

Cloudera Runtime 7.1.2

Using Hue

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CLOUDERA

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Using Hue

Get started using Hue by analyzing and visualizing your data with Impala, a high-speed, low-latency SQL query engine.

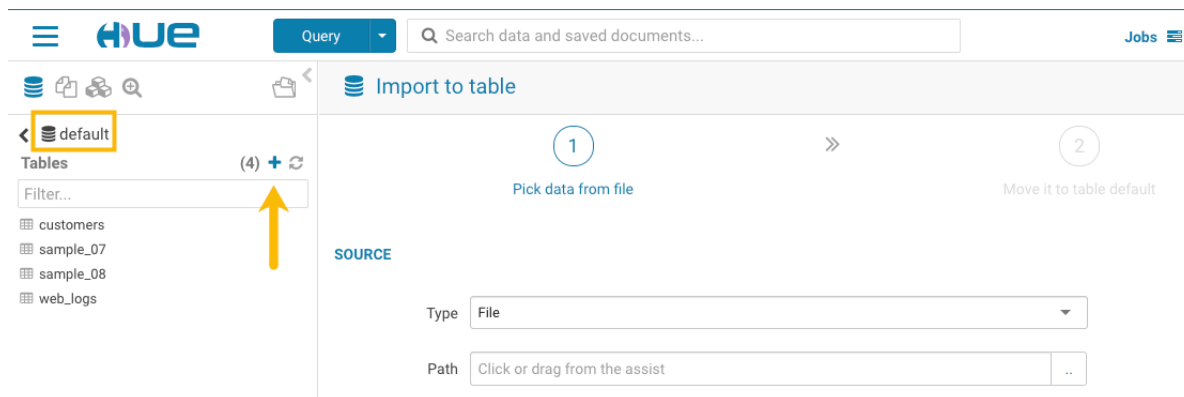
About this task

To try Hue without having an account, try running sample queries on <http://demo.gethue.com/>.

Procedure

1. Download and unzip [one year of bike trips](#) from the Bay Area Bike Share program. This file is about 80 MB in size.

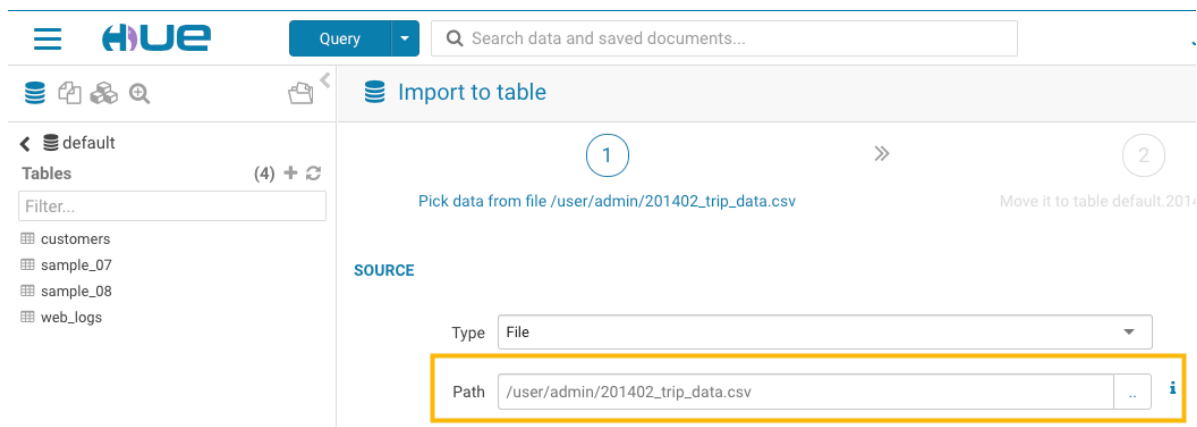
2. Create a table from the `~/babs_open_data_year_1/201402_babs_open_data/201402_trip_data.csv` file found in the unzipped `babs_open_data_year_1.zip` file:
 - a) In the Cloudera Manager Admin Console, select HueWebUIHue Load Balanced to launch Hue.
 - b) In the left navigation panel of Hue, make sure the default database is selected, and click the plus sign to create a table as shown in the following image:



If the default database is not selected, click the "less than" icon that is next to the database icon in the left panel. This enables you to select the default database.

that is next to the database icon in the

- c) In the center panel Importer UI, set Type to File.
- d) Drag the `201402_trip_data.csv` file to the Path field as shown in the following image:



- e) Set the formats as follows:
 - Field Separator = Comma (,)
 - Record Separator = New line
 - Quote Character = Double Quote

Then click Next at the bottom of the page.

