1, Spur, TCP Server, Port: 50000	No filter
<input checked="" type="checkbox"/>	Metrics Collection	Comm Port 1, Spur	No filter



## Metered energy - Modbus RS485 | Add and configure Modbus meters

To add Modbus meters:

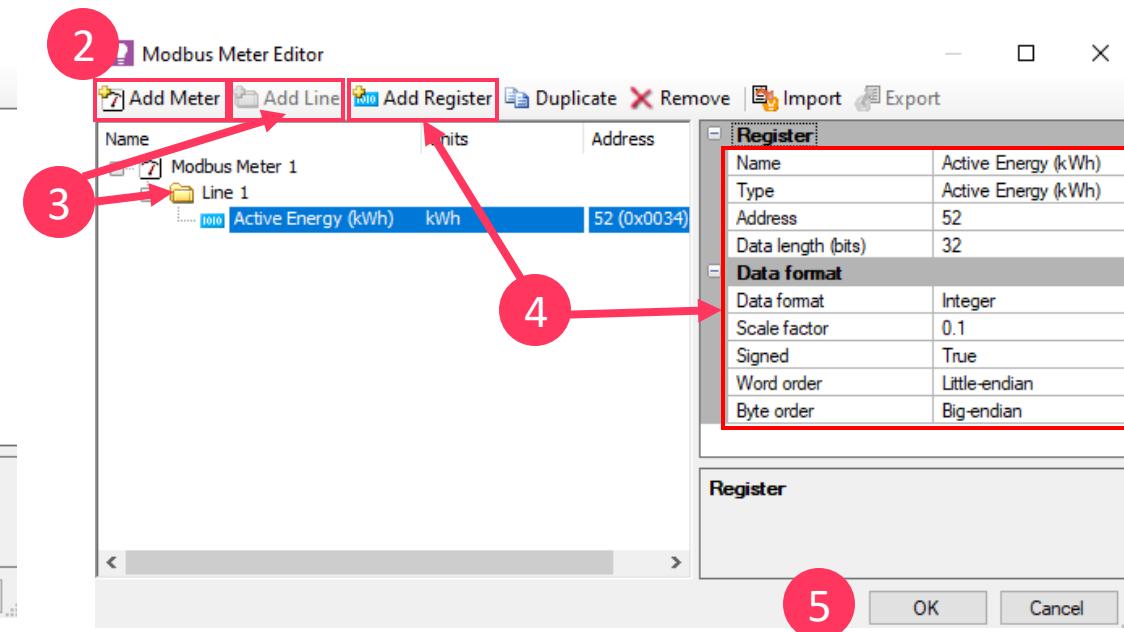
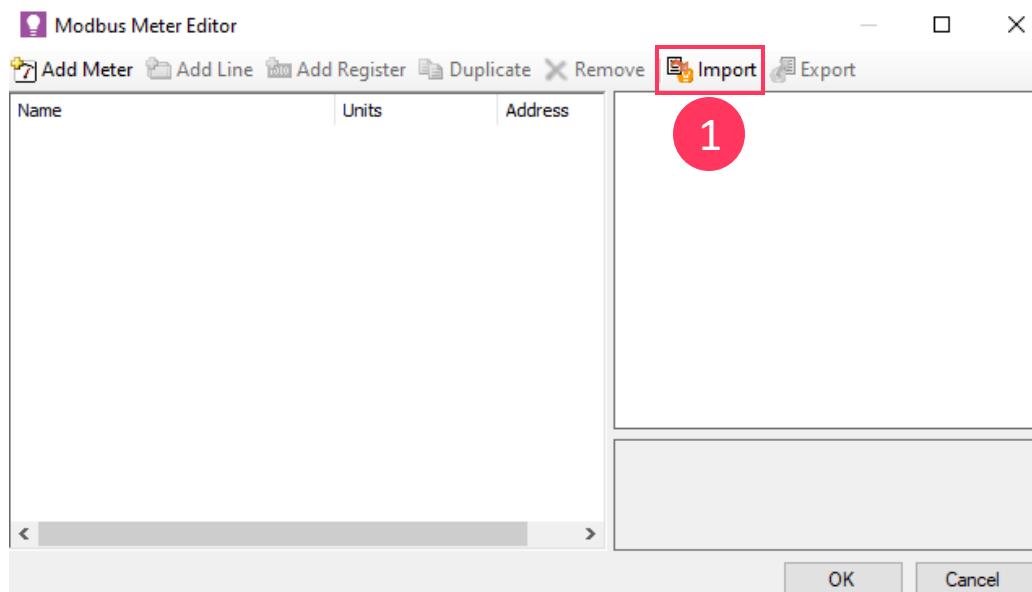
1. In the **System** view, add **PDEG/PDEB** device under **PDDEG-S**, and click on it.
2. Go to the **Create Device** tab.
3. Select **Meters** tab.
4. Choose **Modbus Meter** from the existing list or click **Manage Custom Meters**



## Metered energy - Modbus RS485 | Add and configure Modbus meters

When selected **Manage Custom Meters**:

1. Click **Import**, to load Modbus meter from the external \*.mmx file, for example → **Carel MT300W3200.mmx**  
or,
2. Click **Add Meter**.
3. Create a **Line**.
4. **Add Register** and configure as an **Active Energy** register, according to Modbus Meter technical documentation.
5. Click **OK**.



