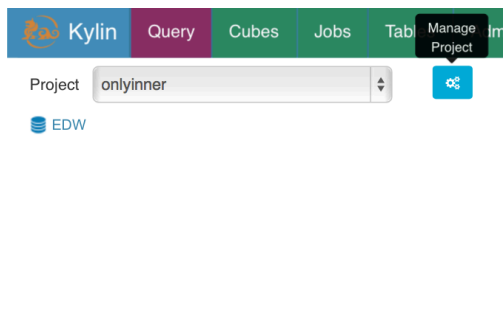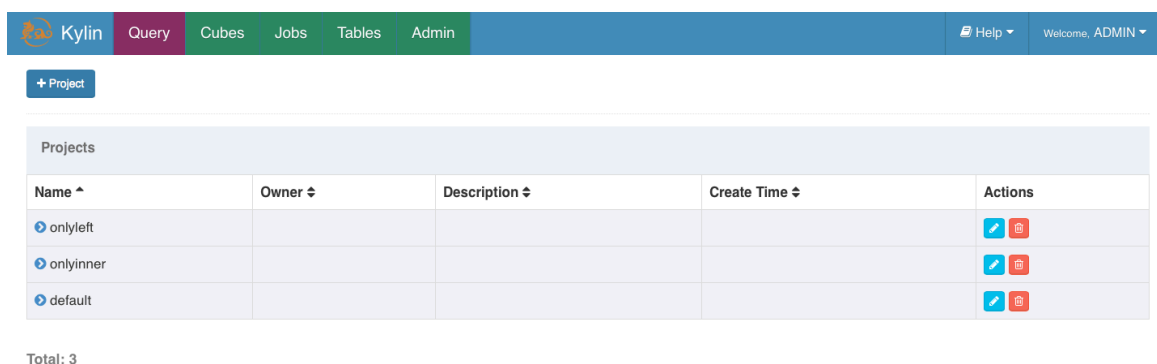# Kylin Cube Creation Tutorial

I. Create a Project

1. Go to `Query` page in top menu bar, then click `Manage Projects`.

2. Click the `+ Project` button to add a new project.

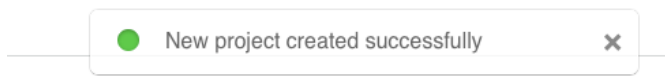3. Fulfill the following form and click `submit` button to send a request.

4. After success, there will be a notification show in the bottom.

New project created successfully ✕

II. Sync up a Table

1. Click `Tables` in top bar and then click the `+ Sync` button to load hive table metadata.

Kylin Query Cubes Jobs Tables Admin

Source Tables   Load Hive Table

EDW ⬍   **+** ⟳

🗄 TEST_CAL_DT
🗄 TEST_CATEGORY_GROUPINGS
🗄 TEST_KYLIN_FACT
🗄 TEST_SELLER_TYPE_DIM
🗄 TEST_SITES

Table Schema:

Columns   Extend Information

Columns
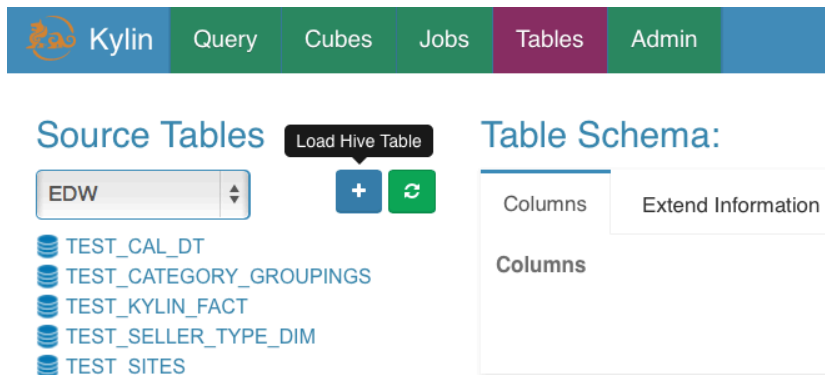
2. Enter the table names and click `Sync` to send a request.

Load Hive Table Metadata

Table Names:(Seperate with comma)

table1,table2

Sync   Cancel

III. Create a Cube

To start with, click `Cubes` in top bar.Then click `+Cube` button to enter the cube designer page.

Total: 2
Storage: 0.00 KB

Step 1. Cube Info

Fill up the basic information of the cube. Click `Next` to enter the next step.

You can use letters, numbers and '_' to name your cube (Notice that space in name is not allowed).

Step 2. Dimensions

1. Set up the fact table.

2. Click `+Dimension` to add a new dimension.

3. There are different types of dimensions that might be added to a cube. Here we list some of them for your reference.
   - Dimensions from fact table.

- Dimensions from look up table.