- f) Set the properties Format = Text.
- g) Edit the FIELDS as follows:
 - Rename Bike # to Bike ID
 - Change the data type of ZipCode to string.
 - Remove all of the spaces in the Name fields.

Then click Submit at the bottom of the page.

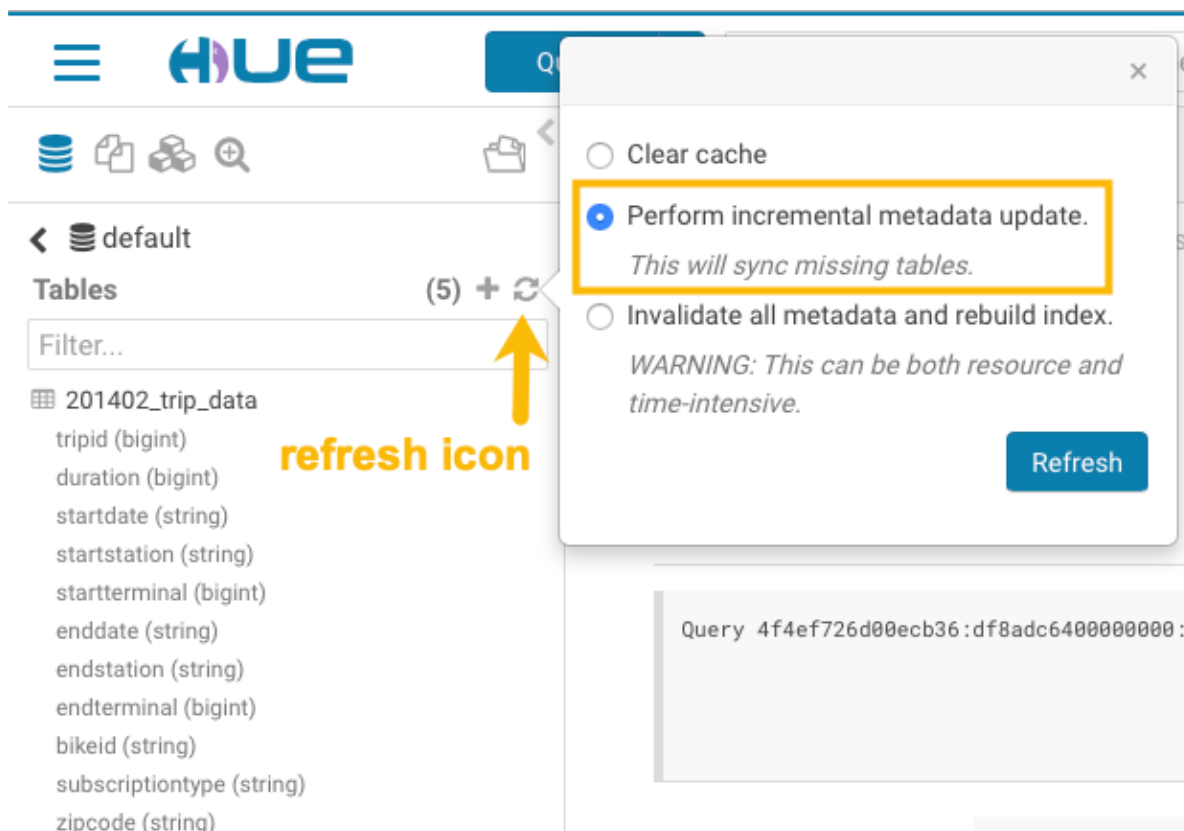
3. Click Query at the top of the page and select EditorHive to open the Hive editor and then create a query.
- Enter the following query into the editor window:

```
SELECT * FROM default.201402_trip_data
LIMIT 10;
```

