Cloudera Data Visualization 7.2.3

# **Connecting to Data**

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# Connecting to a data source in Cloudera Data Visualization

Data Visualization allows you to create connections to many types of external data sources, enhancing your data analysis and visualization capabilities.

Data Visualization currently supports the following connection types:

- Hive
- Impala
- MariaDB
- MySQL
- PostgreSQL
- Solr [Technical Preview]
- Spark SQL
- SQLite (not supported in CDW)
- Snowflake [Technical Preview]

This range of supported connection types provides flexibility and versatility in connecting to various data sources for comprehensive data analysis.

When using Data Visualization with Cloudera Data Warehouse (CDW), the data connection is automatically set up, but you can connect to various other data sources as well to suit your specific requirements.

In Cloudera Machine Learning (CML), you can connect to an Impala or a Hive data warehouse, or tie in data from predictive CML models.

#### Related Information Connections

Datasets Data modeling

### Creating a CML data connection to Impala

Learn how to connect natively to data stored in Impala when using Data Visualization in Cloudera Machine Learning (CML).

### About this task

Before you start using data modeling and visualization functions, you must connect to your data. The following steps show you how to create a new CML data connection in Cloudera Data Visualization (CDV) to an Impala data warehouse.



### Note:

You must have the Manage data connections privilege or be an admin to be able to create and manage connections in Cloudera Data Visualization.

Setting user privileges requires administrator-level access. You can log in as an administrator using the default admin account with the following credentials:

- Username: vizapps\_admin
- Password: vizapps\_admin

When you create a connection, you automatically get privileges to create and manage the associated datasets. You can also build dashboards and visuals within these datasets.

- For more information on the Manage data connections privilege, see RBAC permissions.
- For instructions on how to define privileges for a specific role, see Setting role privileges.
- For instructions on how to assign the administrator role to a user, see *Promoting a user to administrator*.

#### Before you begin

If you are using a CDP Base cluster running Impala with Kerberos for authentication, make sure that Kerberos credentials are configured in CML before creating a CML data connection to the Impala data warehouse. This ensures seamless integration and authentication between CDV and the Impala cluster. If you add Kerberos credentials after launching the CDV app, you need to restart the app for the changes to take effect.

For more information on using Kerberos for authentication in CML, see Hadoop Authentication for ML Workspaces.

### **Procedure**

**1.** On the main navigation bar, click DATA.

The DATA interface opens, displaying the Datasets tab.

| CLOUDERA<br>Data Visualization | HOME SQL VISUALS DATA Q find  | titles, viz types, datasets, autho | rs  | 8              |              |                 | Q SEARCH      | ¢- 0-        | 🛔 vizapps_admin 🗸 |
|--------------------------------|---|------------------------------------|-----|----------------|--------------|-----------------|---------------|--------------|-------------------|
| % NEW CONNECTION               | A Datasets (55)     ♥ Data Extracts     ⑦   |                                    |     |                |              |                 |               |              |                   |
| All Connections                |   |                                    |     |                |              |                 |               |              |                   |
| % 2050_CloneSamples            | Title/Table   |                                    | ID  | Tags           | Created      | Last Updated ↓₹ | Modified By   | # Dashboards |                   |
|                                | Cereals<br>main.cereals<br>Data Connection: samples   | K a∎                               | 11  | Extract Source | May 03, 2021 | 19 hours ago    | juno          | 69           | 8                 |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: samples                         | 40 4 H                             | 191 |                | Sep 28, 2022 | 19 hours ago    | juno          | 24           | ê                 |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: 2050_CloneSamples               | € all                              | 341 |                | May 23, 2023 | 19 hours ago    | vizapps_admin | 19           | 8                 |
|                                | csimport<br>Solr.csaba_import_20240119<br>Data Connection: SolrTestConnection                     | et all                             | 417 |                | Jan 23, 2024 | 2 days ago      | juno          | 1            | ŝ                 |
|                                | Dataset-2-test<br>main.census_pop<br>Data Connection: samples                                     | 80 an                              | 416 |                | Jan 23, 2024 | 2 days ago      | vizapps_admin | 1            | 8                 |
|                                | Dataset-test-1<br>main.census_pop<br>Data Connection: samples                                     | € ell                              | 415 |                | Jan 23, 2024 | 2 days ago      | vizapps_admin | 1            | Û                 |
|                                | vector<br>Solr.cdv_embeddings_out_1536_100_rows_1703174544<br>Data Connection: SolrTestConnection | et all                             | 414 |                | Jan 23, 2024 | 2 days ago      | vizapps_admin | 1            | 8                 |
|                                | asd<br>main.cdv_1937<br>Data Connection: SQLite   | € ell                              | 413 | Extract Target | Jan 22, 2024 | 2 days ago      | juno          | 0            | Û                 |
|                                | report<br>main.reports_report, main.reports_appgroup, main.rep<br>Data Connection: meta           | et all                             | 412 |                | Jan 22, 2024 | 2 days ago      | vizapps_admin | 0            | 8                 |

2. On the side menu bar, click NEW CONNECTION.



**Note:** Only users with Manage data connections privilege or administrators can access the NEW CONNECTION button.

| <b>CLOUDERA</b><br>Data Visualization | HOME SQL VISUALS DATA Q find titles, viz types, datasets, authors                             | 8              |
|---------------------------------------|---|----------------|
| % NEW CONNECTION                      | 🗞 Datasets 🚯 📦 Data Extracts 🕜  |                |
| All Connections                       |   |                |
| So 2050 CloneSamples ▲                | Title/Table ID  | Tags           |
|                                       | Cereals + 11<br>main.cereals<br>Data Connection: samples                                      | Extract Source |
|                                       | cereal     + I     191       main.cereals, main.chicago_govt_pay     Data Connection: samples |                |
|                                       | cereal + 341<br>main.cereals, main.chicago_govt_pay<br>Data Connection: 2050_CloneSamples     |                |
|                                       | csimport + 1 417<br>Solr.csaba_import_20240119<br>Data Connection: SolrTestConnection         |                |

The Create New Data Connection modal window appears.

3. Choose Impala from the Connection type drop-down list and assign a name to your connection.

| Create New Data Connection |  |   |
|----------------------------|--|---|
| Connection type            | Impala   | • |
| Connection name            | doc-test   |   |
| Basic Advanced             | Parameters Data  |   |
| Hostname or IP<br>address  | Enter IP address of the server where your data resides (example: prod_db.yourcompany.com or 10.0.1.20) |   |
| Port #                     | 443  |   |
| Credentials                |  |   |
| Username                   |  |   |
| Password                   |  |   |
| TEST                       | CONNEC   | т |

In this example, the Impala connection is made through Knox. Knox always uses TLS encryption and port 443 is the default HTTPS port.

- 4. Enter the hostname or IP address of the running coordinator.
- You can retrieve this information from the JDBC URL of the Impala DW.
- **5.** Add 443 in the Port # field.
- 6. Enter your workload username and password as credentials.

7. Click the Advanced tab to configure additional details.

| Create New Data Connection |                      |            |               | ×                   |             |         |
|----------------------------|----------------------|------------|---------------|---------------------|-------------|---------|
| Conr                       | nection type         | Impala     |               |                     |             | •       |
| Conne                      | ection name          | doc-test   |               |                     |             |         |
| Basic                      | Advanced             | Parameter  | s Data        |                     |             |         |
| Conne                      | ection mode          | ⊖ Binary   | HTTP          |                     |             |         |
|                            | HTTP Path            | SQL path ( | default clise | ervice)             |             |         |
| :                          | Socket type          | ⊖ Normal   | ● SSL         | $\bigcirc$ SSL with | certificate |         |
| Aut                        | thentication<br>mode | ⊖ NoSasl   | ● Plain       |                     | ⊖ Kerberos  |         |
| Soci                       | ket Timeout          | 60         |               |                     |             |         |
| Imper                      | rsonation            | Enabled    |               |                     |             |         |
| Imper                      | Trusted              | Enabled    |               |                     |             |         |
| Applic                     | ation Name           | viz        |               |                     |             |         |
|                            |                      |            |               |                     |             |         |
| TEST                       | Г                    |            |               |                     |             | CONNECT |

a) For HTTP connection mode, locate the Impala Endpoint for the Data Hub.

| Event<br>Databa | History Autoscale Endpoints (3) Tags (8) Hardware Network Telemetry Repository Details Image Details Recipes (0) ase Upgrade  |
|-----------------|---|
| Name            | URL   |
| CM-<br>API      | https://jingalls-test-dm-gateway.euph-aw.a465-9q4k.cloudera.site/jingalls-test-dm/cdp-proxy-api/cm-api/ 🗯   |
| Impala          | https://jingalls-test-dm-gateway.euph-aw.a465-9q4k.cloudera.sit /jingalls-test-dm/cdp-proxy-api/impala/ 📫   |
| Impala          | jdbc:impala://jingalls-test-dm-gateway.euph-aw.a465-9q4k.cloudera.site:443/;ssl=1;transportMode=http;httpPath=jingalls-test-dm/cdp-proxy-<br>api/impala;AuthMech=3; 🗳 |

b) Copy and paste it into the HTTP Path field.

c) Set any additional details as required.

8. Check the Parameters and Data tabs for more configuration options.

| Create New Data Connection |            |                 | ×      |   |
|----------------------------|------------|-----------------|--------|---|
| Connection type            | Impala     |                 |        | ¥ |
| Connection name            | doc-test   |                 |        |   |
| Basic Advanced             | Parameters | Data            |        |   |
| Parameter Name             |            | Parameter Value |        |   |
| Add new row                |            |                 |        |   |
|                            |            |                 |        |   |
| TEST                       |            |                 | CONNEC | т |

| Create New Data C                        | Connection |      | ×       |
|--|------------|------|---------|
| Connection type                          | Impala     |      | •       |
| Connection name                          | doc-test   |      |         |
| Basic Advanced                           | Parameters | Data |         |
| Concurrency                              | 55         |      |         |
| Concurrency Per 🗊<br>User                | 5          |      |         |
| Query Timeout 🗈<br>(Minutes)             | 22         |      |         |
| Query Still Loading<br>Warning (Seconds) | 20         |      |         |
| Row upload limit 🕲                       | 10000      |      |         |
| Result Cache                             | Enabled    |      |         |
| Cache Retention<br>Time (seconds)        | 86400      |      |         |
| TEST                                     |            |      | CONNECT |

9. Once you finish configuring the settings, click TEST to check the connection.

**10.** Click CONNECT to establish the connection.

### **Results**

You have successfully set up a connection to a running Impala DW. Related Information RBAC permissions Setting role privileges Promoting a user to administrator Hadoop Authentication for ML Workspaces

### Creating a CML data connection to a Hive data warehouse

Learn how to connect natively to data stored in Hive when using Data Visualization in Cloudera Machine Learning (CML).

### About this task

Before you start using data modeling and visualization functions, you must connect to your data. The following steps show you how to create a new CML data connection in Cloudera Data Visualization (CDV) to a Hive data warehouse.



### Note:

You must have the Manage data connections privilege or be an admin to be able to create and manage connections in Cloudera Data Visualization.

Setting user privileges requires administrator-level access. You can log in as an administrator, using the default admin account with the following credentials:

- Username: vizapps\_admin
- Password: vizapps\_admin

When you create a connection, you automatically get privileges to create and manage the associated datasets. You can also build dashboards and visuals within these datasets.

- For more information on the Manage data connections privilege, see *RBAC permissions*.
- For instructions on how to define privileges for a specific role, see Setting role privileges.
- For instructions on how to assign the administrator role to a user, see *Promoting a user to administrator*.

### Before you begin

If you are using a CDP Base cluster running Hive with Kerberos for authentication, make sure that Kerberos credentials are configured in CML before creating a CML data connection to the Hive data warehouse. This ensures seamless integration and authentication between CDV and the Hive cluster. If you add Kerberos credentials after launching the CDV app, you need to restart the app for the changes to take effect.

### Procedure

- **1.** On the main navigation bar, click DATA.
  - The DATA opens, displaying the Datasets tab.

| CLOUDERA<br>Data Visualization  | HOME SQL VISUALS DATA Q find it   | les, viz types, datasets, aut | hors | S              |              |              | Q SEARCH      | 0- 0- A      | * vizapps_admin <del>-</del> |
|---|---|-------------------------------|------|----------------|--------------|--------------|---------------|--------------|------------------------------|
| % NEW CONNECTION  | & Datasets I Data Extracts I  |                               |      |                |              |              |               |              |                              |
| - 2050 ClassSamplan   | Title/Table   |                               | ID   | Tags           | Created      | Last Updated | Modified By   | # Dashboards |                              |
| Cool and a second | Cereals<br>main.cereals<br>Data Connection: samples   | *C + H                        | 11   | Extract Source | May 03, 2021 | 19 hours ago | juno          | 69           | 8                            |
|   | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: samples                         | +: + <b>Ⅲ</b>                 | 191  |                | Sep 28, 2022 | 19 hours ago | juno          | 24           | ê                            |
|   | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: 2050_CloneSamples               | +C + Ⅲ                        | 341  |                | May 23, 2023 | 19 hours ago | vizapps_admin | 19           | 8                            |
|   | csimport<br>Solr.csaba_import_20240119<br>Data Connection: SolrTestConnection                     | *C + 0                        | 417  |                | Jan 23, 2024 | 2 days ago   | juno          | 1            | â                            |
|   | Dataset-2-test<br>main.census_pop<br>Data Connection: samples                                     | +C + 00                       | 416  |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | ê                            |
|   | Dataset-test-1<br>main.census_pop<br>Data Connection: samples                                     | *C + 81                       | 415  |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | 8                            |
|   | vector<br>Solr.cdv_embeddings_out_1536_100_rows_1703174544<br>Data Connection: SolrTestConnection | +C + H                        | 414  |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | 8                            |
|   | asd<br>main.cdv_1937<br>Data Connection: SQLite   | +C + 0                        | 413  | Extract Target | Jan 22, 2024 | 2 days ago   | juno          | 0            | 8                            |
|   | report<br>main.reports_report, main.reports_appgroup, main.rep<br>Data Connection: meta           | +C + H                        | 412  |                | Jan 22, 2024 | 2 days ago   | vizapps_admin | 0            | 8                            |

2. On the side menu bar, click NEW CONNECTION.

**Note:** The NEW CONNECTION button is only accessible to users assigned to roles with the Manage data connections privilege and to administrators.

| CLOUDERA<br>Data Visualization | HOME VISUALS DATA Q find titles, viz ty  | ypes, datasets, authors | C  |              |
|--------------------------------|--|-------------------------|----|--------------|
| % NEW CONNECTION               | & NEW DATASET O ADD DATA   |                         |    |              |
| All Connections                | & Datasets 🕦 🖽 Connection Explo  | rer 👁                   |    |              |
| % samples 🖉                    |  |                         |    |              |
|                                | Title/Table  |                         | ID | Created      |
|                                | Test Dataset<br>main.census_pop  | + il                    | 13 | Dec 08, 2021 |
|                                | Food Stores Inspection in NYC<br>main.retail_food_store_inspections_current_critical_vio | +11                     | 12 | Nov 22, 2021 |
|                                | Cereals<br>main.cereals  | +11                     | 11 | Nov 22, 2021 |
|                                | Earthquake Data January 2019<br>main.earthquake_data2019                                 | +il                     | 10 | Nov 22, 2021 |
|                                | World Life Expectancy<br>main.world_life_expectancy                                      | + 11                    | 9  | Nov 22, 2021 |

The Create New Data Connection modal window appears.

3. Choose Hive from the Connection type drop-down list and assign a name to your connection.

| Create New Data Connection |  |    |
|----------------------------|--|----|
| Connection type            | Hive   | •  |
| Connection name            | doc-test   |    |
| Basic Advanced             | Parameters Data  |    |
| Hostname or IP<br>address  | Enter IP address of the server where your data resides (example: prod_db.yourcompany.com or 10.0.1.20) |    |
| Port #                     | 443  |    |
| Credentials                |  |    |
| Username                   |  |    |
| Password                   | •••••  |    |
| TEST                       | CONNEC   | СТ |

4. Enter the hostname or IP address of the running coordinator.

You can get the coordinator hostname from the JDBC URL of the Hive DW.

- **5.** Use port 443.
- 6. Enter your workload username and password as credentials.

L

7. Click the Advanced tab to configure the additional details.

| Create New Data        | Connection ×                  |
|------------------------|-------------------------------|
| Connection type        | Hive v                        |
| Connection name        | doc-test                      |
| Basic Advanced         | Parameters Data               |
| Connection mode        | ⊖ Binary                      |
| HTTP Path              | SQL path (default cliservice) |
| Access Token           | Access token (optional)       |
| Socket type            | ○ Normal                      |
| Authentication<br>mode | ○ NoSasl                      |
| Socket Timeout         | 60                            |
| Impersonation ()       | Enabled                       |
| Trusted  Impersonation | Enabled                       |
| Application Name       | viz                           |
| TEST                   | CONNECT                       |

8. Click the Parameters tab and set the hive.server2.async.exec.async.compile parameter to false.

| Create New Data Connection |                  |                 |      |
|----------------------------|------------------|-----------------|------|
| Connection type            | Hive             |                 | •    |
| Connection name            | doc-test         |                 |      |
| Basic Advanced             | Parameters Data  |                 |      |
| Parameter Name             |                  | Parameter Value |      |
| hive.server2.async.ex      | ec.async.compile | false           | Đ    |
| Add new row                |                  |                 |      |
| TEST                       |                  | CONN            | IECT |

9. Check the Data tab for more configuration options.

| Create New Data (                        | Connection |         | × |
|--|------------|---------|---|
| Connection type                          | Hive       |         | , |
| Connection name                          | doc-test   |         |   |
| Basic Advanced                           | Parameters | Data    |   |
| Concurrency 💿                            | 50         |         |   |
| Concurrency Per 💿<br>User                | 5          |         |   |
| Query Timeout ()<br>(Minutes)            | 22         |         |   |
| Query Still Loading<br>Warning (Seconds) | 20         |         |   |
| Row upload limit 💿                       | 10000      |         |   |
| Result Cache                             | Enabled    |         |   |
| Cache Retention<br>Time (seconds)        | 86400      |         |   |
| TEST                                     |            | CONNECT |   |

**10.** Once you finish configuring the settings, click TEST to test the connection.

**11.** Click CONNECT to establish the connection.

#### **Results**

You have successfully set up a connection to a running Hive DW. Related Information RBAC permissions Setting role privileges Promoting a user to administrator

### **Creating a CDW data connection in Data Visualization**

Learn how to connect to data when using Cloudera Data Visualization in Cloudera Data Warehouse (CDW) data service. You can connect Data Visualization to a Virtual Warehouse to visualize your data. Similar to using a BI client, you can configure and connect to Virtual Warehouses from different clusters.

### About this task

You must connect to your data prior to using the data modeling and visualization functions. You make the connection to the Virtual Warehouse when you select your warehouse in the steps below. The CDW Warehouse URL has the same compute instance ID as your Virtual Warehouse.

### Note:

To create and manage connections in Cloudera Data Visualization, you must have the Manage data connections privilege or hold administrative privileges. In CDW, these are the members of the Admin Groups associated with the CDV instance.

When you create a connection, you automatically gain privileges to create and manage datasets associated with this connection, and to build dashboards and visuals within these datasets.

- For more information on the Manage data connections privilege, see RBAC permissions.
- For instructions on how to define privileges for a specific role, see Setting role privileges.
- For instructions on how to assign the administrator role to a user, see Promoting a user to administrator.

When you are creating a Hive or Impala data connection within the same cluster, the connection is considered secure and trusted, and the connection details can be auto-populated with a default authentication user.

#### Procedure

- 1. Start Data Visualization from the left navigation panel in CDW.
- 2. On the main navigation bar, click DATA.

The DATA interface appears, open on the Datasets tab.

| % NEW CONVECTION States ( ) ♥ Data Extracts ⑦   |              |   |
|---|--------------|---|
| Q All Connections   |              |   |
| 2050_CloneSamples   | # Dashboards |   |
| Cereals     +: +81     11     Entrem Linuxe     May 03, 2021     19 hours ago     juno       main consults     Data Connection: samples   | 69           | 8 |
| cereal     +: +3     191     Sep 28, 2022     19 hours ago     juno       main.cereals, main.chicagogort,pay  | 24           | ê |
| cereal     +: +II     341     May 23, 2023     19 hours ago     vizapps_admin       main.cereals, main.chicago.govt_pay     Data Connection: 2050_CloneSamples <td>19</td> <td>8</td>   | 19           | 8 |
| catimport databalumport_20240119 + + + = # 417 Jan 23, 2024 2 days ago juno<br>Solorasabalumport_20240119 Bata Connection   | 1            | â |
| Dataseré-21est + + + ■ 416 Jan 23, 2024 2 days ago Vizapps_admin<br>main consus_pop<br>Data Connection: samples   | 1            | 8 |
| Datasetters1     +:     +II     415     Jan 23, 2024     2 days ago     Vizapps_admin       main.comvacions samples     Data Convections samples     Data Convections samples     Data Convections samples     Data Convections samples | 1            | ÷ |
| vector + + + # 414 Jan 23, 2024 2 days ago Vizapps_admin<br>Solk cont_sembeddings_out_1536_100_rows_1703174544<br>Data Convection Solf reatConnection   | 1            | 8 |
| and +: +8 413 Extend target Jan 22, 2024 2 days ago juno<br>main.code.1937<br>Bata Connection: SQLite   | 0            | â |
| report     +: +ii     412     Jan 22, 2024     2 days ago     vizappsedmin       main.reports_report, main.reports_appgroup, main.rep     Data Connection: meta   | 0            | â |

3. In the side menu bar of DATA, click NEW CONNECTION.



**Note:** The NEW CONNECTION button is only accessible to users assigned to roles with the Manage data connections privilege and to administrators.

| CLOUDERA<br>Data Visualization | HOME VISUALS DATA Q find titles, viz type  | s, datasets, authors | 0  |              |
|--------------------------------|--|----------------------|----|--------------|
| % NEW CONNECTION               | & NEW DATASET O ADD DATA   |                      |    |              |
| All Connections                | & Datasets 11 Econnection Explore  | r ®                  |    |              |
| % samples 🖉                    |  |                      |    |              |
|                                | Title/Table  |                      | ID | Created      |
|                                | Test Dataset<br>main.census_pop  | +il                  | 13 | Dec 08, 2021 |
|                                | Food Stores Inspection in NYC<br>main.retail_food_store_inspections_current_critical_vio | +11                  | 12 | Nov 22, 2021 |
|                                | Cereals<br>main.cereals  | +11                  | 11 | Nov 22, 2021 |
|                                | Earthquake Data January 2019<br>main.earthquake_data2019                                 | ÷il                  | 10 | Nov 22, 2021 |
|                                | World Life Expectancy<br>main.world_life_expectancy                                      | +8                   | 9  | Nov 22, 2021 |

The Create New Data Connection modal window appears.

4. In Connection type, select CDW Hive or CDW Impala, and provide a name for your connection.

**Note:** SQLite connection is not supported in CDW, and the option is disabled in the connection list.

| Create New Data (         | Connection   | × |
|---------------------------|--|---|
| Connection type           | CDW Hive   | • |
| Connection name           | doc-test   |   |
| Basic Advanced            | Parameters Data  |   |
| Hostname or IP<br>address | Enter IP address of the server where your data resides (example: prod_db.yourcompany.com or 10.0.1.20) |   |
| Port #                    | 443  |   |
| Credentials               |  |   |
| Username                  |  |   |
| Password                  | •••••  |   |
| TEST                      | CONNEC   | Г |

5. Select a CDW Warehouse to connect to.

For Data connection within the same cluster

The following fields are auto-populated:

- Hostname or IP address
- Port #
- Username

#### For Data connection outside the cluster

Enter the following information:

- Hostname or IP address
- Port #
- Username
- Password

6. Click the Advanced tab and configure the additional details.



**Important:** Depending on the type of connection you are creating, there can be additional tabs in the Create New Data Connection modal window where you have to adjust further settings.

- 7. Click TEST.
  - If the connection is valid, the system returns a Connection Verified message.
- **8.** Click CONNECT.

### What to do next

You can create a data set, and then start creating visuals, dashboards, and applications. For more information, see *Creating datasets* and *Creating a visual*.

Related Information RBAC permissions Setting role privileges Promoting a user to administrator

Creating datasets

Creating a visual

### Creating a CDSW data connection to a data warehouse

Learn how to connect natively to data stored in a data warehouse when using Data Visualization in Cloudera Data Science Workbench (CDSW).

### About this task

You must connect to your data prior to using the data modeling and visualization functionalities. The following steps show you how to create a new CDSW data connection to a running Impala system.



#### Note:

To create and manage connections in Cloudera Data Visualization, you must have the Manage data connections privilege or hold administrative privileges.

Setting user privileges requires administrator-level access. To log in as an administrator, you can use the default admin account with the following credentials:

- Username: vizapps\_admin
- Password: vizapps\_admin

When you create a connection, you automatically gain privileges to create and manage datasets associated with this connection, and to build dashboards and visuals within these datasets.

- For more information on the Manage data connections privilege, see *RBAC permissions*.
- For instructions on how to define privileges for a specific role, see Setting role privileges.
- For instructions on how to assign the administrator role to a user, see *Promoting a user to administrator*.

### Procedure

1. On the main navigation bar, click DATA.

The DATA interface appears, open on the Datasets tab.

| CLOUDERA<br>Data Visualization | HOME VISUALS DATA Q find titles, viz types   | , detasets, authors | 0            |              |               | ¢- 0- ≛v  | lzapps_admin 👻 |
|--------------------------------|--|---------------------|--------------|--------------|---------------|-----------|----------------|
| % NEW CONNECTION               | REW DATASET O ADD DATA   |                     |              |              |               |           |                |
| @ All Connections              | 🗞 Datasets 💷 🖽 Connection Explore  | r Ø                 |              |              |               |           |                |
| ∿ samples 🖉                    |  |                     |              |              |               |           |                |
|                                | Title/Table  |                     | Created      | Last Updated | Modified By   | # Visuals |                |
|                                | Food Stores Inspection in NYC<br>main.retail_food_store_inspections_current_critical_vio | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 3         |                |
|                                | Cereals<br>main.cereals  | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 3         | 8              |
|                                | Earthquake Data January 2019<br>main.earthquake_data2019                                 | 40                  | Oct 14, 2020 | 13 days ago  | vizapps_admin | 1         |                |
|                                | World Life Expectancy<br>main.world_life_expectancy                                      | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 3         | 8              |
|                                | US State Populations Over Time<br>main.census_pop  | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 2         |                |
|                                | US County Population<br>main.us_counties   | +31                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 0         | 8              |
|                                | Global Information Security Threats<br>main.infoseq_1559                                 | -88                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 2         |                |
|                                | Restaurant Inspection SF<br>main.restaurant_scores_lives_standard                        | -81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 2         | 8              |
|                                | Iris<br>main.iris  | -81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 1         |                |
|                                | NYC Taxicab Rides Detail<br>main.trips_detail  | +11                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 0         | 8              |

2. In the Data side menu bar, click NEW CONNECTION.



**Note:** The NEW CONNECTION button is only accessible to users assigned to roles with the Manage data connections privilege and to administrators.

| CLOUDERA<br>Data Visualization | HOME VISUALS DATA   | find titles, viz types, datasets, authors | 0  | ]            |
|--------------------------------|---|---|----|--------------|
| % NEW CONNECTION               | & NEW DATASET O ADD DATA -  | -   |    |              |
| All Connections                | 🗞 Datasets 💷 🖽 Conne  | ction Explorer 🛛 👁                        |    |              |
| % samples 🖉                    |   |   |    |              |
|                                | Title/Table   |   | ID | Created      |
|                                | Test Dataset<br>main.census_pop   | +11                                       | 13 | Dec 08, 2021 |
|                                | Food Stores Inspection in NYC<br>main.retail_food_store_inspections_curre | + 🖬<br>nt_critical_vio                    | 12 | Nov 22, 2021 |
|                                | Cereals<br>main.cereals   | + 31                                      | 11 | Nov 22, 2021 |
|                                | Earthquake Data January 2019<br>main.earthquake_data2019                  | +11                                       | 10 | Nov 22, 2021 |
|                                | World Life Expectancy<br>main.world_life_expectancy                       | + 10                                      | 9  | Nov 22, 2021 |

The Create New Data Connection modal window appears.

- 3. Select a Connection type from the drop-down list, and provide a name for the connection.
- 4. Enter the hostname or IP address of the running coordinator.
- 5. Under Port #, enter the port number.
- 6. Use your workload username and password as credentials.
- 7. Click the Advanced tab and make the appropriate selections.



**Important:** Depending on the type of connection you are creating, there can be additional tabs in the Create New Data Connection modal window where you have to adjust further settings.

8. Click TEST.

If the connection is valid, the system returns a Connection Verified message.

### 9. Click CONNECT.

#### Results

You have set up a connection to a running data warehouse. **Related Information** RBAC permissions Setting role privileges Promoting a user to administrator

# **Managing data connections**

You can change the properties of existing data connections and you can also delete connections that are not associated with any dataset.

### Editing a data connection

Learn how to edit a data connection in Cloudera Data Visualization.

#### About this task

The following steps demonstrate how to edit existing data connections. The example shows changing an Impala connection to a Hive connection.

#### **Procedure**

**1.** On the main navigation bar, click DATA.

The Data view appears, open on the Datasets tab.

| NEW CONNECTION  |           |
|---|-----------|
| Q All Connections   |           |
| S 2050, CloneSamples  | ashboards |
| Coreals         +: +II         11         Enne Exerce         May 03, 2021         19 hours ago         juno         69           main correls         Data Connection: samples         Data Conne | 8         |
| cereal<br>main cerealit, mini chicago, gort_pay     +2     +21     191     Sep 28, 2022     19 hours ago     juno     24       Data Connection: samples   | 8         |
| Coreal ** + ii 341 May 23, 2023 19 hours ago vizapps_admin 19<br>Data Connection; 2050, ConeSamples   | 8         |
| csimport<br>Solk canaba_import_2022/0119     +: +II     417     Jan 23, 2024     2 days ago     juno     1       Data Connection:     SolfTestConnection  | 8         |
| Dataset/deat     +: + #i     416     Jan 23, 2024     2 days ago     Vitapps_admin     1       main census_pop     Data Connection samples  | 9         |
| Datasetes:1     +: +II     415     Jan 23, 2024     2 days ago     Vizapps_admin     1       main consult_opp     Data Connections samples  | 8         |
| vector + i 414 Jan 23, 2024 2 days ago vizapps_admin 1<br>Soliz cidri_embeddings_out_1536_100_rows_1703174544<br>Data Connection: SolTestConnection   | 8         |
| aad +: +ii 413 Lounschauge Jun 22, 2024 2 days ago juno 0<br>main.ndv.1987<br>Data Connection: SQLite   | 9         |
| report     +: +II     412     Jan 22, 2024     2 days ago     vizapps,us/min     0       main.reports_report  | 8         |

**2.** In the side bar, click the Edit button to the right of the connection you want to change.

The Edit Data Connection modal window appears.

3. Edit the connection details according to the connection type change you want to implement.

In this example, an Impala connection is changed to a Hive connection.

| Edit Data Connection               |          |   |  |  |
|------------------------------------|----------|---|--|--|
| Connection type<br>Connection name |          | Impala 🗸  |  |  |
|                                    |          | ImpalaConnection                                |  |  |
| Basic                              | Advanced | Parameters Cache                                |  |  |
| Hostname or IP                     |          | 10.02.40  |  |  |
| address                            |          | (example: prod_db.yourcompany.com or 10.0.1.20) |  |  |
| Port #                             |          | 21050   |  |  |
| Credential                         | S        |   |  |  |
| Username                           |          | admin   |  |  |
|                                    | Password |   |  |  |
|                                    |          |   |  |  |

| TEST CANCEL DELETE CONNECTION SAVE |
|------------------------------------|
|------------------------------------|

### Edit Data Connection

| Connection type   | Hive  |
|---|---|
| Connection name   | HiveConnection  |
| Basic Advance   | d Parameters Cache  |
| Hostname or IP<br>address                                     | 20.01.20<br>(example: prod_db.yourcompany.com or 10.0.1.20) |
| Port #  | 10000   |
| Credentials   |   |
| Username  | admin   |
| Password  | •••••   |
|   |   |
| TEST  | CANCEL DELETE CONNECTION SAVE                               |
| At the bottom of the modal,<br>If the connection is verified, | click TEST.<br>, click SAVE.                                |

|   | Connection Verif | ied!   |                   |      |
|---|------------------|--------|-------------------|------|
|   | TEST             | CANCEL | DELETE CONNECTION | SAVE |
| 1 |                  |        |                   |      |

### Results

After the operation succeeds, the name of the new type of connection appears on the side navigation bar.

### Setting concurrency for a data connection

You can improve resource management in Cloudera Data Visualization by restricting the number of simultaneous connections on specific datasets.

### About this task



Note: This setting is only applicable to Impala, Hive, and SQLite connections.

#### Procedure

**1.** Open the Edit Data Connection modal.

For more information, see *Editing a data connection*.

- **2.** Click the Data tab.
- 3. In the Concurrency field, provide a number to set the maximum limit for simultaneous requests.



**Note:** The default maximum concurrency setting per connection is 100. You can change it to a different value in Site Settings Advanced Settings . If you change the default value, ensure that the new maximum concurrency aligns with the requirements of your data connection.

DATACONNECTION\_CONCURRENCY\_DEFAULT = 100 DATACONNECTION\_CONCURRENCY\_MAX = 100

4. In the Concurrency Per User field, provide a number to limit the maximum number of simultaneous requests a user can send.



**Note:** You can use this setting to prevent a single user from blocking access for a connection. The default concurrency setting per user is 5, with a default maximum concurrency setting per user at 100. You can adjust these values in Site Settings Advanced Settings .

```
DATACONNECTION_CONCURRENCY_USER_DEFAULT = 5
DATACONNECTION_CONCURRENCY_USER_MAX = 100
```

**5.** Click SAVE to apply the changes.

| Edit Data Connection                     |                              |   |  |  |  |  |  |  |  |
|--|------------------------------|---|--|--|--|--|--|--|--|
| Connection type                          | SQLite                       | • |  |  |  |  |  |  |  |
| Connection name                          | samples                      |   |  |  |  |  |  |  |  |
| Basic Data                               |                              |   |  |  |  |  |  |  |  |
| Concurrency                              | 30                           |   |  |  |  |  |  |  |  |
| Concurrency Per 🚯<br>User                | 5                            |   |  |  |  |  |  |  |  |
| Query Timeout ()<br>(Minutes)            | 50                           |   |  |  |  |  |  |  |  |
| Query Still Loading<br>Warning (Seconds) | 1                            |   |  |  |  |  |  |  |  |
| Row upload limit 💿                       | 10000                        |   |  |  |  |  |  |  |  |
| Result Cache                             | ✓ Enabled                    |   |  |  |  |  |  |  |  |
| Cache Retention<br>Time (seconds)        | 8000000(                     |   |  |  |  |  |  |  |  |
| TEST                                     | CLONE DELETE CONNECTION SAVE |   |  |  |  |  |  |  |  |

#### **Related Information**

Editing a data connection

### Setting a warning if the query loads for too long

A data connection admin user can set the time limit for every connection before a warning is shown when data is loaded through a query.

#### About this task

For more information on creating or editing data connections, see *Connection to a data source* and *Editing a data connection*.

### Procedure

I

- **1.** Select the Data tab in the Data Connection modal.
- 2. Enter the number of seconds you want to pass before the warning appears in Query Still Loading Warning (Seconds).

| Basic Advanc                             | ced Parameters | Data |
|--|----------------|------|
| Concurrency                              | 10             |      |
| Concurrency Per<br>User                  | 5              |      |
| Query Timeout ()<br>(Minutes)            | 10             |      |
| Query Still Loading<br>Warning (Seconds) | 20             |      |
| Row upload limit 🕲                       | 1000000        |      |
| Result Cache                             | Enabled        |      |
| Cache Retention<br>Time (seconds)        | 86400          |      |

It is also possible to have this message appear when viewing a dashboard, see Dashboards.

Related Information Dashboards Connecting to a data source in Cloudera Data Visualization Editing a data connection

### **Deleting a data connection**

Learn how you can remove an existing data connection in Cloudera Data Visualization.

### About this task



**Tip:** You can only delete connections that are not associated with any datasets. To learn how to delete datasets, see *Deleting datasets*.

### Procedure

1. On the main navigation bar, click DATA.

The Data view appears, open on the Datasets tab.

| CLOUDERA<br>Data Visualization | HOME SQL VISUALS DATA Q find to   | tles, viz types, datasets, auth | ors | 8              |              |              | Q SEARCH      | ¢- 0-        | å* vizapps_admin → |
|--------------------------------|---|---------------------------------|-----|----------------|--------------|--------------|---------------|--------------|--------------------|
| % NEW CONNECTION               | 🗞 Datasets 📧 🕫  |                                 |     |                |              |              |               |              |                    |
| All Connections                |   |                                 |     |                |              |              |               |              |                    |
| % 2050_CloneSamples            | Title/Table   |                                 | ID  | Tags           | Created      | Last Updated | Modified By   | # Dashboards | _                  |
|                                | Cereals<br>main.cereals<br>Data Connection: samples   | * +1                            | 11  | Extract Source | May 03, 2021 | 19 hours ago | juno          | 69           | 8                  |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: samples                         | <b>*</b> : +Ⅲ                   | 191 |                | Sep 28, 2022 | 19 hours ago | juno          | 24           | â                  |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: 2050_CloneSamples               | *: + <b>i</b> l                 | 341 |                | May 23, 2023 | 19 hours ago | vizapps_admin | 19           | 8                  |
|                                | csimport<br>Solr.csaba_import_20240119<br>Data Connection: SolrTestConnection                     | *: + <b>i</b> l                 | 417 |                | Jan 23, 2024 | 2 days ago   | juno          | 1            | 8                  |
|                                | Dataset-2-test<br>main.census_pop<br>Data Connection: samples                                     | *: +II                          | 416 |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | 8                  |
|                                | Dataset-test-1<br>main.census_pop<br>Data Connection: samples                                     | *C + 10                         | 415 |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | Ê                  |
|                                | vector<br>Solr.cdv_embeddings_out_1536_100_rows_1703174544<br>Data Connection: SolrTestConnection | *C + H                          | 414 |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | 8                  |
|                                | asd<br>main.cdv_1937<br>Data Connection: SQLite   | 40 a H                          | 413 | Extract Target | Jan 22, 2024 | 2 days ago   | juno          | 0            | 8                  |
|                                | report<br>main.reports_report, main.reports_appgroup, main.rep<br>Data Connection: meta           | 8. sti                          | 412 |                | Jan 22, 2024 | 2 days ago   | vizapps_admin | 0            | ê                  |

 In the side bar, click the Edit Connection (pencil) button to the right of the connection you want to delete. The Edit Data Connection modal window appears. 3. At the bottom of the Edit Data Connection modal window, click DELETE CONNECTION.

| Edit Data Connection               |          |   |  |  |  |  |  |  |  |
|------------------------------------|----------|---|--|--|--|--|--|--|--|
| Connection type<br>Connection name |          | Impala 👻  |  |  |  |  |  |  |  |
|                                    |          | ImpalaConnection  |  |  |  |  |  |  |  |
| Basic                              | Advanced | Parameters Cache  |  |  |  |  |  |  |  |
| Hostname or IP<br>address          |          | 10.02.40<br>(example: prod_db.yourcompany.com or 10.0.1.20) |  |  |  |  |  |  |  |
|                                    | Port #   | 21050   |  |  |  |  |  |  |  |
| Credentials                        | 5        |   |  |  |  |  |  |  |  |
| ι                                  | Jsername | admin   |  |  |  |  |  |  |  |
| I                                  | Password | •••••   |  |  |  |  |  |  |  |
|                                    |          |   |  |  |  |  |  |  |  |



#### **Results**

After the operation succeeds, the connection is deleted and its name no longer appears on the side navigation bar. **Related Information** 

Deleting datasets

# **Using the Connection Explorer**

Cloudera Data Visualization enables you to view existing data connections and all data tables accessible through them. In the Connection Explorer interface, you can create new connections to data sources, preview that data, create

new datasets, navigate to these datasets, import supplemental data, and locate existing dashboards and visuals based on specific datasets.

### **Discovering the Connection Explorer interface**

Learn how you can navigate to the Connection Explorer interface and use it to connect to data in Cloudera Data Visualization.

### Procedure

1. On the main navigation bar, click DATA.

The Data view appears, open on the Datasets tab. The Datasets tab lists all existing datasets on the connection.

| CLOUDERA<br>Data Visualization | HOME SQL VISUALS DATA Q find to   | iles, viz types, datasets, autł | iors | 8              |              |              | Q SEARCH      | ¢- 0-        | å* vizapps_admin → |
|--------------------------------|---|---------------------------------|------|----------------|--------------|--------------|---------------|--------------|--------------------|
| % NEW CONNECTION               | & Datasets 💮 🕫 Data Extracts 📀  |                                 |      |                |              |              |               |              |                    |
| 9 2050 ClassSamplas            | Title/Table   |                                 | ID   | Tags           | Created      | Last Updated | Modified By   | # Dashboards |                    |
| 2000_done5emples               | Cereals<br>main.cereals<br>Data Connection: samples   | € all                           | 11   | Extract Source | May 03, 2021 | 19 hours ago | juno          | 69           | ê                  |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: samples                         | ÷: +≣                           | 191  |                | Sep 28, 2022 | 19 hours ago | juno          | 24           | 9                  |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: 2050_CloneSamples               | 40 - 40<br>1                    | 341  |                | May 23, 2023 | 19 hours ago | vizapps_admin | 19           | 8                  |
|                                | csimport<br>Solr.csaba_import_20240119<br>Data Connection: SolrTestConnection                     | *C + H                          | 417  |                | Jan 23, 2024 | 2 days ago   | juno          | 1            | Ê                  |
|                                | Dataset-2-test<br>main.census_pop<br>Data Connection: samples                                     | 8. sti                          | 416  |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | 8                  |
|                                | Dataset-test-1<br>main.census.pop<br>Data Connection: samples                                     | *C + H                          | 415  |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | 8                  |
|                                | vector<br>Solr.cdv_embeddings_out_1536_100_rows_1703174544<br>Data Connection: SolrTestConnection | 40 - 4 H                        | 414  |                | Jan 23, 2024 | 2 days ago   | vizapps_admin | 1            | 8                  |
|                                | asd<br>main.cdv_1937<br>Data Connection: SQLite   | 40 a H                          | 413  | Extract Target | Jan 22, 2024 | 2 days ago   | juno          | 0            | 8                  |
|                                | report<br>main.reports_report, main.reports_appgroup, main.rep<br>Data Connection: meta           | 40 a H                          | 412  |                | Jan 22, 2024 | 2 days ago   | vizapps_admin | 0            | â                  |

2. In the main area, click the Connection Explorer tab.

| CLOUDERA<br>Data Visualization | HOME VISUALS DATA Q find titles, viz type  | es, datasets, authors | C  |              |
|--------------------------------|--|-----------------------|----|--------------|
| % NEW CONNECTION               | S NEW DATASET O ADD DATA   |                       |    |              |
| @ All Connections              | & Datasets 📵 🖽 Connection Explore  | er Ø                  |    |              |
| % samples 🥒                    |  |                       |    |              |
|                                | Title/Table  |                       | ID | Created      |
|                                | Test Dataset<br>main.census_pop  | +11                   | 13 | Dec 08, 2021 |
|                                | Food Stores Inspection in NYC<br>main.retail_food_store_inspections_current_critical_vio | + 81                  | 12 | Nov 22, 2021 |
|                                | Cereals<br>main.cereals  | + 81                  | 11 | Nov 22, 2021 |
|                                | Earthquake Data January 2019<br>main.earthquake_data2019                                 | +11                   | 10 | Nov 22, 2021 |
|                                | World Life Expectancy<br>main.world_life_expectancy                                      | +11                   | 9  | Nov 22, 2021 |

The Connection Explorer interface appears, where you can explore the databases and tables available on the connection and you can also manage all functions related to the data on the connection. You can click a

connection in left navigation that you want to explore and select a database. You can also select a specific table from that database, and explore its details.

| Data Visualization |                       |  |                            | DATA                           |   |  | pes, datasets, authors.            |                            |            | O - O - ≜ vizapp |
|--------------------|-----------------------|--|----------------------------|--------------------------------|---|--|------------------------------------|----------------------------|------------|------------------|
| & NEW CONNECTION   | æ                     | NEW DATASE?                                  | тс                         | ADD DAT                        | A                                       | ]  |                                    |                            |            |                  |
| All Connections    | 8                     | a Dataset:                                   | . 0                        |                                | Connec                                  | tion Explo                               | orer 🕐                             |                            |            |                  |
| amples 🖉           |                       |  |                            |                                |   |  |                                    |                            |            |                  |
|                    | 8                     | nain   |                            |                                |   | <b>w</b>                                 | Table Name                         |                            | # Datasets |                  |
|                    |                       |  |                            |                                |   |  | census_pop                         |                            | 1          | & New dataset    |
|                    |                       |  |                            |                                |   |  | cereals                            |                            | 1          | 🗞 New dataset    |
|                    |                       |  |                            |                                |   |  | chicago_govt_pay                   |                            | 0          | 🗞 New dataset    |
|                    |                       |  |                            |                                |   |  | earthquake_data20                  | 19                         | 1          | & New dataset    |
|                    |                       |  |                            |                                |   |  | generalTestForExpl                 | oreCall                    | 0          | 🗞 New dataset    |
|                    |                       |  |                            |                                |   |  | generaltest_151616                 | 50078                      | 0          | 🚯 New dataset    |
|                    |                       |  |                            |                                |   |  | infoseq_1559                       |                            | 1          | & New dataset    |
|                    |                       |  |                            |                                |   |  | iris                               |                            | 1          | 🗞 New dataset    |
|                    | Sa                    | mple Data                                    | Data                       | isets                          |   |  |                                    |                            |            |                  |
|                    | L 1                   |  |                            |                                |   |  |                                    |                            |            |                  |
|                    | id                    | name   | age                        | cost                           | debt                                    | altname                                  | favoriteanimal                     | heartrate                  |            |                  |
|                    | 1                     | austan                                       | 21                         | 10000                          | 0                                       | a-dog                                    | horse                              | 71                         |            |                  |
|                    |                       | energii                                      |                            |                                |   |  |                                    |                            |            |                  |
|                    | 2                     | trevor                                       | 33                         | 203                            | 30                                      | t-money                                  | cat                                | 82                         |            |                  |
|                    | 2                     | trevor                                       | 33                         | 203                            | 30                                      | t-money                                  | cat                                | 82                         |            |                  |
|                    | 2<br>3                | trevor                                       | 33<br>22                   | 203<br>393                     | 30<br>845.84                            | t-money<br>nate                          | cat<br>dog                         | 82<br>56                   |            |                  |
|                    | 2<br>3<br>4           | trevor<br>nathaniel<br>james                 | 33<br>22<br>34             | 203<br>393<br>456              | 30<br>845.84<br>944.23                  | t-money<br>nate<br>j-dog                 | cat<br>dog<br>seagul               | 82<br>56<br>99             |            |                  |
|                    | 2<br>3<br>4<br>5      | trevor<br>nathaniel<br>james<br>jake         | 33<br>22<br>34<br>31       | 203<br>393<br>456<br>543       | 30<br>845.84<br>944.23<br>23.45         | t-money<br>nate<br>j-dog<br>nate         | cat<br>dog<br>seagul<br>dog        | 82<br>56<br>99<br>87       |            |                  |
|                    | 2<br>3<br>4<br>5<br>6 | trevor<br>nathaniel<br>james<br>jake<br>john | 33<br>22<br>34<br>31<br>22 | 203<br>393<br>456<br>543<br>34 | 30<br>845.84<br>944.23<br>23.45<br>34.4 | t-money<br>nate<br>j-dog<br>nate<br>nate | cat<br>dog<br>seagul<br>dog<br>dog | 82<br>56<br>99<br>87<br>66 |            |                  |

The Connection Explorer interface contains the following items:

| CLOUDERA<br>Data Visualization       | HOME VISUALS DATA Q find titles, vi | e types, datasets, authors  |            | O - O - ≜ vizapps_admin - |
|--------------------------------------|-------------------------------------|---|------------|---------------------------|
| ⊕ NEW CONNECTION     All Connections | 🔹 NEW DATASET 💿 ADO DATA —          | Oreate Analytical View     Differ result caffle     Orego Visual Artifictus     Iorect Access |            |                           |
| ∿ samples 🔹 🖉                        | ≣ main 11                           | Table Name  | # Datasets |                           |
|                                      |                                     | census_pop  | 1          | & New dataset             |
|                                      |                                     | cereals   | 1          | & New dataset             |
|                                      |                                     | chicago_govt_pay  | 0          | 🗞 New dataset             |
|                                      |                                     | earthquake_data2019   | 1          | & New dataset             |
|                                      |                                     | generalTestForExploreCall   | 0          | & New dataset             |
|                                      |                                     | generaltest_1516160078  | 0          | 🗞 New dataset             |
|                                      |                                     | infoseq_1559  | 1          | & New dataset             |
|                                      |                                     | iris  | 1          | & New dataset             |
|                                      |                                     | Click on a table row above to view sample data and table statistics                           |            |                           |

- New Connection is for connecting to any source of data.
- New Dataset is for creating datasets, which are necessary for developing dashboards and visuals. You can also start a new dataset from a specified table.
- For SQLite connections, the Add Data option enables you to introduce data that enriches your datasets from outside sources.
- The Supplemental menu, under the (ellipsis) icon, opens new options.
  - **a.** For Impala connections, clicking the Clear result cache option under the supplemental menu reloads the full table definition.
  - **b.** Import Visual Artifacts option under the supplemental menu enables you to restore or import visual artifacts from a backup \*.json file.
  - **c.** Direct Access enables you to access data directly by running SQL queries. You can build datasets from specific SQL queries, as opposed to starting with an existing table.

- The databases area of the screen shows all databases that you can access through the current connection. In our example, there is one called main (selected). Selecting a database shows its tables.
- In the list of tables, the # Datasets column lists the number of datasets that use the particular table as their initial definition.
- New Dataset is for creating a dataset on a specific table.

### Previewing data table details

Learn how you can preview table details directly in the Connection Explorer interface.

To see more information about data tables in the Connection Explorer, click the row of a table. When you click a row, two tabs, Sample Data and Datasets appear below the list of tables.

### **Sample data**

When you click a table, you can preview the table data in the Sample Data view.

| CLOUDERA<br>Data Visualization | HON         | ie visu         | ALS    | DATA       | Q f    | nd titles, viz ty | ypes, datasets, authors | -         |         | or or ≜vizi   |
|--------------------------------|-------------|-----------------|--------|------------|--------|-------------------|-------------------------|-----------|---------|---------------|
| % NEW CONNECTION               | ŵ           | NEW DATASE      | т      | ADD DAT    | A      | ]                 |                         |           |         |               |
| All Connections                | 8           | Datasets        | s 🛈    |            | Connec | tion Explo        | orer 💿                  |           |         |               |
| % samples →                    | E main 11 T |                 |        |            |        |                   | Table Name              |           | # Datas | iets          |
|                                | ci          |                 |        | census_pop |        | 1                 | 🗞 New dataset           |           |         |               |
|                                |             |                 |        |            |        |                   | cereals                 |           | 1       | 🗞 New dataset |
|                                |             |                 |        |            |        |                   | chicago_govt_pay        |           | 0       | 🗞 New dataset |
|                                |             |                 |        |            |        |                   | earthquake_data20       | 19        | 1       | 🗞 New dataset |
|                                |             |                 |        |            |        |                   | generalTestForExp       | loreCall  | 0       | 🗞 New dataset |
|                                |             |                 |        |            |        |                   | generaltest_15161       | 60078     | 0       | 🗞 New dataset |
|                                |             |                 |        |            |        |                   | infoseq_1559            |           | 1       | 🗞 New dataset |
|                                |             |                 |        |            |        |                   | iris                    |           | 1       | 🗞 New dataset |
|                                | Sa          | mple Data       | Data   | isets      |        |                   |                         |           |         |               |
|                                | id          | name            | age    | cost       | debt   | altname           | favoriteanimal          | heartrate |         |               |
|                                | 1           | austen          | 21     | 10000      | 0      | a-dog             | horse                   | 71        |         |               |
|                                | 2           | trevor          | 33     | 203        | 30     | t-money           | cat                     | 82        |         |               |
|                                | 3           | nathaniel       | 22     | 393        | 845.84 | nate              | dog                     | 56        |         |               |
|                                | -           | lane of         |        | 454        | 044.00 | Lden              | and and                 | 00        |         |               |
|                                | 4           | james           | 34     | 455        | 944.23 | l-qoğ             | seagui                  | 99        |         |               |
|                                | 5           | jake            | 31     | 543        | 23.45  | nate              | dog                     | 87        |         |               |
|                                | 6           | john            | 22     | 34         | 34.4   | nate              | dog                     | 66        |         |               |
|                                | Show        | ring 1 - 6 of 6 | ó rows |            |        |                   |                         |           |         |               |

### Datasets

When you click a table, you can check the following data in the Datasets view:

- Title/Table
- Created date
- Last Updated date
- Modified by username
- # Visuals for a link to the dashboards and visuals based on the dataset.

You can also perform the following actions:

- Navigate directly to the dataset interface, where you can rename the dataset, modify fields and other parameters, create joins, and so on.
- Start a new dashboard based on the dataset.
- Order datasets based on any of the table columns.
- Delete datasets.

| CLOUDERA<br>Data Visualization | HOME VISU                         | ALS DATA                    | Q find titles, vi | iz types, datasets, autho | s 0          |              |                 |               |               | o- 0-     | 🌢 vizapps. | _admin + |
|--------------------------------|-----------------------------------|-----------------------------|-------------------|---------------------------|--------------|--------------|-----------------|---------------|---------------|-----------|------------|----------|
| % NEW CONNECTION               | & NEW DATASET                     | r O ADD DA                  | ATA               |                           |              |              |                 |               |               |           |            |          |
| All Connections                | 🗞 Datasets                        |                             | Connection Exp    | plorer 🕐                  |              |              |                 |               |               |           |            |          |
| ∿ samples 🖉                    | 🗐 main                            |                             | 11                | Table Name                |              |              |                 |               | # Datasets    |           |            |          |
|                                |                                   |                             |                   | census_pop                |              |              |                 |               | 1             | 🗞 New d   | ataset     |          |
|                                |                                   |                             |                   | cereals                   |              |              |                 | 1             | 🗞 New d       | ataset    |            |          |
|                                |                                   |                             |                   | chicago_govt_pay          | ý            |              |                 | 0             | & New dataset |           |            |          |
|                                |                                   |                             |                   | earthquake_data2          | 2019         | 1            | 🔊 New dataset   |               |               |           |            |          |
|                                |                                   |                             |                   | generalTestForEx          | ploreCall    |              | 0               | 🚳 New dataset |               |           |            |          |
|                                |                                   |                             |                   | generaltest_1516          | 160078       |              | 0 🗞 New dataset |               |               |           |            |          |
|                                |                                   |                             |                   | infoseq_1559              |              |              | 1               | 🗞 New dataset |               |           |            |          |
|                                |                                   |                             |                   | iris                      |              |              |                 |               | 1             | 🗞 New d   | ataset     |          |
|                                | Sample Data                       | Datasets                    |                   |                           |              |              |                 |               |               |           |            |          |
|                                | Title/Table                       |                             |                   |                           | Created      | Last Updated | 17              | Modified By   |               | # Visuals |            |          |
|                                | Earthquake Dat<br>main.earthquake | a January 201<br>a_data2019 | 9                 | +il                       | Oct 14, 2020 | 13 days ago  |                 | vizapps_admi  | in            | 1         | 1          | 8        |
|                                |                                   |                             |                   |                           |              |              |                 |               |               |           |            |          |
|                                |                                   |                             |                   |                           |              |              |                 |               |               |           |            |          |
|                                |                                   |                             |                   |                           |              |              |                 |               |               |           |            |          |
|                                |                                   |                             |                   |                           |              |              |                 |               |               |           |            |          |

# **Using the Direct Access interface**

The Direct Access interface of Cloudera Data Visualization enables you to run SQL queries on data connections directly on the DATA page. You can quickly examine the structure of tables that are available on the connection, build a query using standard SQL syntax, preview its results, and then create a dataset on the query. You can also download the data, if needed.

### **Running a SQL query in Direct Access**

Learn how you can run a SQL query in the Direct Access interface of Cloudera Data Visualization.

### Procedure

**1.** On the main navigation bar, click DATA.

The DATA view appears, open on the Datasets tab.

| CLOUDERA<br>Data Visualization | HOME VISUALS DATA Q find stiles, viz types   | , datasets, authors | 0            |              |               | o- o- 4   | ⊾vizapps_admin <del>v</del> |
|--------------------------------|--|---------------------|--------------|--------------|---------------|-----------|-----------------------------|
| % NEW CONNECTION               | & NEW DATASET O ADD DATA   |                     |              |              |               |           |                             |
| All Connections                | 🗞 Datasets 🔟 🎟 Connection Explore  | r O                 |              |              |               |           |                             |
| % samples 🛛                    |  |                     |              |              |               |           |                             |
|                                | Title/Table  |                     | Created      | Last Updated | Modified By   | # Visuals |                             |
|                                | Food Stores Inspection in NYC<br>main.retail_food_store_inspections_current_critical_vio | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 3         | 8                           |
|                                | Cereals<br>main.cereals  | +50                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 3         | 8                           |
|                                | Earthquake Data January 2019<br>main.earthquake_data2019                                 | +11                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 1         | 8                           |
|                                | World Life Expectancy<br>main.world_life_expectancy                                      | +11                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 3         | 8                           |
|                                | US State Populations Over Time<br>main.census_pop  | +11                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 2         | 8                           |
|                                | US County Population<br>main.us_counties   | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 0         | 8                           |
|                                | Global Information Security Threats<br>main.infoseq_1559                                 | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 2         | 8                           |
|                                | Restaurant Inspection SF<br>main.restaurant_scores_lives_standard                        | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 2         | 8                           |
|                                | l <b>ris</b><br>main.iris  | +81                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 1         |                             |
|                                | NYC Taxicab Rides Detail<br>main.trips_detail  | +11                 | Oct 14, 2020 | 13 days ago  | vizapps_admin | 0         | 8                           |

2. Open the Supplemental menu (ellipsis icon) and click >\_ Direct Access.

| CLOUDERA<br>Data Visualization | HOME VISUALS DATA  | Q find titles, viz types, datasets, authors | 8            |              |
|--------------------------------|--|---|--------------|--------------|
| % NEW CONNECTION               | & NEW DATASET O ADD DATA   |   |              |              |
| All Connections                | 🗞 Datasets 🕕 🌐 Co  | Create Analytical View                      |              |              |
| ବ୍ତ samples 🛛 🥒                | Title/Table  | Import Visual Artifacts     Direct Access   | Created      | Last Updated |
|                                | Food Stores Inspection in NYC main.retail_food_store_inspections_c | +51<br>current_critical_vio                 | Oct 14, 2020 | 13 days ago  |
|                                | Cereals<br>main.cereals  | +51   | Oct 14, 2020 | 13 days ago  |
|                                | Earthquake Data January 2019<br>main.earthquake_data2019           | +il   | Oct 14, 2020 | 13 days ago  |

The Direct Access interface appears, where you can select the database you want to access.

3. Add your SQL data query to the Enter SQL below code-enabled text box.

The Autocomplete option is on by default. It validates the syntax of the SQL query you enter.

If you want to limit the number of, you have two options:

- a. You can add a limit clause in the SQL query syntax.
- **b.** You can mark the Add in a "LIMIT 100" clause to any SQL select query that does not have a limit clause option. This limitation is on by default. If you set a record limit in the SQL query, it will override this default option, even if it is checked.

| Data Connection: samp      | les   |
|----------------------------|---|
| Database                   | Enter SQL below   |
| main -                     | select from * main.us_counties                              |
| Tables                     |   |
| restaurant_scores_lives    |   |
| retail_food_store_inspe    |   |
| superstore_sales           |   |
| trips                      |   |
| trips_detail               |   |
| us_counties                |   |
| world_life_expectancy      | ☑ Autocomplete on   |
|                            |   |
| Add in a "LIMIT 100" claus | e to any SQL select query that does not have a limit clause |
| ► RUN Enter email a        | ddress here   |
|                            |   |

4. Click RUN to execute the SQL query.

After the query executes, the results area shows the query results.

In this example, the following query has been run: select \* from main.us\_counties limit 5

| Data Conr  | nection: s  | samples    |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
|--|-------------|------------|--------------|-----------------------|--------|----------|------------|-------------|---------------|-----------|--------------|-----------|--------------|-----------|-------------|----------------|
| Database   |             | Ent        | er SQL below |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| main   |             |            | lect * from  | main.us_counties limi | t 5    |          |            |             |               |           |              |           |              |           |             |                |
| Tables   |             |            |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| restaurant_  | scores_live | s          |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| retail_food_   | store_insp  | e          |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| superstore_  | sales       |            |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| trips  |             |            |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| trips_detail   |             |            |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| us_counties  | 3           |            |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| world_life_e   | expectancy  |            |              |                       |        |          |            |             |               |           |              |           |              |           | 🗹 Aı        | utocomplete on |
| Add in a "LIMIT 100" clause to any SQL select query that does not have a limit clause      RUN     Enter email address here     RUN IN BACKGROUND AND EMAIL RESULT |             |            |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |
| Number of  | f rows in C | SV         | O DOWNLO     | AD CSV                |        |          |            |             |               |           |              |           |              |           |             |                |
| □ select *   | from ma     | ain.us_cou | inties limit | 5                     |        |          |            |             |               |           |              |           |              |           |             |                |
| sumlev ≑   | state ≑     | county \$  | stname ≑     | ctyname ