

How to use Hue with Kylin

Date: August 2016

Author: Ramón Portolés, Alberto a.ramonportoles@gmail.com [Linkedin](#)

Intro

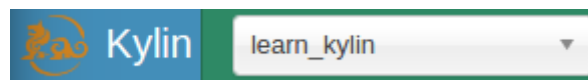
In [Hue-2745](#) v3.10, add jdbc support like Phoenix, **Kylin**, Redshift, Solr Parallel SQL, ...

But ... there isn't any manual to use it with Kylin :(

Pre-requisites

We need an instance of Kylin, with a cube: [Quick Start with Sample Cube](#), will be enough

You can check:



Used Software:

- [Apache Hue](#) v3.10.0
- [Apache Kylin](#) v1.5.2

1 Install Apache Hue

If you have Hue installed, you can skip this step

I installed Hue on my Ubuntu 16.04 LTS. The [official Instructions](#) didn't work but [this](#) works fine:

1.A Install & compile Hue:

There isn't any binary package thus we need install all [pre-requisites](#) to compile with *make*

```
Sudo apt-get install --fix-missing -q -y \  
  git \  
  ant \  
  gcc \  
  g++ \  
  libkrb5-dev \  

```

```
libmysqlclient-dev \  
libssl-dev \  
libsasl2-dev \  
libsasl2-modules-gssapi-mit \  
libsqlite3-dev \  
libtidy-0.99-0 \  
libxml2-dev \  
libxslt-dev \  
libffi-dev \  
make \  
maven \  
libldap2-dev \  
python-dev \  
python-setuptools \  
libgmp3-dev \  
libz-dev
```

Download and Compile:

```
git clone https://github.com/cloudera/hue.git  
cd hue  
make apps
```

1.B Start and connect

To start Hue:

```
build/env/bin/hue runserver_plus localhost:8888
```

- runserver_plus: is like runserver with [debugger](#)
- localIP: Port, usually Hue uses 8888

The output must be similar to:

```
Django version 1.6.10, using settings 'desktop.settings'  
Development server is running at http://localhost:8888/  
Using the Werkzeug debugger (http://werkzeug.pocoo.org/)
```

Connect using your browser: <http://localhost:8888>



Since this is your first time logging in, pick any username and password. Be sure to remember these, as **they will become your Hue superuser credentials.**

Create Account

Important: The first time that you connect to hue, are you setting Login / Pass for admin
We will use Hue / Hue, as login / pass

Issue 1: Could not create home directory

Could not create home directory.

Its a permission problem of your current user, you can use: `sudo` to start Hue

Issue 2: Could not connect to ...

Could not connect to localhost:10000

If you downloaded Hue's code from Git, Hive connection is active but not configured → you can skip this message

Issue 3: Address already in use

`[Errno 98] Address already in use`

The port is in use or you have other instance of Hue running

You can use `ps -ef | grep hue`, to find the pid and kill

2 Configure Apache Hue for Kylin




Our purpose is add a snippet in one notebook with Kylin queries

References:

- [Custom SQL Databases](#)
- [Manual: Kylin JDBC Driver](#)
- [GitHub: Kylin JDBC Driver](#)

Register JDBC Driver

1. We need find the JAR Class for JDBC Connector
From [Kylin Download](#), Choose **Binary** and the **correct version of Kylin and HBase**
Download & Unpack: in `./lib`:

Nombre	
	kylin-coprocessor-1.5.2.jar
	kylin-jdbc-1.5.2.jar
	kylin-job-1.5.2.jar

2. Put this JAR in you Java ClassPATH in your `.bashrc`
`export CLASSPATH=~/.Descargas/apache-kylin-1.5.2-bin/lib/kylin-jdbc-1.5.2.jar`

check the actual value: `echo $CLASSPATH`

check permission for this file (Must be accessible for you):

`-rwxr-xr-x 1 root root 11640840 ago 24 23:26 kylin-jdbc-1.5.2.jar`

3. Add this new interface into your Hue.ini
Where is my hue.ini ?
 - If you install from Git you are using: `UnzipPath/desktop/conf/pseudo-distributed.ini`

(I shared my *INI* file in GitHub)

- If you are using Cloudera: you must use Advanced Configuration Snippet
- Other: find you actual *hue.ini*