-  Click the execute icon to run the query. The following rows are returned:

Query History		Saved Queries		Results (10)
		201402_trip_data.tripid	201402_trip_data.duration	201402_trip_data
  	1	4576	63	8/29/2013 14:13
	2	4607	70	8/29/2013 14:42
	3	4130	71	8/29/2013 10:16
	4	4251	77	8/29/2013 11:29
	5	4299	83	8/29/2013 12:02
	6	4927	103	8/29/2013 18:54
	7	4500	109	8/29/2013 13:25
	8	4563	111	8/29/2013 14:02
	9	4760	113	8/29/2013 17:01
	10	4258	114	8/29/2013 11:33

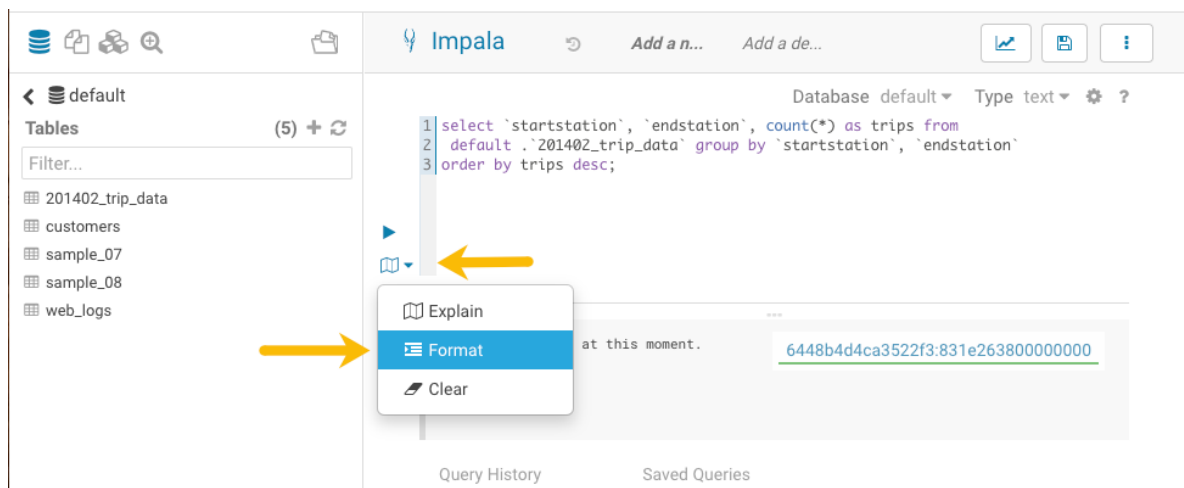
4. Click Query at the top of the page and select EditorImpala to open the Impala SQL editor and then create a query.
 - a. In the left panel, click the refresh icon and select Perform incremental metadata update to make the new table visible to Impala:



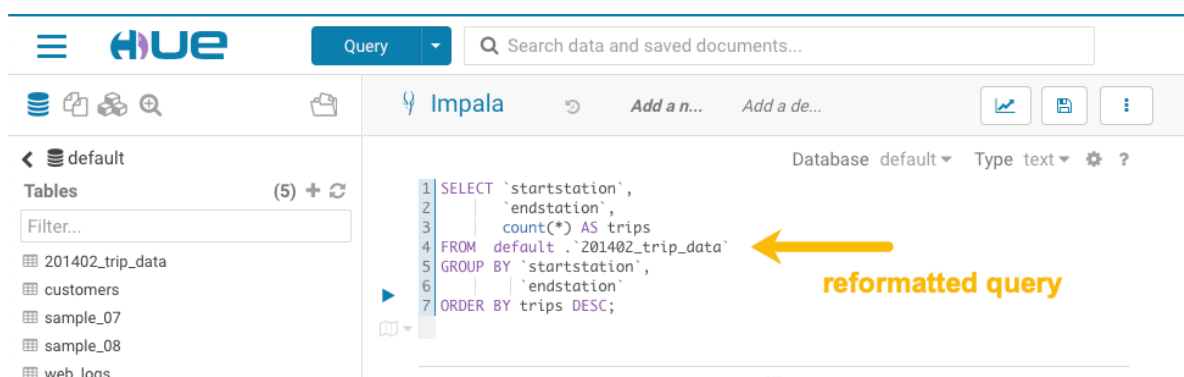
- b. Enter the following query into the editor window:

```
select 'startstation', 'endstation', count(*) as trips from default.'201402_trip_data'
group by 'startstation', 'endstation' order by trips desc;
```

- c. Click the down arrow just under the execution icon and select Format:



This reformats the query:



- d.

