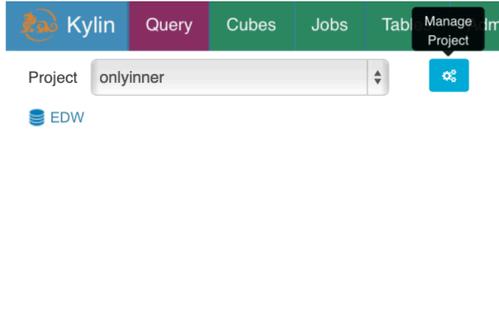


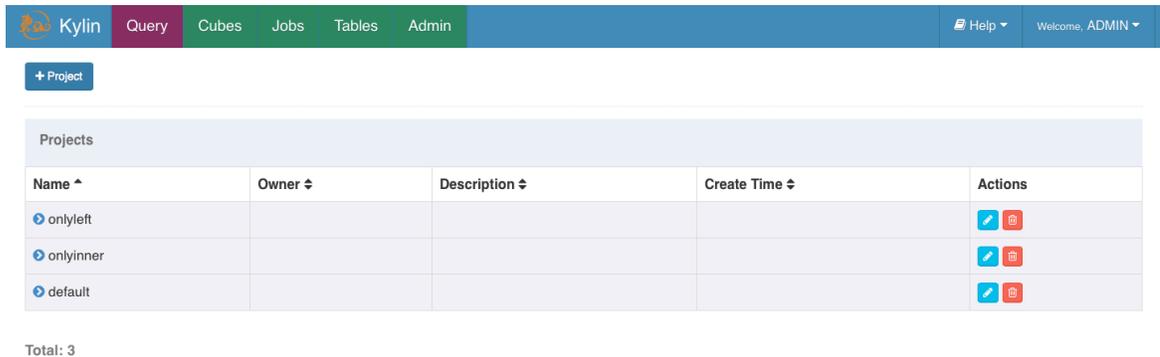
Kylin Cube Creation Tutorial

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.

New Project

Project Name

Project Description

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.

The screenshot shows the Kylin web interface. The top navigation bar has tabs for 'Kylin', 'Query', 'Cubes', 'Jobs', 'Tables', and 'Admin'. The 'Tables' tab is highlighted. Below the navigation bar, there is a 'Source Tables' section. It features a dropdown menu with 'EDW' selected, a 'Load Hive Table' button, and a list of tables: TEST_CAL_DT, TEST_CATEGORY_GROUPINGS, TEST_KYLIN_FACT, TEST_SELLER_TYPE_DIM, and TEST_SITES. To the right of this section is the 'Table Schema:' section, which has two tabs: 'Columns' and 'Extend Information'. The 'Columns' tab is currently selected.

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

The screenshot shows a dialog box titled 'Load Hive Table Metadata'. It has a text input field labeled 'Table Names:(Seperate with comma)' containing the text 'table1,table2'. At the bottom right of the dialog, there are two buttons: 'Sync' and 'Cancel'.

III. Create a Cube

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

Project: -- All Projects -- Cube Name: Filter ... [Json Editor] + Cube

Name	Status	Cube Size	Source Records	Last Build Time	Owner	Create Time	Actions	Admins
test_kylin_cube_without_slr_empty		0.00 KB	0	1970-01-01 08:00:00			Action	Action
test_kylin_cube_with_slr_empty		0.00 KB	0	1970-01-01 08:00:00			Action	Action

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).

Source Tables

- EDW
- TEST_CAL_DT
 - TEST_CATEGORY_GROUPINGS
 - TEST_KYLIN_FACT
 - TRANS_ID (long)
 - CAL_DT (date)
 - LSTG_FORMAT_NAME (string)
 - LEAF_CATEG_ID (int)
 - LSTG_SITE_ID (int)
 - SLR_SEGMENT_CD (short)
 - PRICE (decimal(38,16))
 - ITEM_COUNT (long)
 - SELLER_ID (long)
 - TEST_SELLER_TYPE_DIM
 - TEST_SITES

Cube Designer

1 Cube Info 2 Dimensions 3 Measures 4 Filter 5 Refresh Setting 6 Advanced Setting 7 Overview

Project Tutorial

Cube Name cube_creation_demo

Notification List Comma Separated

Description

Tips

- Cube must belong to project which you have privilege to create
- Cube name is unique name of entire system

Note: inputs with light blue border are mandatory.