Filter ...				
ID	Name	Table Name	Column Name	Data Type
1	LSTG_FORMAT_NAME	TEST_KYLIN_FACT	LSTG_FORMAT_NAME	string

Edit Dimension

Name

CAL_DT

Data Type

date ▼

Table Name

TEST_CAL_DT

Column Name

{FK}

Join	Hierarchy	Derived

Join Relation ☑

Type

Inner ▼

CAL_DT ▼ = CAL_DT ▼ 🗑

+ New Join

Save Cancel

Filter ...				
ID	Name	Table Name	Column Name	Data Type
1	LSTG_FORMAT_NAME	TEST_KYLIN_FACT	LSTG_FORMAT_NAME	string

Edit Dimension

Name

CAL_DT

Data Type

date ▼

Table Name

TEST_CAL_DT

Column Name

{FK}

Join	Hierarchy	Derived

WEEK_BEG_DT ▼ 🗑

+ New Derived

Save Cancel

○ Dimensions from look up table with hierarchy.

ID	Name	Table Name	Column Name	Data Type	Joi
1	LSTG_FORMAT_NAME	TEST_KYLIN_FACT	LSTG_FORMAT_NAME	string	
2	CAL_DT	TEST_CAL_DT	{FK}	date	inn

Edit Dimension

Name

CATEGORY

Data Type

-- Select a Data Type --

Table Name

TEST_CATEGORY_GROUPINGS

Column Name

{FK}

Join	Hierarchy	Derived

Hierarchy ☑

Level	Column
1	META_CATEG_NAME
2	CATEG_LVL2_NAME
3	CATEG_LVL3_NAME

+ New Hierarchy

Save   Cancel

○ Dimensions from look up table with derived dimensions.

4. User can edit the dimension after saving it.

Step 3. Measures

1. Click the `+Measure` to add a new measure.

Cube Designer

	Cube Info	Dimensions	Measures	Filter	Refresh Setting	Advanced Setting	Overview
	✓	✓	3	4	5	6	7

ID	Name	Expression	Param Type	Param Value	Return Type	Actions
1	_COUNT_	COUNT	constant	1	bigint	✏️ 🗑️

+ Measure

Note: inputs with light blue border are mandatory.

← Prev   Next →

← Back to My Cubes

2. There are 5 different types of measure according to its expression: `SUM`, `MAX`, `MIN`, `COUNT` and `COUNT_DISTINCT`. Please be carefully to choose the return type, which is related to the error rate of the `COUNT(DISTINCT)`.

   ○ SUM

ID	Name	Expression	Param Type	Param Value
1	_COUNT_	COUNT	constant	1

Edit Measure

Name	GMV_SUM
Expression	SUM ▾
Param Type	column ▾
Param Value	PRICE ▾
Return Type	DECIMAL ▾

Save   Cancel

   ○ MIN

ID	Name	Expression	Param Type	Param Value
1	_COUNT_	COUNT	constant	1
2	GMV_SUM	SUM	column	PRICE

Edit Measure

Name	GMV_MIN
Expression	MIN ▼
Param Type	column ▼
Param Value	PRICE ▼
Return Type	DECIMAL ▼

Save   Cancel

- MAX

ID	Name	Expression	Param Type	Param Value
1	_COUNT_	COUNT	constant	1
2	GMV_SUM	SUM	column	PRICE
3	GMV_MIN	MIN	column	PRICE

Edit Measure

Name	GMV_MAX
Expression	MAX ▼
Param Type	column ▼
Param Value	PRICE ▼
Return Type	DECIMAL ▼

Save   Cancel

- COUNT

ID	Name	Expression	Param Type
1	GMV_SUM	SUM	column
2	GMV_MIN	MIN	column
3	GMV_MAX	MAX	column
4	SELLER_CNT_HLL	COUNT_DISTINCT	column

Edit Measure

Name	TRANS_CNT
Expression	COUNT
Param Type	constant
Param Value	1
Return Type	BIGINT

Save Cancel

- DISTINCT_COUNT

ID	Name	Expression	Param Type	Param Value
1	_COUNT_	COUNT	constant	1
2	GMV_SUM	SUM	column	PRICE
3	GMV_MIN	MIN	column	PRICE
4	GMV_MAX	MAX	column	PRICE

Edit Measure

Name	SELLER_CNT_HLL
Expression	COUNT_DISTINCT ▾
Param Type	column ▾
Param Value	SELLER_ID ▾
Return Type	Error Rate < 2.44% ▾

Save Cancel

Step 4. Filter

This step is optional. You can add some condition filter in `SQL` format.

Cube Designer

✓ Cube Info — ✓ Dimensions — ✓ Measures — 4 Filter — 5 Refresh Setting — 6 Advanced Setting — 7 Overview

Condition Filter

Condition Filter..

Tips

1. Where clause to filter data from source
2. Do not include date column which will be used for incremental refresh
3. Do not include "Where"
4. Please verify SQL when finish cube design from SQL view of cube

Note: inputs with light blue border are mandatory.

← Prev   Next →

← Back to My Cubes

Step 5. Refresh Setting

This step is designed for incremental cube build.

Choose partition type, partition column and start date.

Step 6. Advanced Setting

Step 7. Overview & Save

You can overview your cube and go back to previous step to modify it. Click the Save button to complete the cube creation.