Click the save icon , enter a query name, and click Save.

- e.

Click the execute icon  to run the query.

5. Create a bar chart that is based on the query results:

a.



Click the chart icon and then select Bars.

Impala

0.66s Database default Type text

```

1 SELECT `startstation`,
2        `endstation`,
3        count(*) AS trips
4 FROM default.`201402_trip_data`
5 GROUP BY `startstation`,
6          `endstation`
7 ORDER BY trips DESC;

```

Query 4142ddc7e9c4b8ad:4af0d8b600000000: 0% Complete (0 out of 1)

4142ddc7e9c4b8ad:4af0d8b600000000

Query History Saved Queries Results (1,024+)

COLUMNS (4)

- ☒ startstation string
- ☒ endstation string
- ☒ trips bigint

Bar chart options:

- ☒ Bars
- ☐ Pie
- ☐ Scatter
- ☐ Marker Map
- ☐ Gradient Map

	startstation	endstation
1	Harry Bridges Plaza (Ferry Building)	Embarcadero at Sansome
2	Townsend at 7th	San Francisco Caltrain (Townsend at 4th)
3	San Francisco Caltrain 2 (330 Townsend)	Townsend at 7th
4	Market at Sansome	2nd at South Park
5	Embarcadero at Sansome	Steuart at Market
6	2nd at South Park	Market at Sansome
7	San Francisco Caltrain (Townsend at 4th)	Harry Bridges Plaza (Ferry Building)
8	2nd at Townsend	Harry Bridges Plaza (Ferry Building)

b. Set the bar chart elements as follows:

- X-AXIS = startstation
- Y-AXIS = trips
- LIMIT = 10

TYPE: Bars

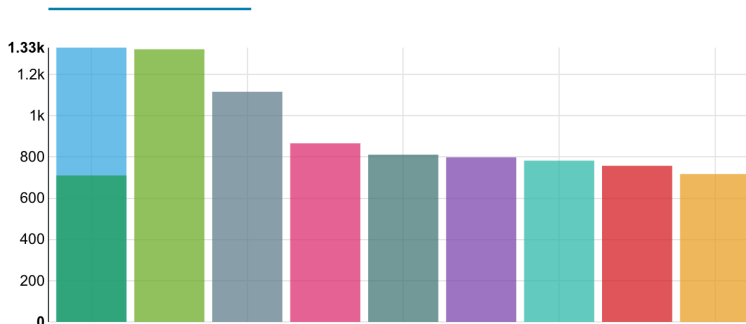
X-AXIS: startstation

Y-AXIS: ☒ trips

GROUP: Choose a column to pivo...

LIMIT: 10

SORTING: ☒ Ascending ☐ Descending ☐ Grouped



6.

Create a pie chart by clicking the chart icon again



and then select Pie.

7.

Download the query results by clicking the download icon



and selecting in what format you want to download, copy, or export the results.

Enabling the SQL editor autocompleter

Autocompleter provides finely tuned SQL suggestions for Hive and Impala dialects while you enter queries into the editor window. See [Brand new Autocompleter for Hive and Impala](#) in the Hue blog.

About this task

Autocompleter is enabled by default. To manually enable or disable it, open the editor configuration panel and edit settings as follows:

Procedure

1. Log in to Hue and go to either the Hive or Impala editor.
2. Place your cursor in the editor window and then use one of the following keyboard shortcuts to open the editor configuration panel:

- On a Mac system, use the Command key followed by a hyphen and then a comma:

Command-,

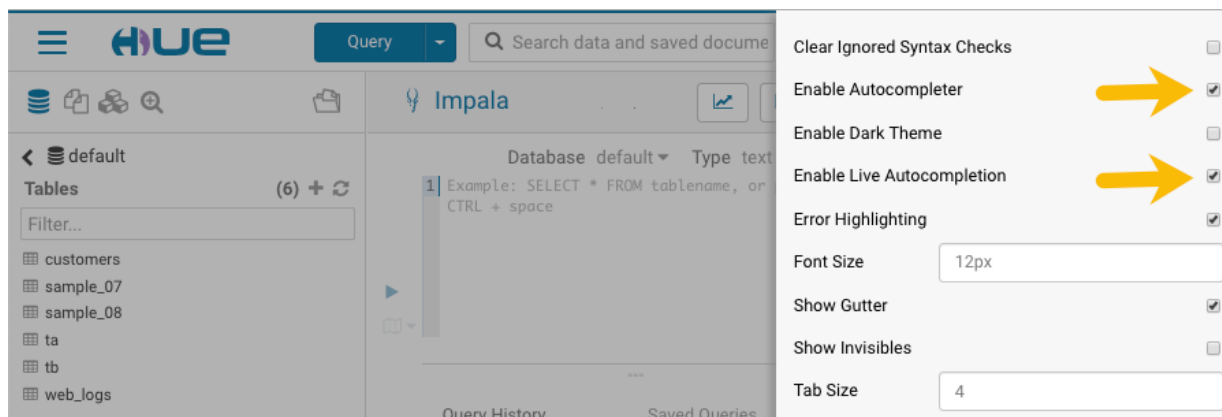
- On a Windows system, use the Ctrl key followed by a hyphen and then a comma:

Ctrl-,



Tip: Type a question mark (?) anywhere but in the active editor window to open a menu of editor keyboard shortcuts.

3. To enable autocompletion, check the box adjacent to Enable Autocompleter. When you check Enable Autocompleter, Enable Live Autocompletion is automatically enabled as well. Place your cursor in the editor window to close the configuration panel.



4. To disable autocompletion:

- Uncheck Enable Live Autocompletion but leave Enable Autocompleter checked, and then place your cursor in the editor window to close the configuration panel. This disables live autocompletion, but if you want to use

autocompletion while building your queries in the editor, enter the following key stroke sequence to activate autocompletion: Ctrl + Space Key

- Uncheck both Enable AutoCompleter and Enable Live Autocompletion, and then click in the editor to close the configuration panel. This disables all autocompletion functionality.

Using governance-based data discovery

Hue can use the metadata tagging, indexing, and search features available in Apache Atlas data management. After integrating Hue with Atlas, classifications and indexed entities can be accessed and viewed in Hue. This topic shows you how to use metadata classifications in Hue.

Integration between Hue and Atlas is enabled by default, but if your administrator has disabled it, it must be re-enabled before you can use governance-based data discovery.

Searching metadata tags

The SQL Editor in Hue provides a search text box where you can search on the metadata tags or classifications that are associated with your databases, tables, and columns.

About this task

You can search for tags or classifications in either the Hive or the Impala editors.

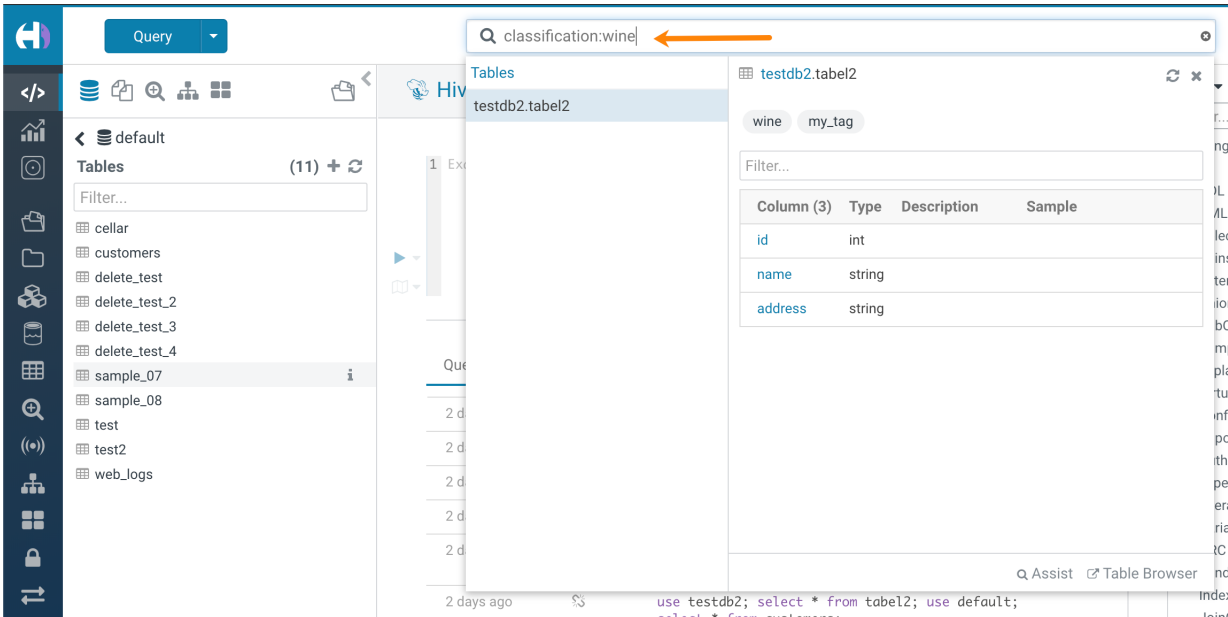


Note: On clusters that use Apache Ranger for role-based access control, the Search mechanism does not display counts of popular values. Ranger ensures that Hue users can view only entities to which their user role (as configured and managed by Ranger) has been granted specific permissions.

Procedure

1. Go to Query Editor Impala or Hive.

2. To locate the tags or classifications in Apache Atlas, in the metadata search box located just to the right of the Query drop-down menu, type a tag: or classification: facet followed by its name. For example, type classification: wine as shown in the following image:



After you type the search facet and the tag or classification name in the search box, the `<DATABASE>.<TABLE>` where the tag or classification is found is returned. Click the `<DATABASE>.<TABLE>` to view the tags and classifications that have been defined for it.

Granting permission to access S3 and ABFS File Browser in Hue

Only admin users can view and access S3 or ABFS File Browser in Hue after enabling it. You must manually grant application permissions to non-admin users and groups for them to be able to view and access S3 and ABFS File Browsers in Hue.

About this task

The following table lists the application permissions for each cloud storage type:

Cloud storage	Hue application permission
S3	filebrowser.s3_access:Access to S3 from filebrowser and filepicker.
ABFS (ADLS Gen2)	filebrowser.abfs_access:Access to ABFS from filebrowser and filepicker.
ADLS (Gen1)	filebrowser.adls_access:Access to ADLS from filebrowser and filepicker.
GS	Access to GS from filebrowser and filepicker.

Before you begin

You can only assign Hue application permissions to groups or users within a group. Add the users to a group to whom you want to grant access to the S3 or ABFS File Browsers.

 **Important:** The "default" group in Hue does not have the permissions required to view S3 or ABFS File Browsers, by default. If your users belong to the default group, then you must manually grant the required permissions.

Procedure

1. Sign in to Hue as an Administrator.
2. Go to admin Manage Users Groups .
3. Click on the group to whom you want to grant the filebrowser application permissions.
4. On the **Edit [***GROUP-NAME***]** page, select the required permission under the permission section and click Update group.

List of supported non-alphanumeric characters for file and directory names in Hue

Auto-generated files may often introduce non-alphanumeric characters in the filenames which are not supported by Hue. This might cause the files or directories to not appear on the Hue File Browser. Review the list of non-alphanumeric characters supported in Hue to avoid running into this issue.

The following table lists the supported non-alphanumeric characters in Hue:

Table 1: Non-alphanumeric characters supported in Hue

Special character symbol	Description
~	Tilde
@	Ampersat
#	Hash
\$	Dollar sign
&	Ampersand
(	Left paranthesis
)	Right paranthesis
*	Asterisk
!	Exclamation mark
+	Plus
=	Equal
:	Colon Not supported with Knox.
;	Semicolon
,	Comma
.	Period
?	Question mark Not supported with Knox.
/	Forward slash Not supported with Knox.
\	Backslash
'	Apostrophe or single quote