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Step 2. Dimensions

- Set up the fact table.

Cube Designer

Progress bar: 1 (Cube Info) ✓, 2 (Dimensions), 3 (Measures), 4 (Filter), 5 (Refresh Setting), 6 (Advanced Setting), 7 (Overview)

Fact Table: tes

- TEST_CAL_DT
- TEST_CATEGORY_GROUPINGS
- TEST_KYLIN_FACT
- TEST_SELLER_TYPE_DIM
- TEST_SITES

+ Dimension

Note: inputs with light blue border are mandatory.

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

Cube Designer

Progress bar: 1 (Cube Info) ✓, 2 (Dimensions), 3 (Measures), 4 (Filter), 5 (Refresh Setting), 6 (Advanced Setting), 7 (Overview)

Fact Table: TEST_KYLIN_FACT

+ Dimension

Note: inputs with light blue border are mandatory.

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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.

Cube Designer

Progress: 1 (✓) — 2 — 3 — 4 — 5

1 Cube Info 2 Dimensions 3 Measures 4 Filter 5 Refresh Setting

Fact Table:

Edit Dimension

Name:

Data Type:

Table Name:

Column Name:

Join Hierarchy **Derived**

- 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:

Data Type:

Table Name:

Column Name:

Join Hierarchy Derived

Join Relation:

Type:

=

Filter ...

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

Edit Dimension

Name:

Data Type:

Table Name:

Column Name:

Join Hierarchy **Derived**

- Dimensions from look up table with hierarchy.

Filter ...

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

Edit Dimension

Name:

Data Type:

Table Name:

Column Name:

Join: Hierarchy Derived

Hierarchy

Level	Column
1	<input type="text" value="META_CATEG_NAME"/> <input type="button" value="X"/>
2	<input type="text" value="CATEG_LVL2_NAME"/> <input type="button" value="X"/>
3	<input type="text" value="CATEG_LVL3_NAME"/> <input type="button" value="X"/>

- Dimensions from look up table with derived dimensions.

Filter ...

ID	Name	Table Name	Column Name	Data Type	Join
1	LSTG_FORMAT_NAME	TEST_KYLIN_FACT	LSTG_FORMAT_NAME	string	
2	CAL_DT	TEST_CAL_DT	{FK}	date	inner
3	CATEGORY	TEST_CATEGORY_GROUPINGS	{FK}		inner

Edit Dimension

Name:

Data Type:

Table Name:

Column Name:

Join Hierarchy **Derived**

4. User can edit the dimension after saving it.

Filter ...

ID	Name	Table Name	Column Name	Data Type	Join	Derived	Hierarchy	Actions
1	LSTG_FORMAT_NAME	TEST_KYLIN_FACT	LSTG_FORMAT_NAME	string		[]	N	<input type="button" value="edit"/> <input type="button" value="delete"/>
2	CAL_DT	TEST_CAL_DT	{FK}	date	inner	["WEEK_BEG_DT"]	N	<input type="button" value="edit"/> <input type="button" value="delete"/>
3	CATEGORY	TEST_CATEGORY_GROUPINGS	{FK}		inner	["USER_DEFINED_FIEL D1","USER_DEFINED_F IELD3","UPD_DATE","U PD_USER"]	Y	<input type="button" value="edit"/> <input type="button" value="delete"/>
4	SITE_ID	TEST_SITES	{FK}	string	inner	["SITE_NAME","CRE_U SER"]	N	<input type="button" value="edit"/> <input type="button" value="delete"/>

Edit Dimension

Name:

Data Type:

Table Name:

Column Name:

Join Hierarchy **Derived**

Join Relation

Tips

1. Type in any input box for auto suggestion
2. Pick up Fact Table from Star Schema Tables first
3. Data Type should match with Hive Table's Data Type
4. Join Type have to be same as will be used in query
5. Using Hierarchy to inherit one dimension another
6. Using Derived for One-One relationship between columns, like ID and Name

Step 3. Measures

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

Cube Designer

Progress bar: 1. Cube Info (checked), 2. Dimensions (checked), 3. Measures (active), 4. Filter, 5. Refresh Setting, 6. Advanced Setting, 7. Overview

Filter ...

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.

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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).

- o SUM

Filter ...

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

Edit Measure

Name:

Expression:

Param Type:

Param Value:

Return Type:

[Save](#) [Cancel](#)

- o MIN

Filter ...

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

Edit Measure

Name:

Expression:

Param Type:

Param Value:

Return Type:

- o MAX

Filter ...

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:

Expression:

Param Type:

Param Value:

Return Type:

- 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:

Expression:

Param Type: constant

Param Value: 1

Return Type: BIGINT

- 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:

Expression:

Param Type:

Param Value:

Return Type:

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.

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Step 5. Refresh Setting

This step is designed for incremental cube build.

Cube Designer

Progress: 1. Cube Info (✓) 2. Dimensions (✓) 3. Measures (✓) 4. Filter (✓) 5. Refresh Setting (5) 6. Advanced Setting (6) 7. Overview (7)

Cube Size: SMALL

Query Priority: NORMAL

Partition Type: APPEND

Partition Column: TEST_KYLIN_FACT.CAL_DT

Start Date:

November 2014

#	Sun	Mon	Tue	Wed	Thu	Fri	Sat
43	26	27	28	29	30	31	01
44	02	03	04	05	06	07	08
45	09	10	11	12	13	14	15
46	16	17	18	19	20	21	22
47	23	24	25	26	27	28	29
48	30	01	02	03	04	05	06

Today Weeks Clear Done

Note: inputs with light blue border are mandatory.

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Tips

1. Please indicate which type for refresh model
2. Leave as default if this cube always need full build
3. Please indicate partition column of Fact Table in Hive
4. Partition column accept expression like: concat(year, '-', month, '-', day)
5. Please indicate start date to just pull certain data from source

Choose partition type, partition column and start date.

Cube Designer

Progress: 1. Cube Info (✓) 2. Dimensions (✓) 3. Measures (✓) 4. Filter (✓) 5. Refresh Setting (5) 6. Advanced Setting (6) 7. Overview (7)

Cube Size: SMALL

Query Priority: NORMAL

Partition Type: APPEND

Partition Column: TEST_KYLIN_FACT.CAL_DT

Start Date: 2014-10-01

Tips

1. Please indicate which type for refresh model
2. Leave as default if this cube always need full build
3. Please indicate partition column of Fact Table in Hive
4. Partition column accept expression like: concat(year, '-', month, '-', day)
5. Please indicate start date to just pull certain data from source

Note: inputs with light blue border are mandatory.

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Step 6. Advanced Setting

Cube Designer

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

Aggregation Groups

ID	Aggregation Groups
1	<input type="text" value="LSTG_FORMAT_NAME x"/> <input type="text" value="CATEGORY x"/> <input type="text" value="SITE_ID x"/>

[New Aggregation Group+](#)

Rowkeys

[New Rowkey Column+](#)

Note: inputs with light blue border are mandatory.

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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.

Cube Designer

✓ ✓ ✓ ✓ ✓ ✓ 7
 Cube Info Dimensions Measures Filter Refresh Setting Advanced Setting Overview

Project Name	Tutorial	<input type="text" value="Description"/>
Cube Name	cube_creation_demo	
Fact Table	TEST_KYLIN_FACT	
Lookup Table	3	
Dimensions	4	
Measures	5	

Note: inputs with light blue border are mandatory.

[← Prev](#) [Save](#)
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