

Integrating Apache Hive with BI tools

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Connecting Hive to BI tools using a JDBC/ODBC driver in Cloudera Data Warehouse

To query, analyze, and visualize data stored in Cloudera, you use drivers provided by Cloudera to connect Apache Hive to Business Intelligence (BI) tools.

About this task

How you connect to Hive depends on a number of factors: the location of Hive inside or outside the cluster, the HiveServer deployment, the type of transport, transport-layer security, and authentication. HiveServer is the server interface that enables remote clients to run queries against Hive and retrieve the results using a JDBC or ODBC connection.

Before you begin

- Choose a Hive authorization model.
- Configure authenticated users for querying Hive through JDBC or ODBC driver. For example, set up a Ranger policy.

Downloading a JDBC driver from Cloudera Data Warehouse

To use third-party BI tools, your client users need a JDBC JAR to connect your BI tool and the service. You learn how to download the JDBC JAR to give to your client, and general instructions about how to use the JDBC JAR.


Before you begin

Before you can use your BI tool with the Cloudera Data Warehouse service:

- You created a Database Catalog.
You have the option to populate your Database Catalog with sample data when you create it.
- You created a Virtual Warehouse and configured it to connect to the Database Catalog.

Of course, to query tables in the Virtual Warehouse from a client, you must have populated the Virtual Warehouse with some data.

Procedure

1. Log in to the Cloudera Data Warehouse service as DWUser.
2. In the **Overview** page of the Cloudera Data Warehouse service, click See More in the Resources and Downloads tile.
3. Click Hive JDBC Jar to download the Apache Hive JDBC JAR file.
4. Provide the JAR file you downloaded to your JDBC client.
On most clients, add the JAR file under the Libraries folder. Refer to your client documentation for information on the location to add the JAR file.
5. In the Cloudera Data Warehouse service **Overview** page, for the Virtual Warehouse you want to connect to the client, click  and select Copy JDBC URL.

A URL is copied to your system clipboard in the following format:

```
jdbc:hive2://<your_virtual_warehouse>.<your_environment>.<dw.company.com>/default;transportMode=http;httpPath=cliservice;ssl=true;retries=3
```

6. Paste the URL into a text editor and configure your client BI tool to connect to the Virtual Warehouse using the following portion of the URL, represents the server name of the Virtual Warehouse:

```
<your_virtual_warehouse>.<your_environment>.<dwx.company.com>
```

7. In your JDBC client, set the following other options:

Authentication: Username and Password

Username: Username you use to connect to the Cloudera Data Warehouse service.

Password: Password you use to connect to the Cloudera Data Warehouse service.