Add this lines inside `[[interpreters]]`

```
[[[kylin]]]
```

```
name=kylin JDBC
```

```
interface=jdbc
```

```
options='{ "url": "jdbc:kylin://172.17.0.2:7070/learn_kylin", "driver": "org.apache.kylin.jdbc.Driver", "user":  
"ADMIN", "password": "KYLIN" }'
```

4. Try to Start Hue and connect Like 'Start and connect'

TIP: you will need one JDBC Source for each project

Register without password:


We can use this other format:


```
options='{ "url": "jdbc:kylin://172.17.0.2:7070/learn_kylin", "driver": "org.apache.kylin.jdbc.Driver" }'
```

And when you connect to Notebook, Hue prompts this:

×

Connect to the data source

 hue

 Contraseña

Cancel

Connect

Issue 1: Hue can't Start

If when connect to Hue (<http://localhost:8888>), you see this:

ValueError

ValueError: Expecting , delimiter: line 1 column 53 (char 52)

Traceback (most recent call last)

This is the Copy/Paste friendly version of the traceback. You can also view the full traceback on [lodgeit pastebin](#): [create paste](#)

You can go to last line: `obj, end = self.scan_once(s, idx)`

And launch Python Interpreter (see console icon at right):

```
[console ready]
>>> print (s)
{"url": "jdbc:kylin://172.17.0.2:8080/learn_kylin", "driver": "org.apache.kylin.jdbc.Driver", "user":
"ADMIN", "password": "KYLIN"}
>>>
```

In my case: I forgotten “ after learn_kylin

Issue 2: Password Prompting

In Hue 3.11 there is a bug [Hue 4716](#)

In Hue 3.10 with Kylin, I don't have any problem :)

3 Test query Example

Add in yours Kylin's notebook

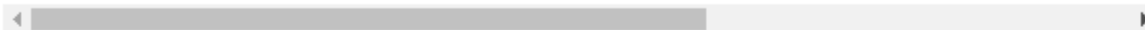


Write a query, like this:

```
select part_dt, sum(price) as total_sold, count(distinct seller_id) as sellers from kylin_sales group by part_dt
order by part_dt
```

And Execute with: 

```
select part_dt, sum(price) as total_sold, count(distinct seller_id) as sellers
```



	PART_DT	TOTAL_SELLED	SELLERS
1	2012-01-01	466.9037	12
2	2012-01-02	970.2347	17
3	2012-01-03	917.4138	14
4	2012-01-04	553.0541	10
5	2012-01-05	732.9007	18

Congratulations ;;; you are connected Hue with Kylin

Issue 1: No suitable driver found for jdbc:kylin

```
An error occurred while calling z:java.sql.DriverManager.getConnection. :  
java.sql.SQLException: No suitable driver found for jdbc:kylin://172.17.0.2:7070/learn_kylin  
at java.sql.DriverManager.getConnection(DriverManager.java:689) at  
java.sql.DriverManager.getConnection(DriverManager.java:247) at  
sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method) at  
sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62) at
```

There is a bug (not solved at 27 Ago 2016, nor in 3.10 and 3.11), but [the solution](#) is very easy (Thanks to Shahab Tajik)

You only need [change 3 lines](#) in `<HuePath>/desktop/libs/librdbms/src/librdbms/jdbc.py`

4 Limits

Nowadays, in Hue 3.10 and 3.11

- Auto-complete isn't support on JDBC interfaces
- Max 1.000 records. There is a limitation on JDBC interfaces, because Hue does not support pagination of results [Hue 3419](#)
- Obviously: It's only for read-only

5 Future Work

Dashboards

There is an amazing feature of Hue: [Search Dashboards](#) / [Dynamic Dashboards](#) (you can 'play' with this [Demo On-line](#)) ... **But only works with SolR**

There is a Jira to solve this: [Hue 3228](#), RoadMap 4.1 [Hue MailList](#) and add Dashboards to JDBC connections


Chart & Dynamic Filter

Nowadays, Isn't compatible, you only can work with Grid

I think the problem is , Hue don't know how read Kylin Metadata [Hue 4011](#)



DB Query

Query Editors >  **DB Query**, Is not yet supported with JDBC
Now only support [Django Databases](#)

For any suggestions, feel free to contact me

Thanks, Alberto