interact

## Metered energy - Modbus RS485 | Add and configure Modbus meters

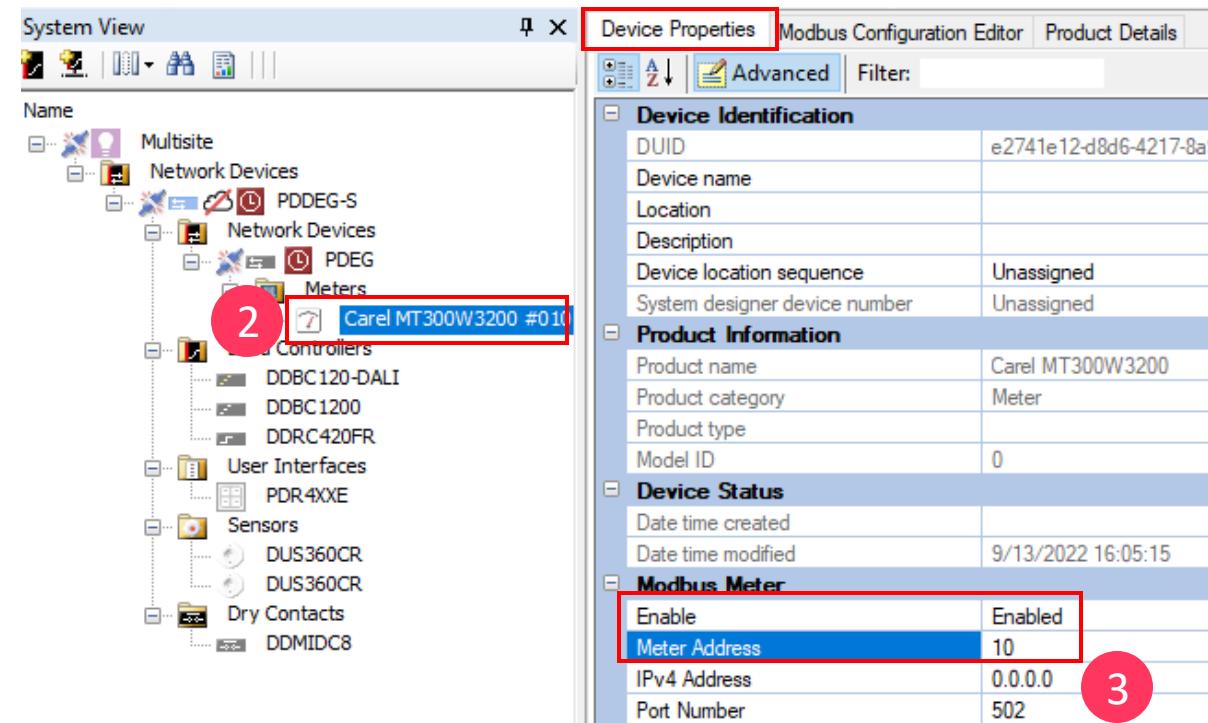
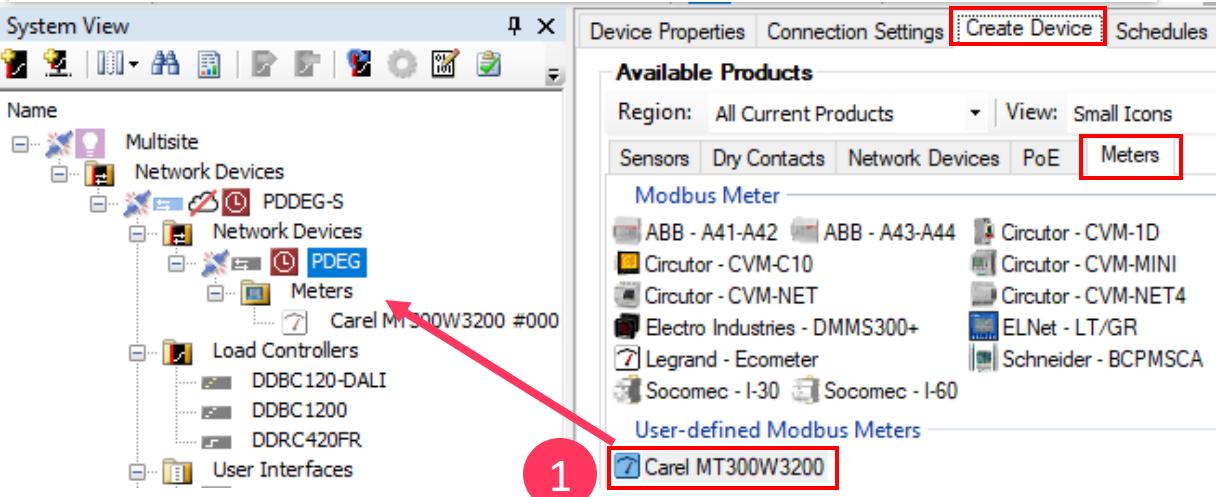
Custom meter will appear on **Meters** list (PDEG --> *Create Device* tab)

### 1. Drag & Drop Custom Meter under PDEG/PDEB.

From now onwards, all the steps are relevant for Modbus meters added from SB list or created as Custom Meters

### 2. Click on the Modbus Meter.

### 3 On the Device Properties tab, specify **Meter Address** and ensure meter is **Enabled**.



## Metered energy - Modbus RS485 | Add and configure Modbus meters

Having selected Modbus meter in the System view:

1. Go to **Modbus Configuration Editor** tab.
2. Enable an **Active Energy** register.
3. In a **Power Zone** column, assign desired **Power Zone** to the **Active Energy** register.

Modbus Device Channel Assignment						
Name	Enabled	Value	Units	Address	Power	Power Zone
1010 Phase L1-N (V)	<input type="checkbox"/>		V	0 (0x0000)		
1010 Phase L2-N (V)	<input type="checkbox"/>		V	2 (0x0002)		
1010 Phase L3-N (V)	<input type="checkbox"/>		V	4 (0x0004)		
1010 average phase-neutral S...	<input type="checkbox"/>		V	36 (0x0024)		
Assigned Circuits						
Voltage:						
1010 Phase L1-L2 (V)	<input type="checkbox"/>		V	6 (0x0006)		
1010 Phase L2-L3 (V)	<input type="checkbox"/>		V	8 (0x0008)		
1010 Phase L3-L1 (V)	<input type="checkbox"/>		V	10 (0x000A)		
1010 average phase-phase S...	<input type="checkbox"/>		V	38 (0x0026)		
Assigned Circuits						
Power factor:						
1010 phase L1	<input type="checkbox"/>		PF	46 (0x002E)		
1010 phase L2	<input type="checkbox"/>		PF	47 (0x002F)		
1010 phase L3	<input type="checkbox"/>		PF	48 (0x0030)		
1010 SE	<input type="checkbox"/>		PF	49 (0x0031)		
Assigned Circuits						
SE:						
1010 phase sequence	<input type="checkbox"/>		Other	50 (0x0032)		
1010 frequency (Hz)	<input type="checkbox"/>		Hz	51 (0x0033)		
1010 Active energy SE (kWh)	<input checked="" type="checkbox"/>		kWh	52 (0x0034)		
Assigned Circuits						
Apparent power:						
Reactiv inductive energy						
Reactiv capacitive energy?						
50						
1010 Active energy SE (kWh)	<input checked="" type="checkbox"/>		kWh	52 (0x0034)		

Modbus Device Channel Assignment						
Name	Ena...	Value	Units	Address	Power Zone	
THD:						
Current:						
Voltage:						
Voltage:						
Power factor:						
SE:						
1010 phase sequence	<input type="checkbox"/>		Other	50 (0x0032)		
1010 frequency (Hz)	<input type="checkbox"/>		Hz	51 (0x0033)		
1010 Active energy SE (kWh)	<input checked="" type="checkbox"/>		kWh	52 (0x0034)	HVAC	
Assigned Circuits						
Apparent power:						
Reactiv inductive energy						
Reactiv capacitive energy?						
Lighting						
Clear						

interact

## Metered energy - Modbus RS485 | Add and configure PDEG/PDEB

In order to configure **PDEG/PDEB** as a Modbus gateway:

1. Configure **PDEG/PDEB** IP address, Gateway and Subnet. PDEG must belongs to the same network as PDDEG-S.
2. On the **Ports** tab, create an additional **IPv4 Client** Port, indicating PDDEG-S IP address as a **Hostname**. Apply all shown settings.
3. On the **Ports** tab, configure **Comm Port 1** as a **Modbus Gateway** type. Apply all indicated settings.
4. Cross check routing setting on the **Routing** tab.
5. On the **Metrics** tab, ensure **Total Energy Consumption** metric **Polling Interval** is set to **15 minutes**.

2

Port	Type, Index	Connection	Description
Comm Port 1	1, 1	Spur	Baudrate: 38400
IPv4 Port 1	2, 1	Spur	TCP Client, IP: 192.168.1.20, Port: 50000

3

Port	Port type	Modbus gateway
Comm Port 1	1, 1	38400
IPv4 Port 1	2, 1	5
		Retry delay (milliseconds)
		300
		Port mode
		Half duplex
		Data bits
		Data bits 8
		Parity
		Parity none
		Stop bits
		Stop bits 1
		DMX max Channel
		65535
		Trust DyNet
		True
		Pass Non DyNet
		True
		Pass DyNet
		True
		Handshake
		RS485
		Zero DMX levels enabled
		True
		Modem
		False
		Echo
		False
		Query Delay
		65535

4

Enable	From	To	Filters
<input checked="" type="checkbox"/>	Comm Port 1, Spur	IPv4 Port 1, Spur, TCP Client, IP: 192.168.1.20, Port: 50000	No filter
<input checked="" type="checkbox"/>	IPv4 Port 1, Spur, TCP Client, IP: 192.168.1.20, Port: 5...	Comm Port 1, Spur	No filter
<input checked="" type="checkbox"/>	Internal Messages	IPv4 Port 1, Spur, TCP Client, IP: 192.168.1.20, Port: 50000	No filter
<input checked="" type="checkbox"/>	Metrics Collection	IPv4 Port 1, Spur, TCP Client, IP: 192.168.1.20, Port: 50000	No filter

