Installation

Ensure you have the following installed

Git

Docker

Docker Compose

Clone the git repository and branch to master with the following commands

git clone https://github.com/vinvic4life/kylin4.0.1-dockerfile.git -b master

cd into the directory kylin4.0.1-dockerfile

run the build script with

./build_standalone_image.sh

After build is complete,

Use the following command to start the app

docker-compose up -d

Allow up to 15 minutes to initialize all components depending on your Hardware specifications

Run the following command to ensure your container is running

docker ps

Access Kylin Gui with

http://127.0.0.1:7070/kylin

MDX Gui

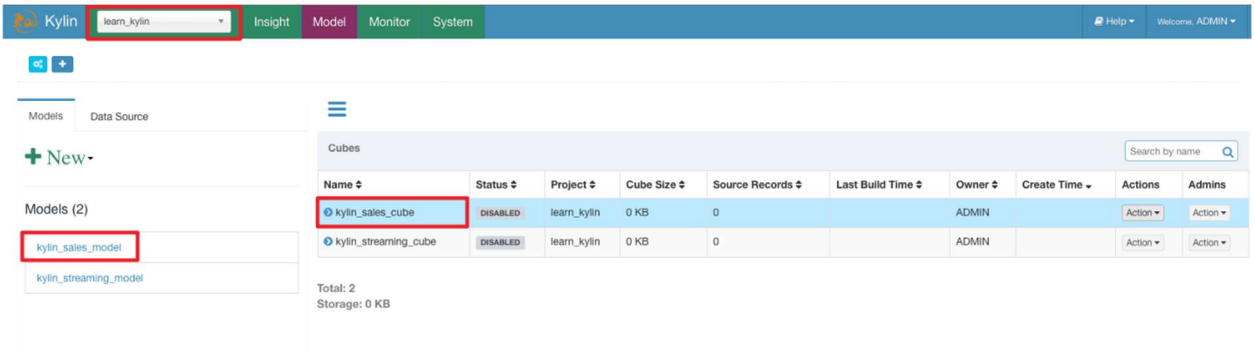
http://127.0.0.1:7080

To test connection with Excel using the sample data follow the steps below.

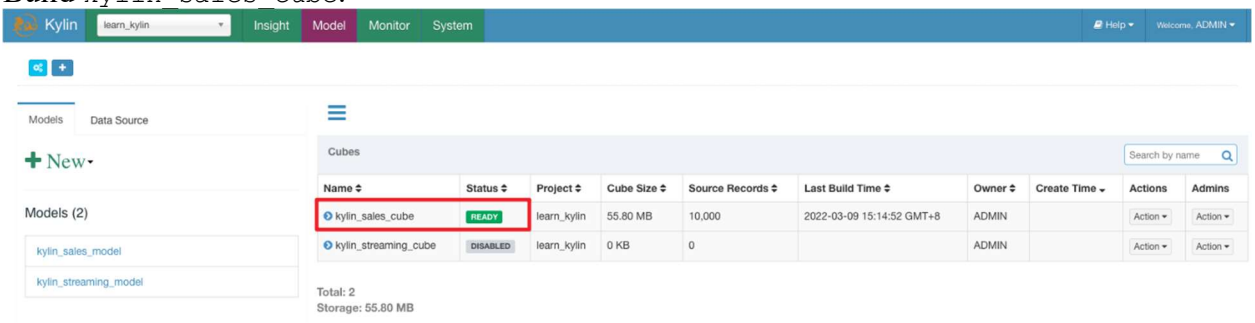
TEST With Sample Data

1. **Create Models/Cubes in Kylin**

   The current docker environment starts with the `learn_kylin` project by default, and generates `kylin_sales_model` and `kylin_sales_cube`.



2. Build `kylin_sales_cube`.

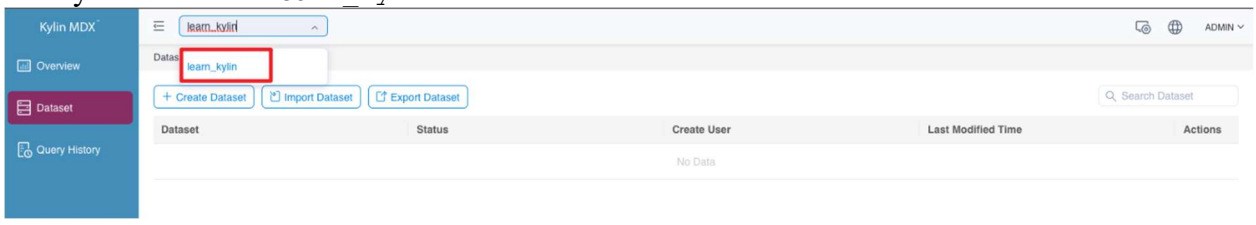


Create MDX Dataset

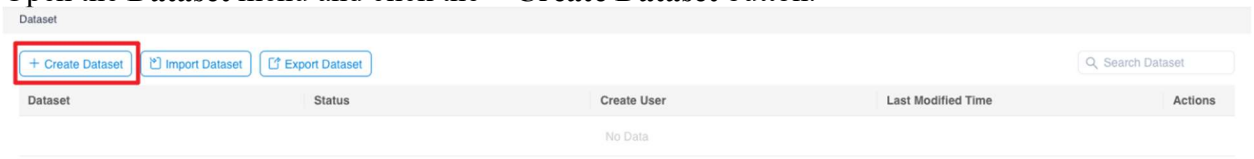
At this point, we have completed the preparation work, and then we should start creating MDX dataset.

Fill in the basic information

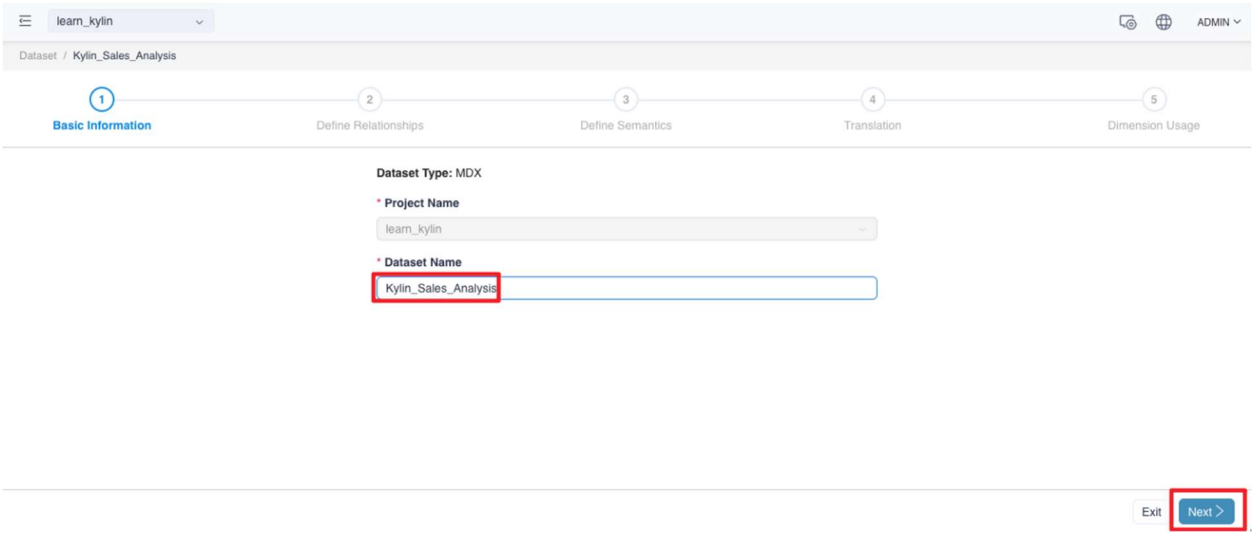
1. Since the Cube in Kylin is created in the project `learn_kylin`, the project name in MDX for Kylin should be `learn_kylin`.



2. Open the **Dataset** menu and click the + **Create Dataset** button.



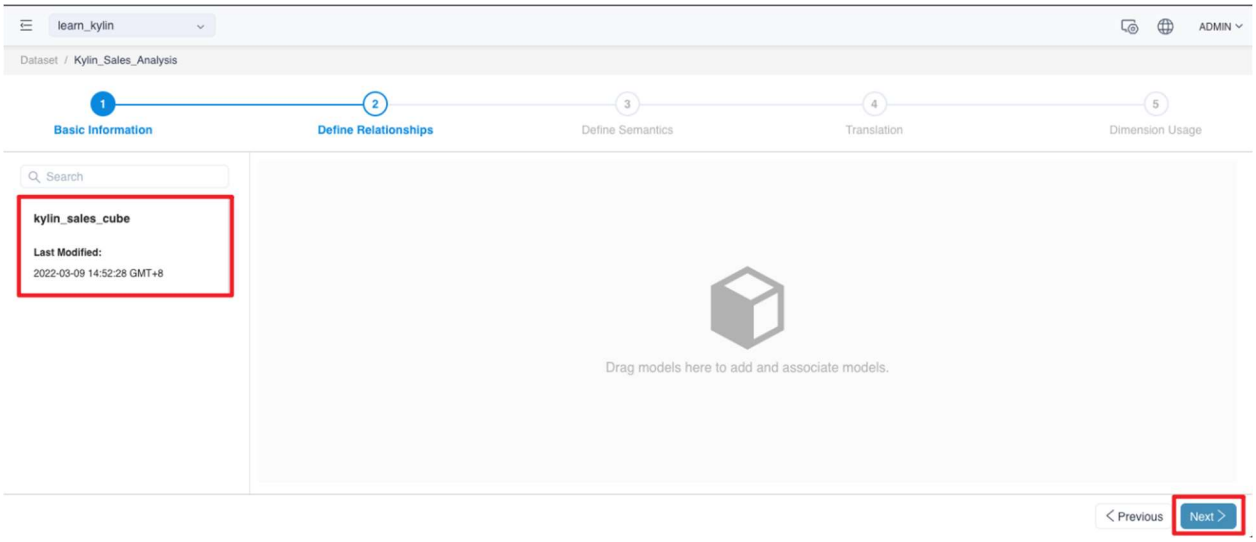
3. Click to start creating a dataset.
   Fill in the dataset Name with ***Kylin_Sales_Analysis***.
   Click **Next** button when done.



Define Relationships

This analysis will simply analyze whether there is a relationship between the data about `Kylin_Sales`.

Drag `kylin_sales_cube` to the right pane. Click the **Next** button when done.

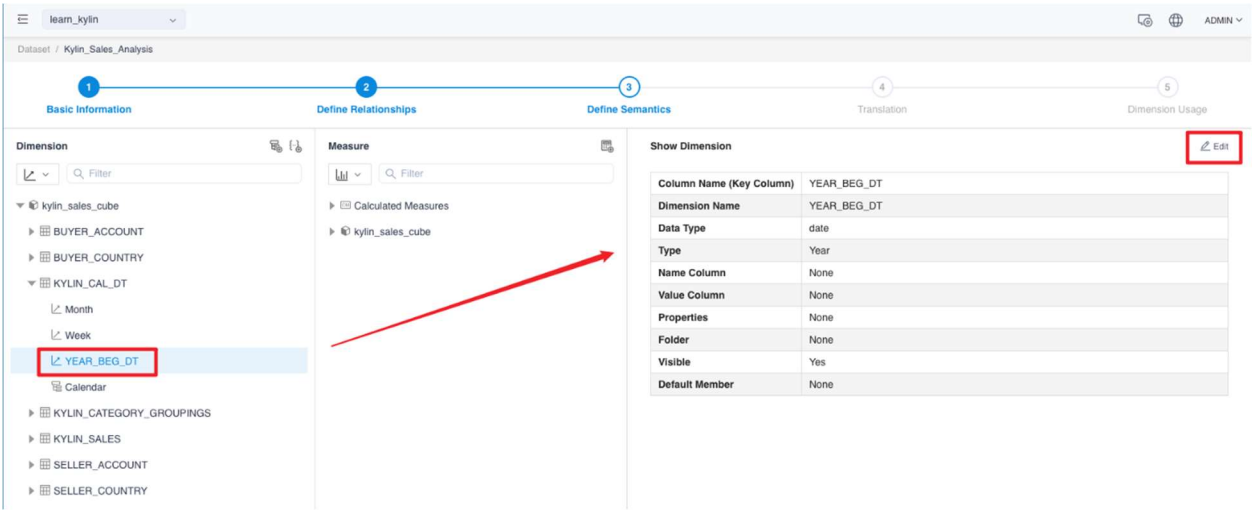


Modify dimension name and measure name

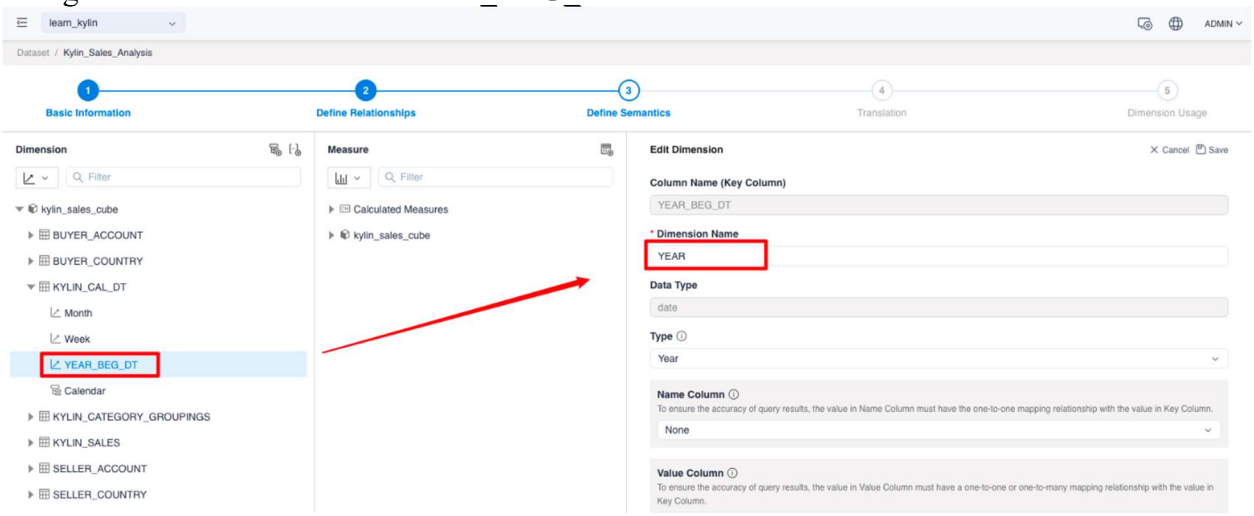
To increase readability, we can change the names of dimensions and measures.

Modify the dimension name

1. Click on the **Dimension Name** on the left side of the Define Semantics page to display the dimension details.



2. On the Display Dimension Details page, click the **Edit** button to go to the edit page to change dimension name from **YEAR_BEG_DT** to **YEAR**.

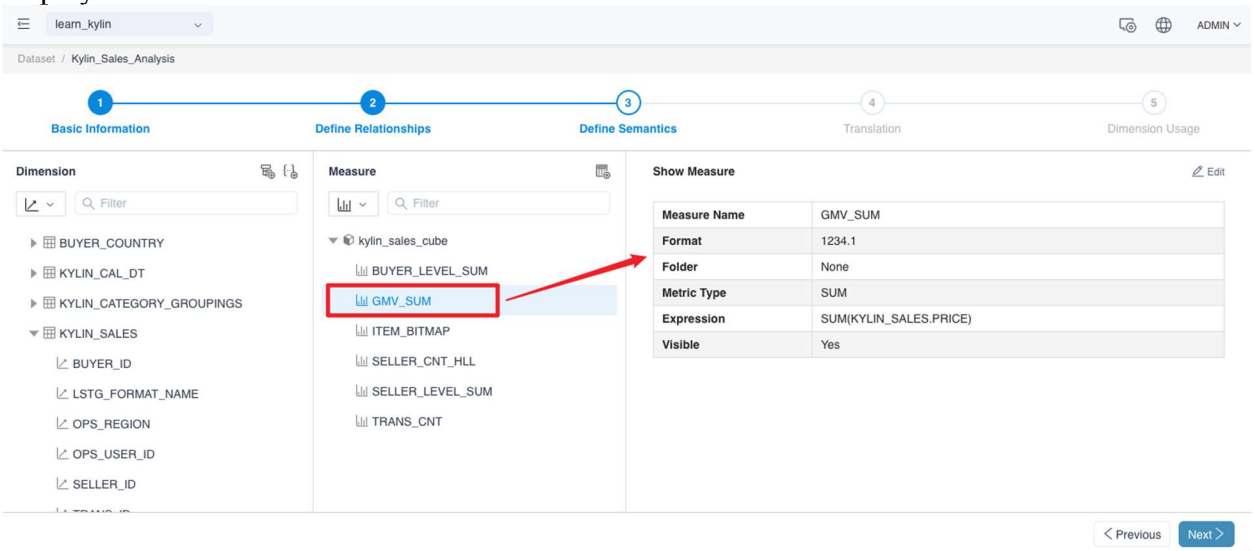


3. On the same way, we could change the dimension name by the following table:

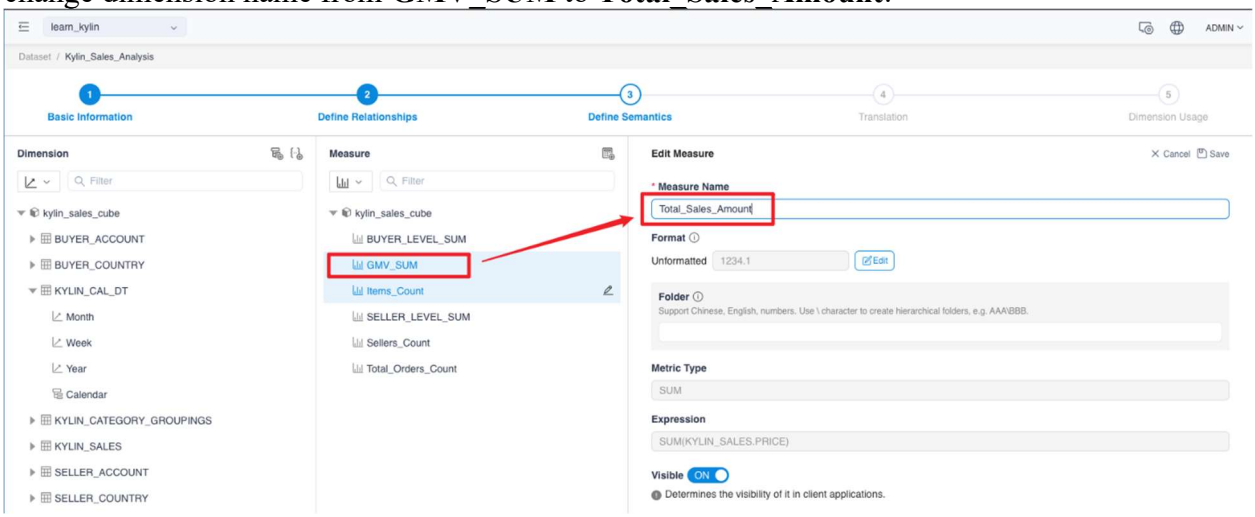
Cube Name	Table Name	Original Name	Changed Name
kylin_sales_cube	KYLIN_CAL_DT	YEAR_BEG_DT	Year
kylin_sales_cube	KYLIN_CAL_DT	MONTH_BEG_DT	Month
kylin_sales_cube	KYLIN_CAL_DT	WEEK_BEG_DT	Week

Modify the measure name

1. Similarly, click on the **measure name** on the left side of the definition semantics page to display the metric details.



2. On the Display Metrics Details page, click the **Edit** button to go to the Edit page to change dimension name from **GMV_SUM** to **Total_Sales_Amount**.



3. On the same way, we could change the measure name according to the table below:

Cube Name	Original Name	Changed Name
kylin_sales_cube	TRANS_CNT	Total_Orders_Count
kylin_sales_cube	SELLER_CNT_HLL	Sellers_Count
kylin_sales_cube	ITEM_BITMAP	Items_Count
kylin_sales_cube	GMV_SUM	Total_Sales_Amount

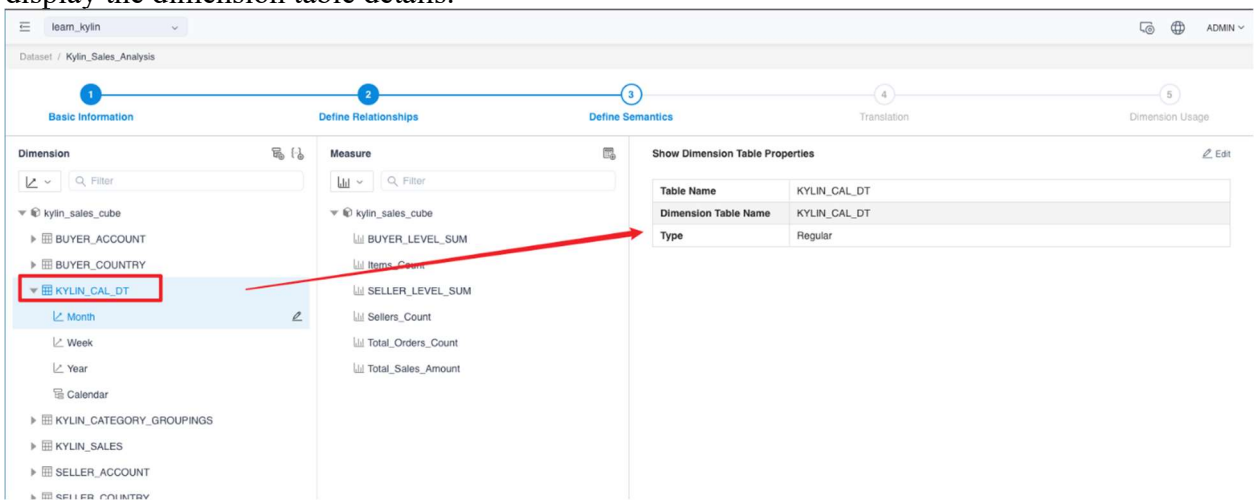
Modify dimension table attributes and dimension attributes

In order to calculate time intelligence functions such as YTD, MTD, and QTD, it is necessary to adjust the attributes of the related dimension tables and dimensions. We need to change the

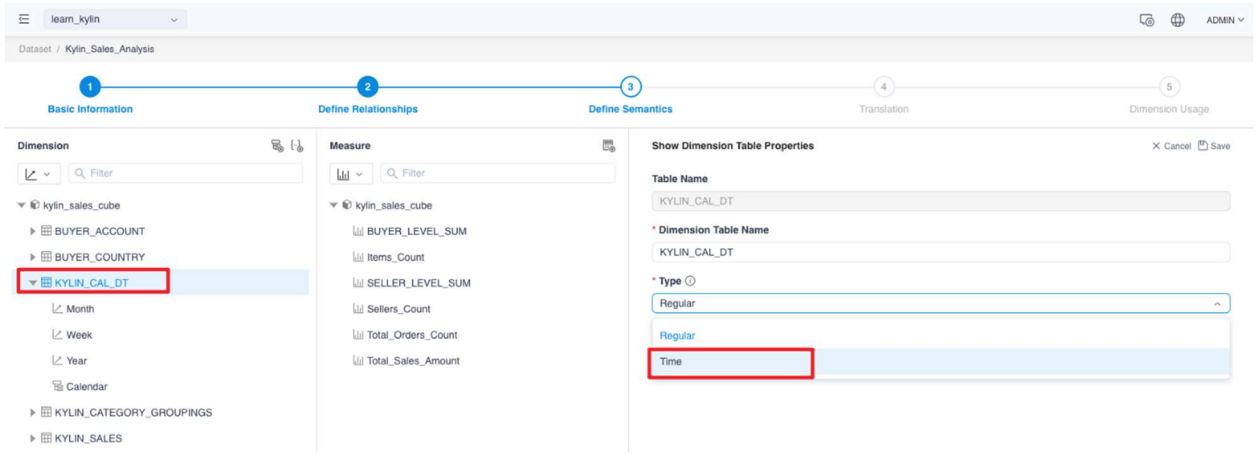
dimension table property to a time type, and the dimension attributes of year, season and month to year, season and month respectively.

1. **Modify dimension table properties**

   Click on the **Dimension Table Name** on the left side of the Define Semantic page to display the dimension table details.

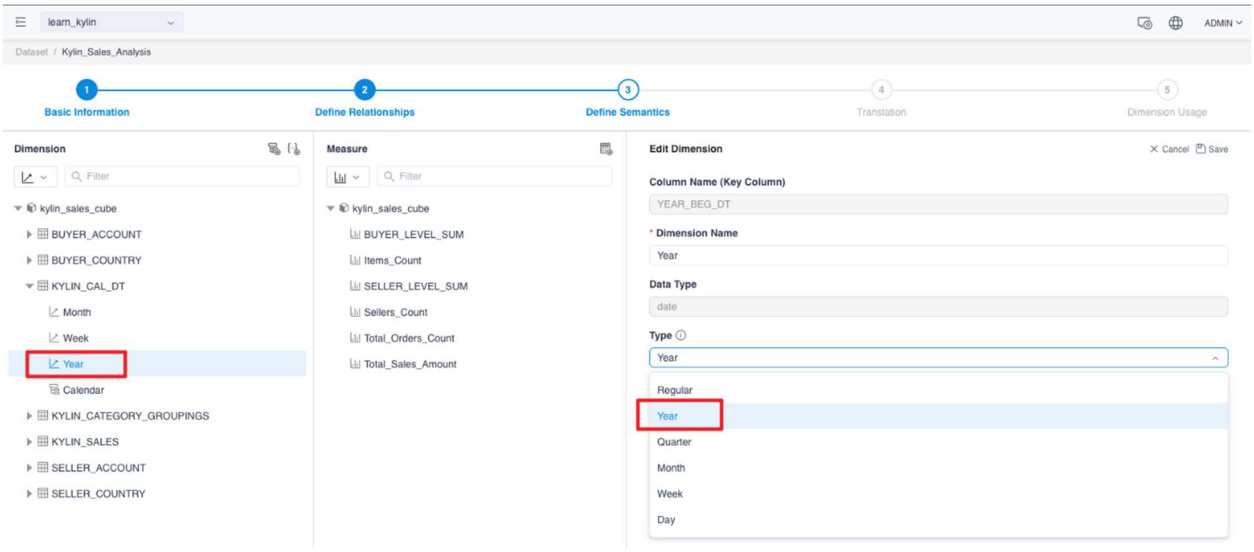


   On the `Show Dimension Table Properties` page, click the **Edit** button to go to the edit page, where the dimension table properties are changed from regular to time.



2. **Modify dimension attributes**

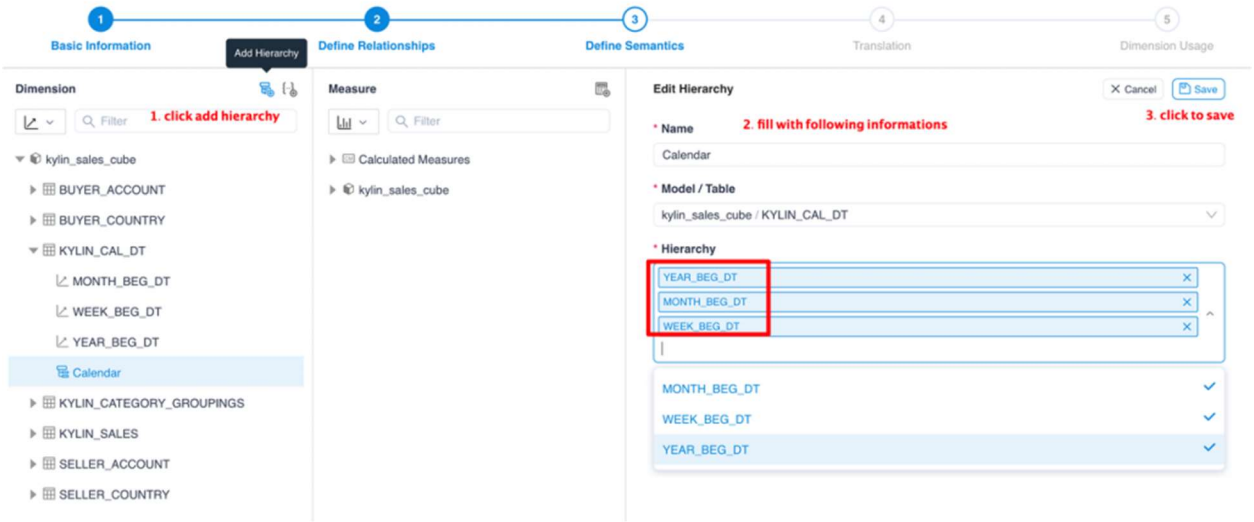
   According to the method described above, you can change the properties of the edit dimension property page. Here you need to change the properties of the dimension year, quarter and month to year, season and month, and week.



Create Hierarchies

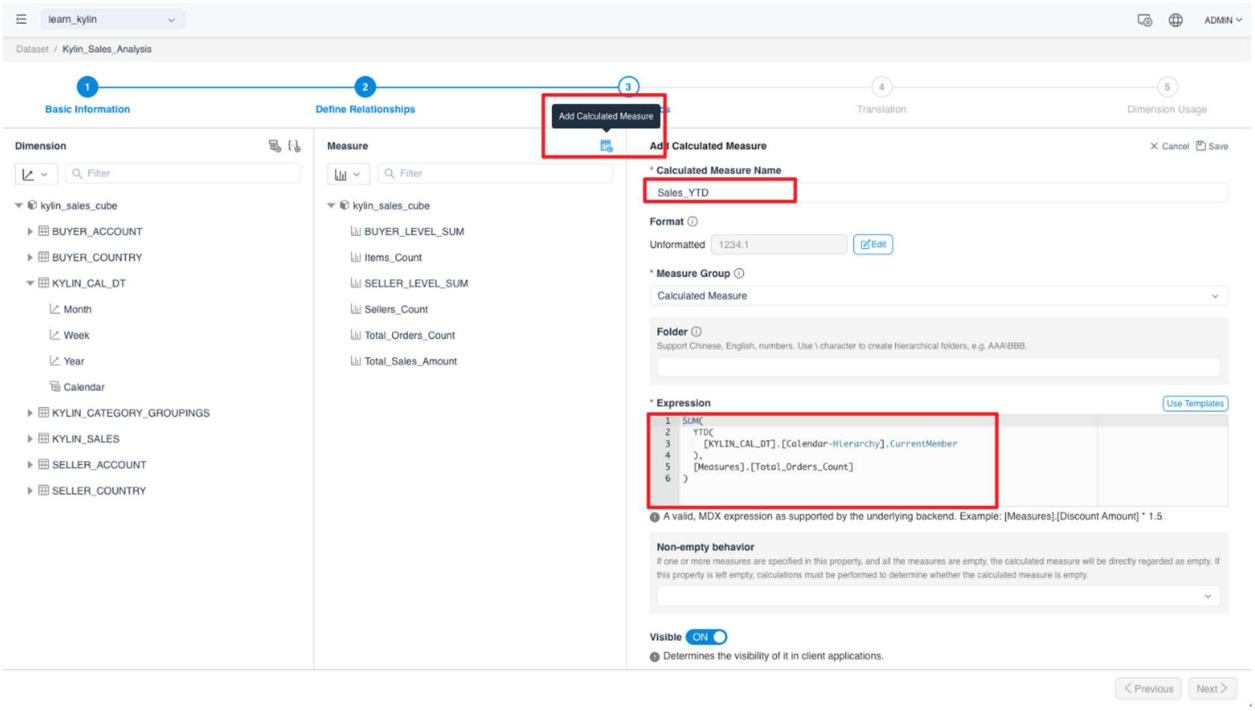
For time dimensions, such as the year, month, day, and other dimensions with a hierarchical structure, we generally establish a hierarchy for analysis.

Click the **Add Hierarchy** button to add a hierarchy. Here, due to the needs of the analysis, create a hierarchy called a Calendar, Dimensions in the hierarchy need to be selected in order of concept, for example, year, month, and week.



Create Calculated Measures

Add a calculated measure by clicking the **Add Calculated Measure** button.



MDX Expression

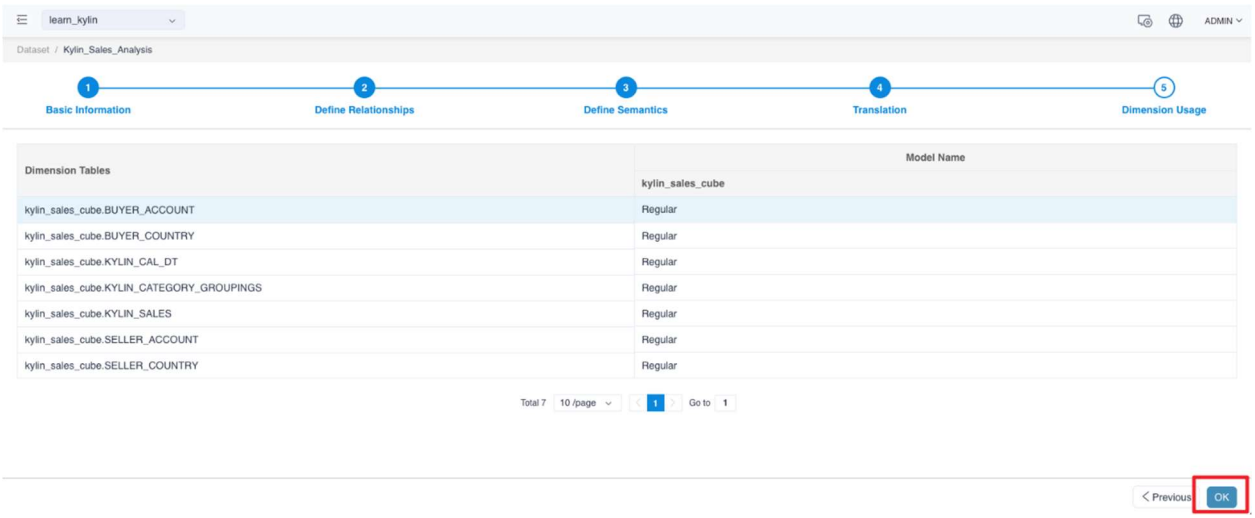
SUM(YTD([DATE_DIM].[calendar-Hierarchy].CurrentMember),[Measures].[Sales_Qty])

Edit Dimension Usage

Since Kylin does not support complex many-to-many relationships, so there is no special definition here.

Save and Create

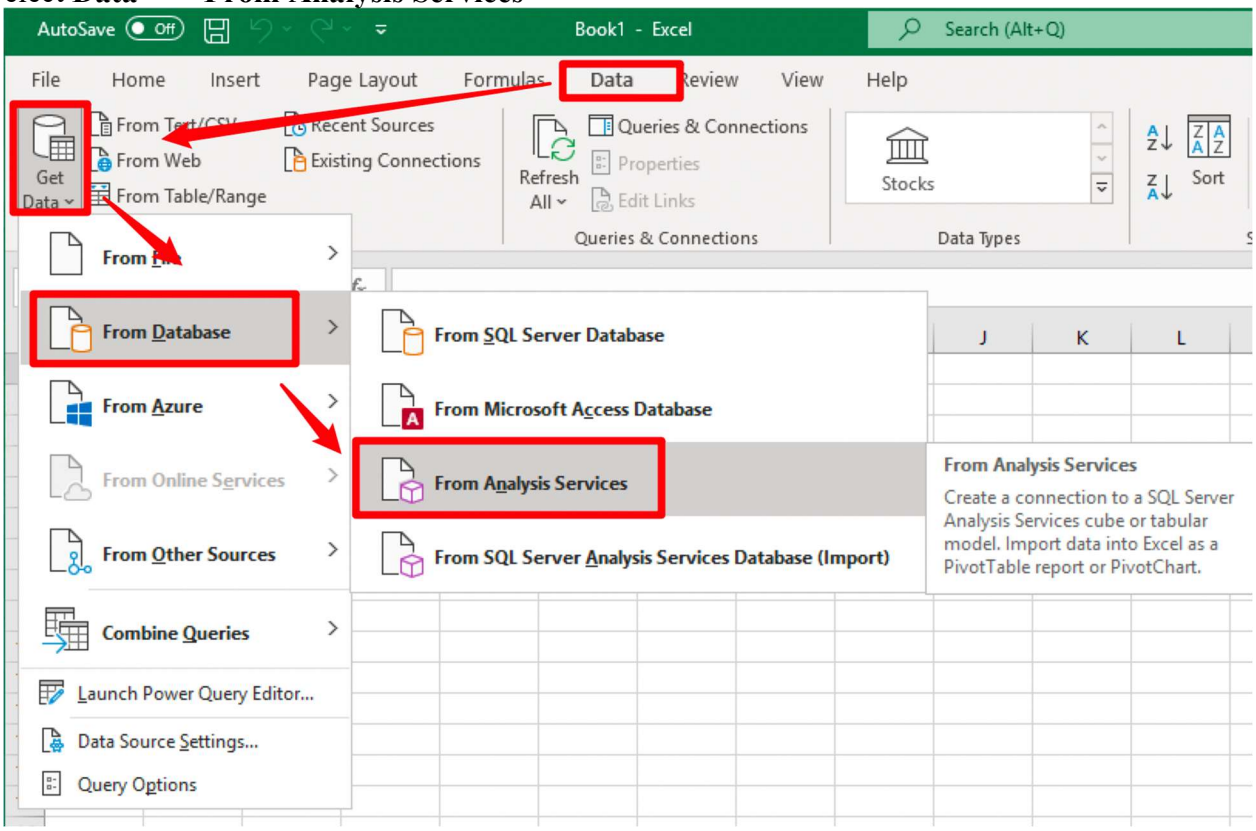
Now that you have completed the main work of creating a data set in this tutorial, click the **OK** button.



Analysis in Excel

We have completed the definition of the data set, and now we can connect to Excel for analysis.

1. elect **Data —> From Analysis Services**



2. Next you need to fill in the address information of MDX for Kylin in the **Server Name** column. The sample is as follows:
   `http://{host}:{port}/mdx/xmla/{project}`
   The default port of MDX for Kylin is 7080.

The username and password are your MDX for Kylin's login username and password.