5

Metric	Metric type	Total Energy Consumption (Modbus)
Metric	Enabled	Enabled
Method	Polling	Polling
Port type	Comm Port	Comm Port
Protocol	Modbus gateway	Modbus gateway
Polling interval	00:15:00	00:15:00
Number of registers	2	2
Data format	Integer	Integer
Scale factor	0.1	0.1
Signed	True	True
Word order	Little-endian	Little-endian
Byte order	Big-endian	Big-endian

interact

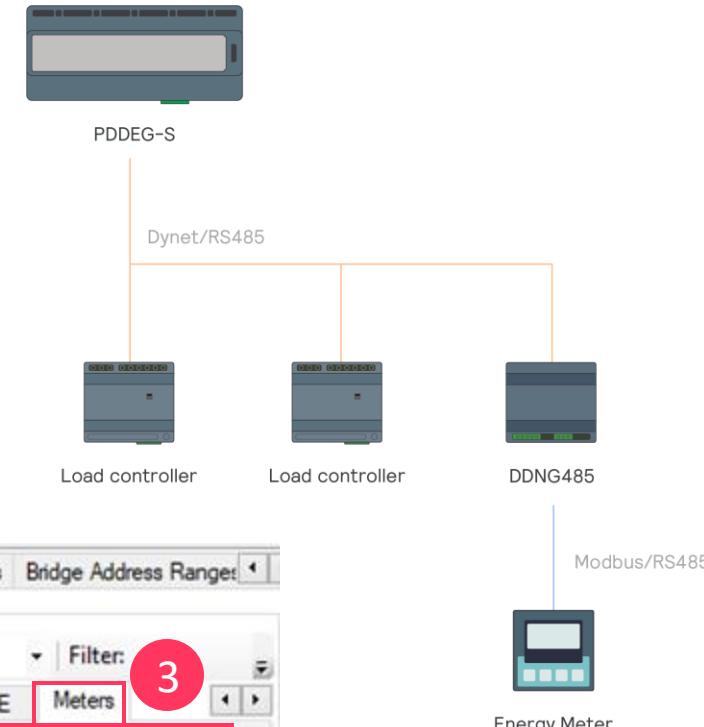
# **Configure Modbus RS485 metering with DDNG485**

Architecture FLX - Multisite

## Metered energy - Modbus RS485 | Add and configure Modbus meters

To add Modbus meters:

1. In the **System** view, add new **DDNG485** device under **PDDEG-S**, and click on it.
2. Go to the **Create Device** tab.
3. Select **Meters** tab.
4. Choose **Modbus Meter** from the existing list or click **Manage Custom Meters**

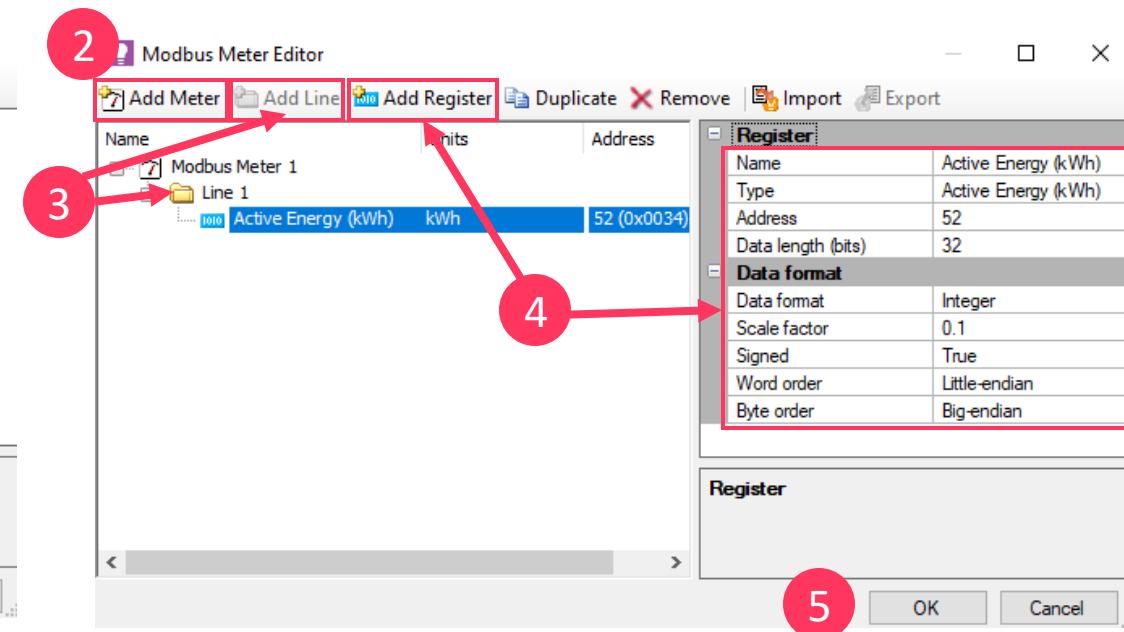
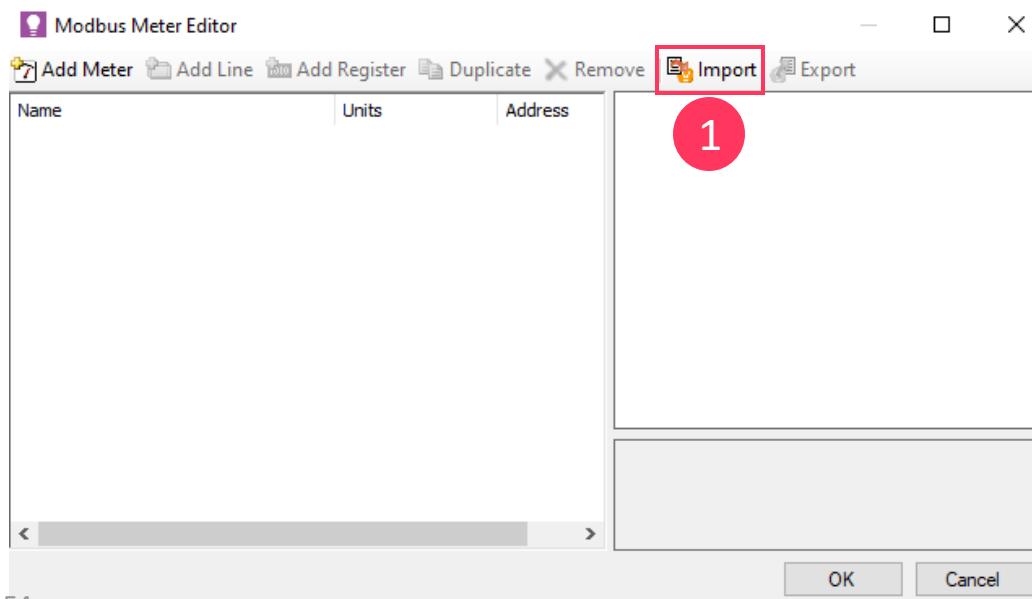


The screenshot shows the software interface for device management. The left pane is the 'System View' showing a tree structure of network devices, including 'Multisite', 'Network Devices' (with 'PDDEG-S' and 'DDNG485' selected), 'Load Controllers', 'User Interfaces', 'Sensors', and 'Dry Contacts'. The 'DDNG485' node is circled with a red number '1'. The right pane shows the 'Create Device' tab selected. The 'Available Products' section has a 'Meters' tab highlighted with a red circle '3' and a red box around the 'Modbus Meter' list, which contains items like ABB - A41-A42, ABB - A43-A44, Circutor - CVM-1D, etc. The 'Device Properties' panel shows fields for 'Device Details' (Device name, Device location, Device description) and 'Device Properties' (Meter Address, currently 'Unassigned'). A red circle '4' with an arrow points from the 'Device Properties' panel down to the 'Manage Custom Meters' button at the bottom of the right pane.

## Metered energy - Modbus RS485 | Add and configure Modbus meters

When selected **Manage Custom Meters**:

1. Click **Import**, to load Modbus from the external \*.mmx file, for example → **Carel MT300W3200.mmx**  
or,
2. Click **Add Meter**.
3. Create a **Line**.
4. **Add Register** and configure an **Active Energy** register, according to Modbus Meter technical documentation.
5. Click **OK**.



interact

## Metered energy - Modbus RS485 | Add and configure Modbus meters

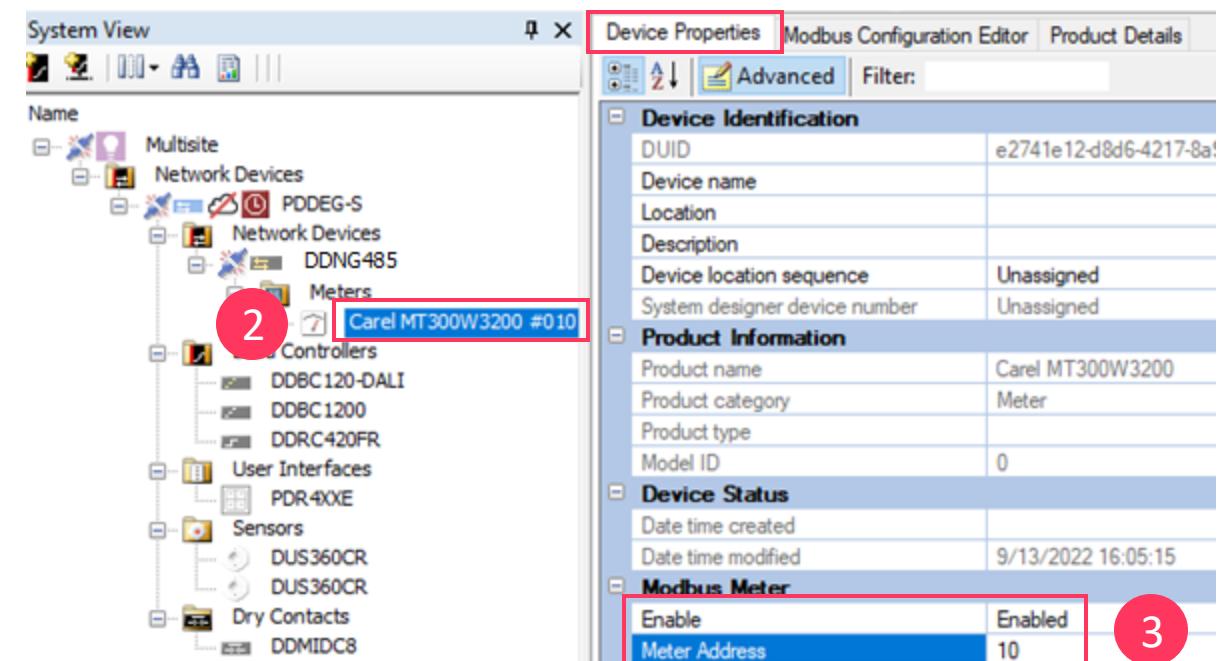
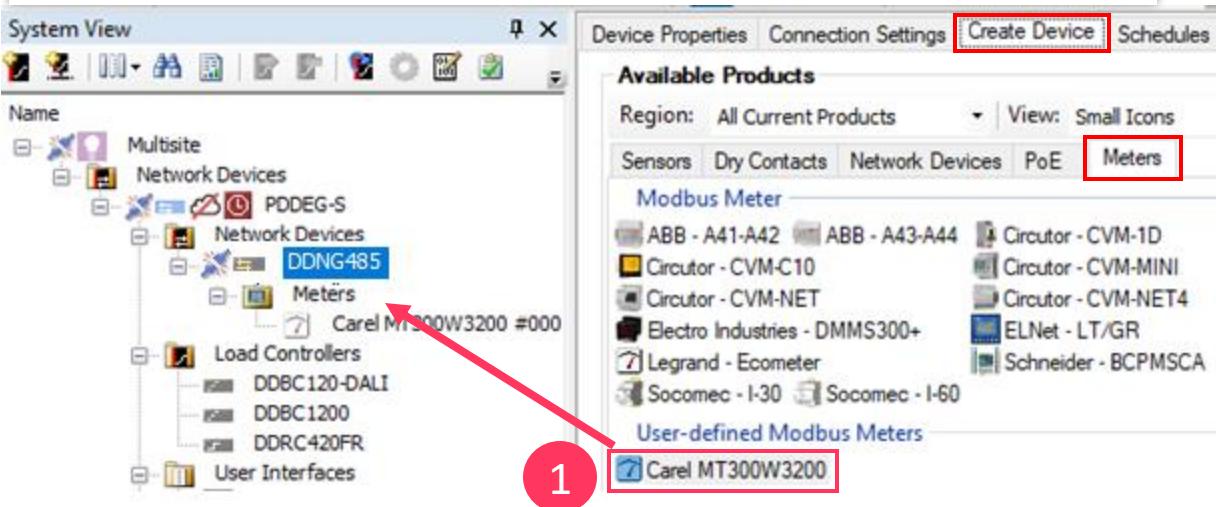
Custom meter will appear on **Meters** list (DDNG485 --> *Create Device* tab)

### 1. Drag & Drop Custom Meter under DDNG485.

From now onwards, all the steps are relevant for Modbus meters added from SB list or created as Custom Meters

### 2. Click on the Modbus Meter.

### 3 On the **Device Properties** tab, specify **Meter Address** and ensure meter is **Enabled**.



## Metered energy - Modbus RS485 | Add and configure Modbus meters

Having selected Modbus meter in the System view:

1. Go to **Modbus Configuration Editor** tab.
2. Enable an **Active Energy** register.
3. In a **Power Zone** column, assign desired **Power Zone** to the **Active Energy** register.

Device Properties Modbus Configuration Editor **Product Details**

Modbus Device Channel Assignment

1

Name	Enabled	Value	Units	Address	Power Zone
1010 Phase L1-N (V)	<input type="checkbox"/>	V	0 (0x0000)		
1010 Phase L2-N (V)	<input type="checkbox"/>	V	2 (0x0002)		
1010 Phase L3-N (V)	<input type="checkbox"/>	V	4 (0x0004)		
1010 average phase-neutral S...	<input type="checkbox"/>	V	36 (0x0024)		
Assigned Circuits					
Voltage:					
1010 Phase L1-L2 (V)	<input type="checkbox"/>	V	6 (0x0006)		
1010 Phase L2-L3 (V)	<input type="checkbox"/>	V	8 (0x0008)		
1010 Phase L3-L1 (V)	<input type="checkbox"/>	V	10 (0x000A)		
1010 average phase-phase S...	<input type="checkbox"/>	V	38 (0x0026)		
Assigned Circuits					
Power factor:					
1010 phase L1	<input type="checkbox"/>	PF	46 (0x002E)		
1010 phase L2	<input type="checkbox"/>	PF	47 (0x002F)		
1010 phase L3	<input type="checkbox"/>	PF	48 (0x0030)		
1010 SE	<input type="checkbox"/>	PF	49 (0x0031)		
Assigned Circuits					
SE:					
1010 phase sequence	<input type="checkbox"/>	Other	50 (0x0032)		
1010 frequency (Hz)	<input type="checkbox"/>	Hz	51 (0x0033)		
1010 Active energy SE (kWh)	<input checked="" type="checkbox"/>	kWh	52 (0x0034)		
Assigned Circuits					
Apparent power:					
Reactiv inductive energy					
Reactiv capacitive energy					
Clear					

2

Device Properties Modbus Configuration Editor Product Details

Modbus Device Channel Assignment

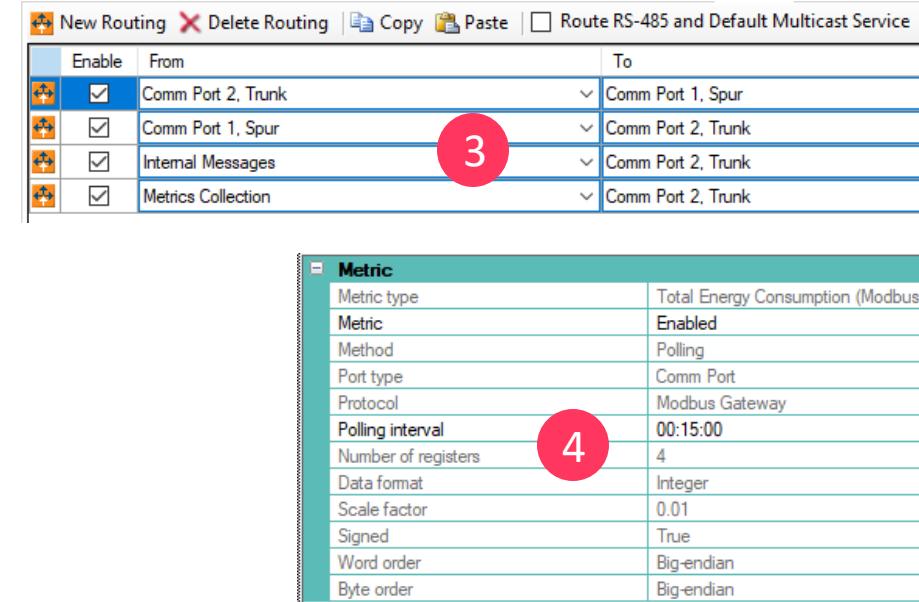
Name	Enabled	Value	Units	Address	Power Zone
THD:					
Current:					
Voltage:					
Voltage:					
Power factor:					
SE:					
1010 phase sequence	<input type="checkbox"/>	Other	50 (0x0032)		
1010 frequency (Hz)	<input type="checkbox"/>	Hz	51 (0x0033)		
1010 Active energy SE (kWh)	<input checked="" type="checkbox"/>	kWh	52 (0x0034)		
Assigned Circuits					
HVAC					
Lighting					
Clear					

3

## Metered energy - Modbus RS485 | Additional DDNG485 configurations

In order to finalize **DDNG485** configuration as a Modbus gateway:

1. In the **System** view select **DDNG485**.
2. Verify **Comm Port1** and **Com Port 2** configurations.
3. Cross check routing setting on the **Routing** tab.
4. On the **Metrics** tab, ensure **Total Energy Consumption** metric **Polling Interval** is set to **15 minutes**.

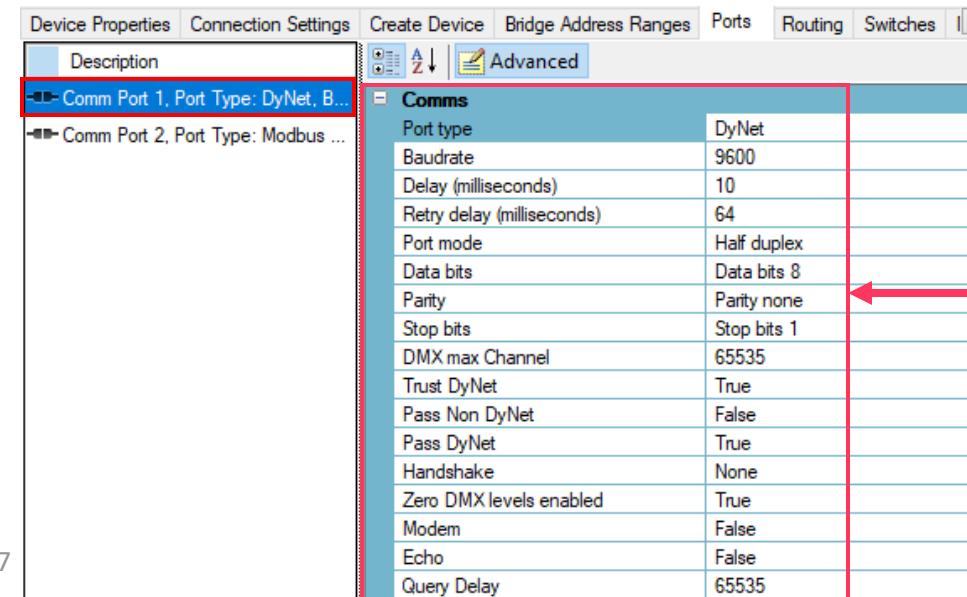


**Routing Tab (Top):**

Enable	From	To
<input checked="" type="checkbox"/>	Comm Port 2, Trunk	Comm Port 1, Spur
<input checked="" type="checkbox"/>	Comm Port 1, Spur	Comm Port 2, Trunk
<input checked="" type="checkbox"/>	Internal Messages	Comm Port 2, Trunk
<input checked="" type="checkbox"/>	Metrics Collection	Comm Port 2, Trunk

**Metrics Tab (Bottom):**

Metric	Value
Metric type	Total Energy Consumption (Modbus)
Metric	Enabled
Method	Polling
Port type	Comm Port
Protocol	Modbus Gateway
Polling interval	00:15:00
Number of registers	4
Data format	Integer
Scale factor	0.01
Signed	True
Word order	Big-endian
Byte order	Big-endian



**Comm Port 1 Configuration (Left):**

Description	Comm Port 1, Port Type: DyNet, B...
<b>Comms</b>	
Port type	DyNet
Baudrate	9600
Delay (milliseconds)	10
Retry delay (milliseconds)	64
Port mode	Half duplex
Data bits	Data bits 8
Parity	Parity none
Stop bits	Stop bits 1
DMX max Channel	65535
Trust DyNet	True
Pass Non DyNet	False
Pass DyNet	True
Handshake	None
Zero DMX levels enabled	True
Modem	False
Echo	False
Query Delay	65535

**Comm Port 2 Configuration (Right):**

Description	Comm Port 2, Port Type: Modbus ...
<b>Comms</b>	
Port type	Modbus Gateway
Baudrate	9600
Delay (milliseconds)	10
Retry delay (milliseconds)	64
Port mode	Half duplex
Data bits	Data bits 8
Parity	Parity none
Stop bits	Stop bits 1
DMX max Channel	65535
Trust DyNet	True
Pass Non DyNet	True
Pass DyNet	True
Handshake	None
Zero DMX levels enabled	True
Modem	False
Echo	False
Query Delay	65535

2

interact

interact

## Configure Modbus IP metering

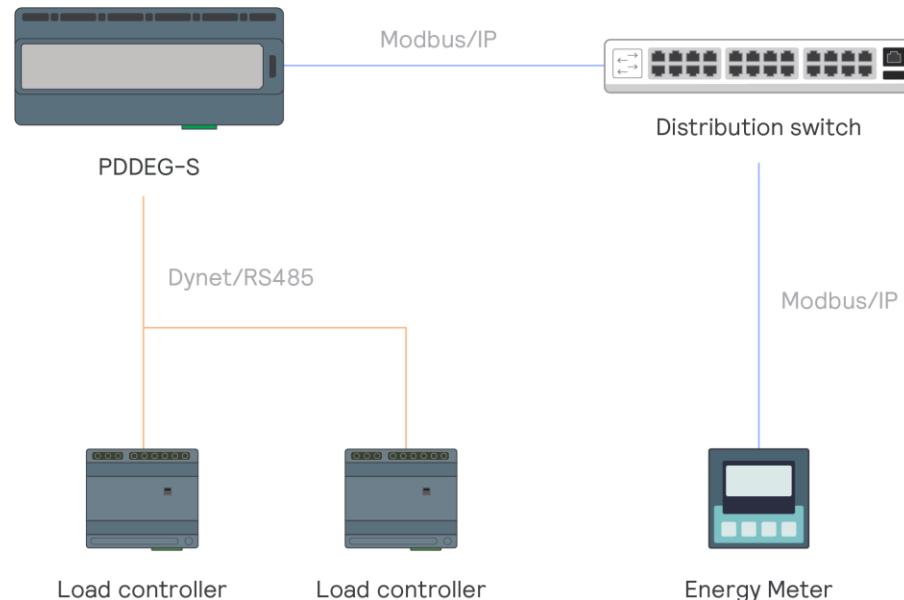
Architecture FLX - Multisite

## Metered energy - Modbus IP | Add and configure Modbus Meters

### Step B2: Open Job file from the Cloud

To add Modbus meters:

1. In the **System** view, click on **PDDEG-S**.
2. Go to the **Create Device** tab.
3. Select **Meters** tab.
4. Click **Manage Custom Meters**

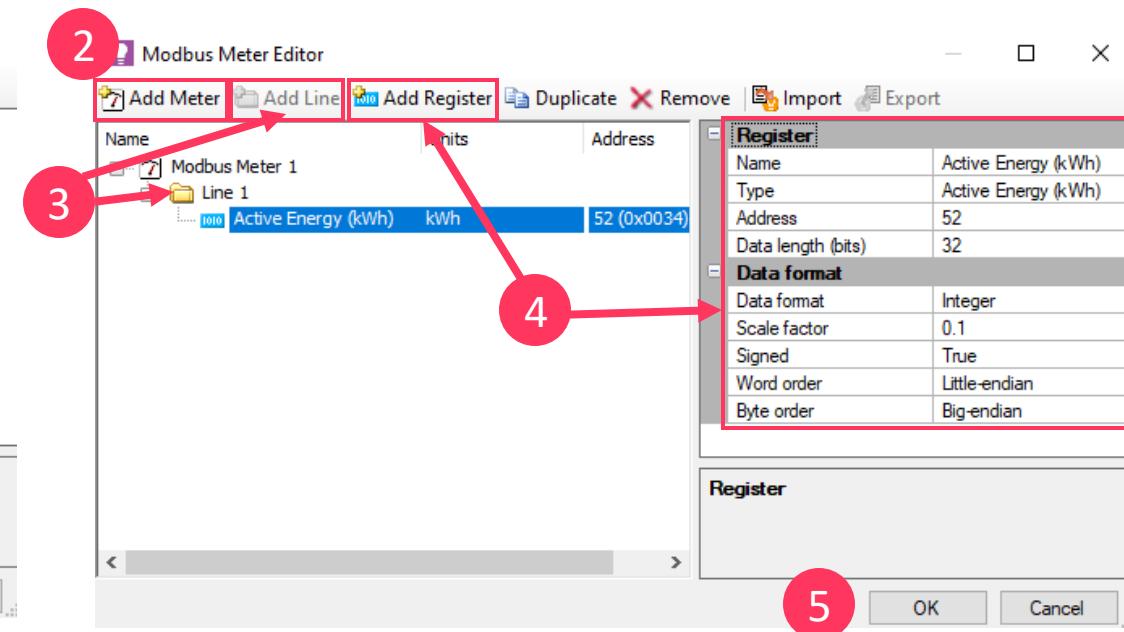
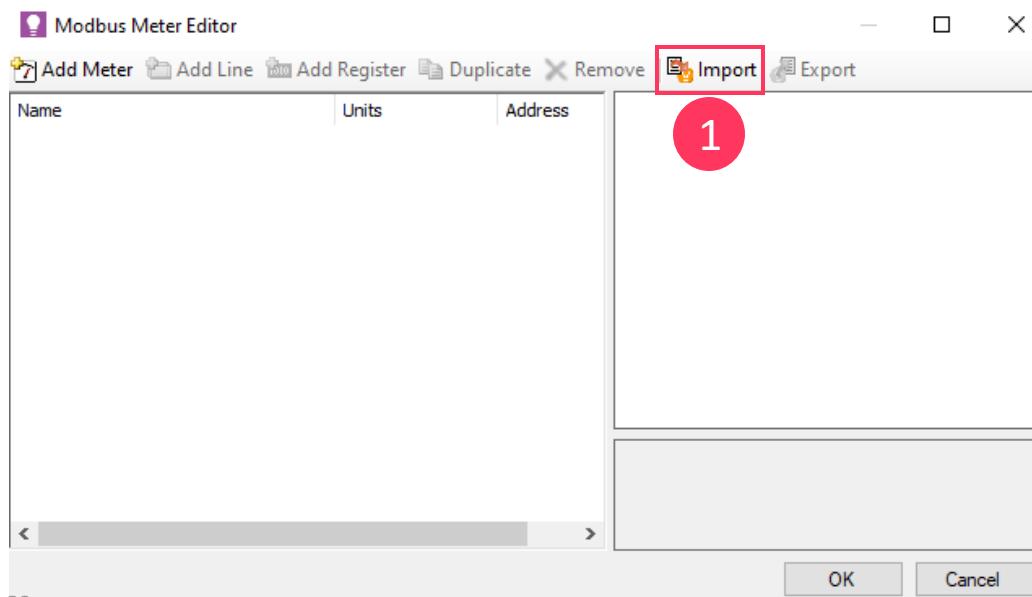


interact

## Metered energy - Modbus IP | Add and configure Modbus Meters

When selected **Manage Custom Meters**:

1. Click **Import**, to load Modbus from the external file
2. Click **Add Meter**
3. Create a **Line**
4. **Add Register** and configure an **Active Energy** register, according to Modbus Meter technical documentation.
5. Click **OK**

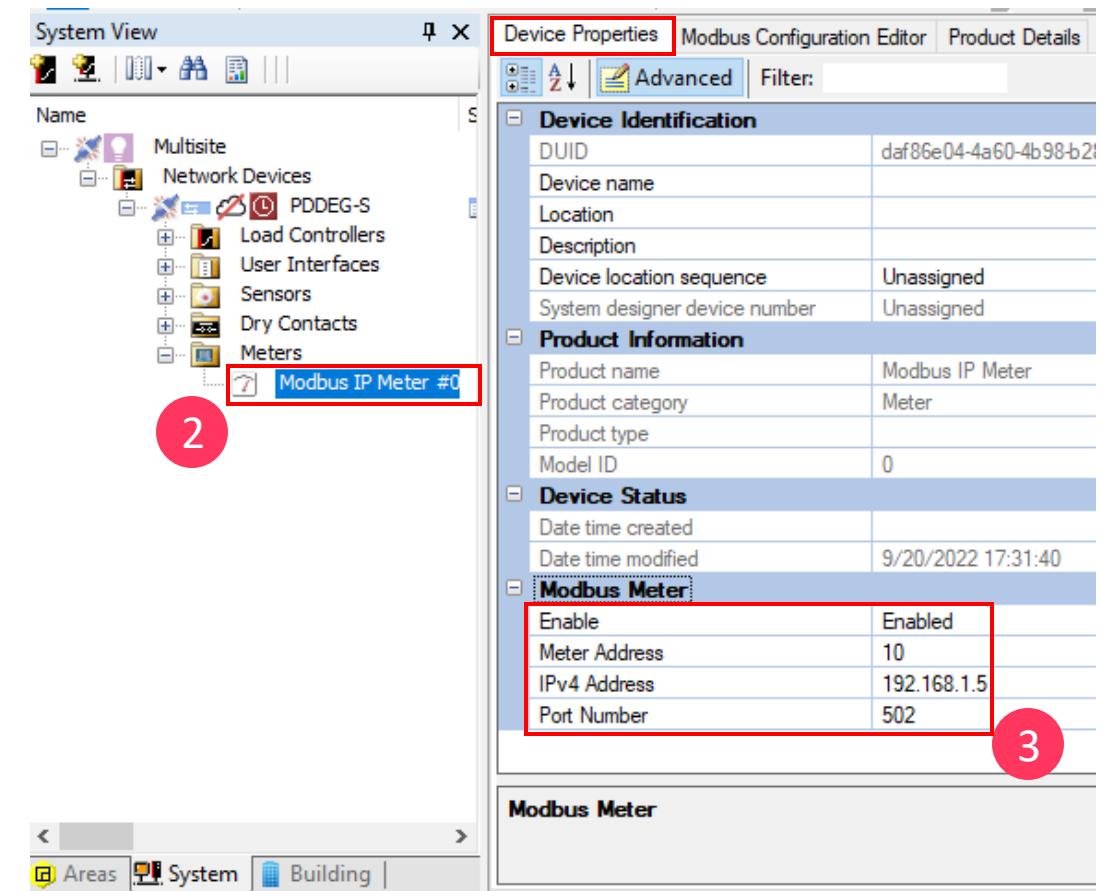
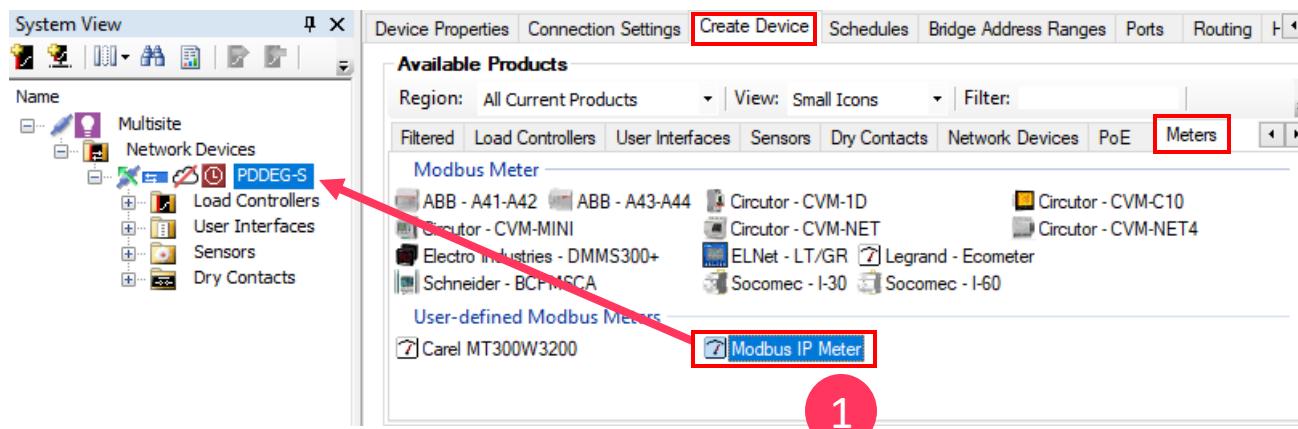


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## Metered energy - Modbus IP | Add and configure Modbus Meters

Custom meter will appear on **Meters** list (PDDEG-S-->Create Device tab)

1. **Drag & Drop** custom meter under **PDDEG-S**
2. **Click on** the Modbus Meter
3. **On the Device Properties tab**, specify **Meter Address** and ensure meter is **Enabled**. Fill in meter **IP address** and **Port number**.



## Metered energy - Modbus IP | Add and configure Modbus Meters

Having selected Modbus meter in the System view:

1. Go to **Modbus Configuration Editor** tab.
2. Enable an **Active Energy** register.
3. In a **Power Zone** column, assign desired **Power Zone** to the **Active Energy** register.

Modbus Device Channel Assignment					
Name	Enabled	Value	Units	Address	Power Zone
1010 Phase L1-N (V)	<input type="checkbox"/>		V	0 (0x0000)	
1010 Phase L2-N (V)	<input type="checkbox"/>		V	2 (0x0002)	
1010 Phase L3-N (V)	<input type="checkbox"/>		V	4 (0x0004)	
1010 average phase-neutral S...	<input type="checkbox"/>		V	36 (0x0024)	
Assigned Circuits					
Voltage:					
1010 Phase L1-L2 (V)	<input type="checkbox"/>		V	6 (0x0006)	
1010 Phase L2-L3 (V)	<input type="checkbox"/>		V	8 (0x0008)	
1010 Phase L3-L1 (V)	<input type="checkbox"/>		V	10 (0x000A)	
1010 average phase-phase S...	<input type="checkbox"/>		V	38 (0x0026)	
Assigned Circuits					
Power factor:					
1010 phase L1	<input type="checkbox"/>		PF	46 (0x002E)	
1010 phase L2	<input type="checkbox"/>		PF	47 (0x002F)	
1010 phase L3	<input type="checkbox"/>		PF	48 (0x0030)	
1010 SE	<input type="checkbox"/>		PF	49 (0x0031)	
Assigned Circuits					
SE:					
1010 phase sequence	<input type="checkbox"/>		Other	50 (0x0032)	
1010 frequency (Hz)	<input type="checkbox"/>		Hz	51 (0x0033)	
1010 Active energy SE (kWh)	<input checked="" type="checkbox"/>		kWh	52 (0x0034)	
Assigned Circuits					
Apparent power:					
Reactiv inductive energy					
Reactiv capacitive energy?					

Name	Enabled	Value	Units	Address	Power Zone
THD:					
Current:					
Voltage:					
Voltage:					
Power factor:					
SE:					
phase sequence	<input type="checkbox"/>		Other	50 (0x0032)	
frequency (Hz)	<input type="checkbox"/>		Hz	51 (0x0033)	
Active energy SE (kWh)	<input checked="" type="checkbox"/>		kWh	52 (0x0034)	HVAC
Assigned Circuits					Lighting
Apparent power:					Clear
Reactiv inductive energy					
Reactiv capacitive energy?					

interact

## Metered energy - Modbus IP | PDDEG-S configuration

In order to finalize **PDDEG-S** configuration for Metered Energy:

1. On the **Metrics** tab, ensure that **Total Energy Consumption** metric has a **Polling Interval** of **15** minutes

Metric	
Metric type	Total Energy Consumption (Modbus)
Metric	Enabled
Method	Polling
Port type	Ethernet
Protocol	Modbus gateway
Polling interval	00:15:00
Number of registers	2
Data format	Integer
Scale factor	0.1
Signed	True
Word order	Little-endian
Byte order	Big-endian

1

interact

## Plan installation and commissioning

Architecture FLX - Multisite

### Plan installation | Connectivity audit

#### Order hardware

System Designer tool can generate reports with complete overview of all designed in system components. Make sure all the hardware required for the project have been ordered.

#### Perform a connectivity audit

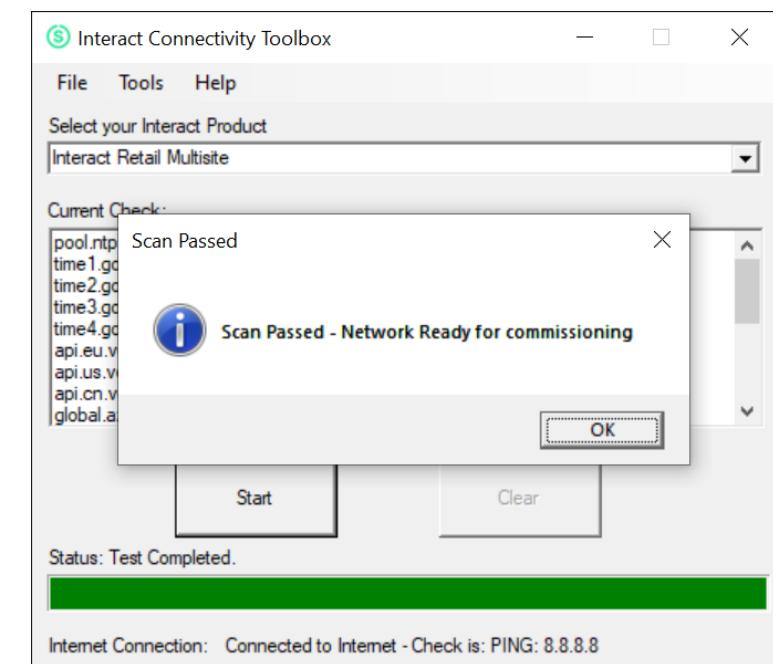
IT department of customer should be informed about number of endpoints which must be accessible from the internal network in order to provide gateway connectivity to Interact Cloud.

More information is available on the **Signify Partner Portal** in the **Security Statement** document.

To ensure customer IT infrastructure is ready for the Multisite installation, it is advised to run on the customer site an **Interact Connectivity Toolbox**.

Ideally, this should happen prior to the commissioning date, with close cooperation between Signify and customer's IT department.

1. Visit **Signify Partner Portal** and download **Interact Connectivity Toolbox** software and **Technical Note** document
2. Follow all the steps described in the **Technical Note**



## Plan commissioning | Preparation

Request work order for Site Engineer

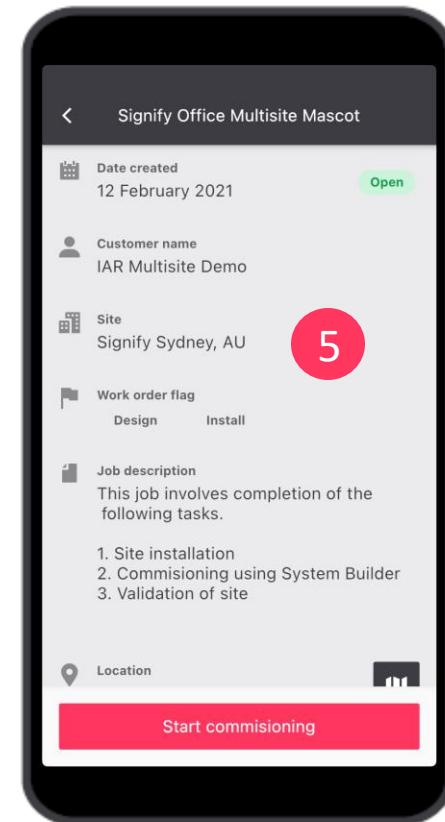
Before onsite activities, a work order for Site Engineer must be requested and proceeded by Global Software Operations team. The installer receives an email when the work order is assigned.

Install Interact Retail Install app

Before going onsite, install the **Interact Retail Install app** on the phone.

It is recommended to check if the **Interact Retail Install app** functions as expected to prepare for the onsite commissioning.

1. Open the app on your device
2. Select region: **Global**
3. Enter your username (email address), then tap **Next**
4. Enter your password. Tap **Sign In**
5. Select the **work order**. It is expected to observe work order summary page with a **Start Commissioning** button. **Do not start commissioning** before site visit.



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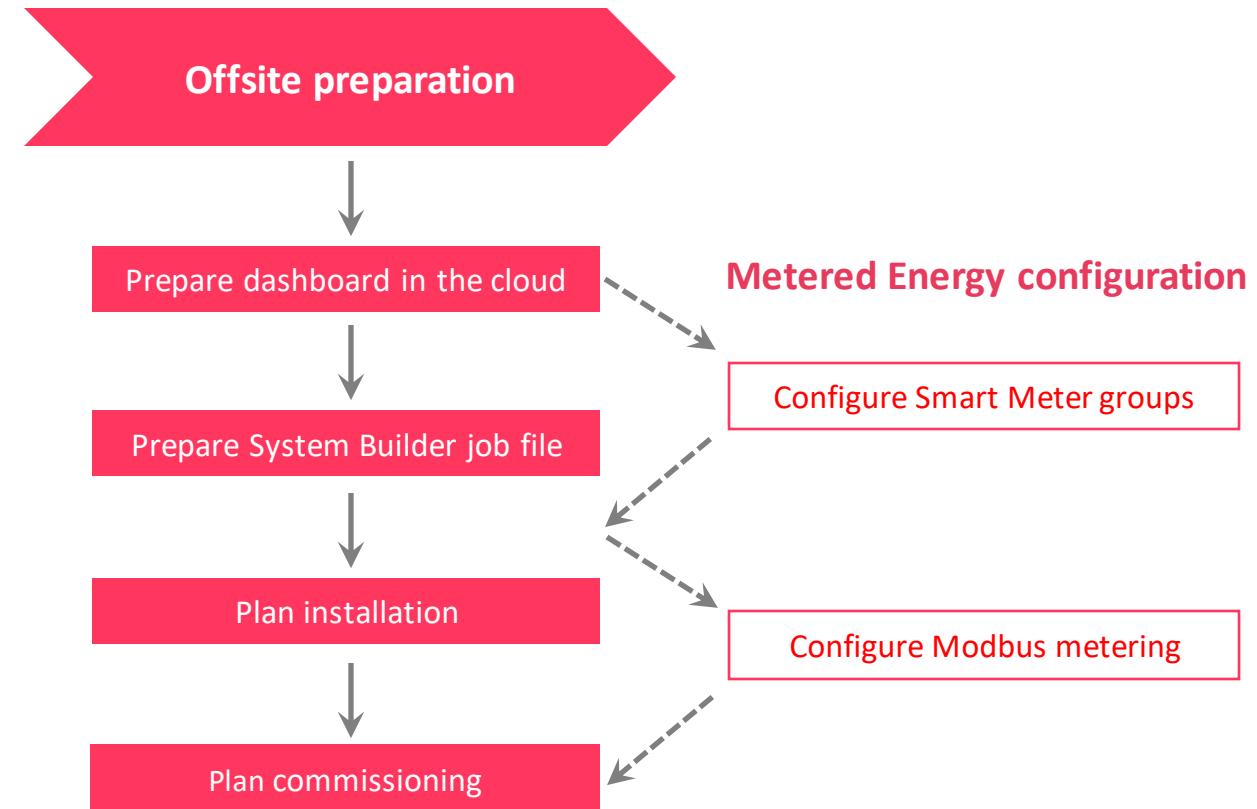
**Lesson review**

Architecture FLX - Multisite

## Lesson review | Onsite installation, commissioning and validation

In this lesson, you have learnt:

- Which are the steps to be taken in the offsite commissioning.
- Base Link Areas need to be defined and linked to each channel before uploading the System Builder file to the cloud. Plus, all the areas have 64 presets, devices have unique names, and the gateway have 100 schedules, 30 public holidays, and 30 special events.
- Manual Override integration features need the task and join additional configuration.
- Metered Energy configurations are only relevant for projects that are meant for monitoring of an Active Energy consumption through Modbus meters.



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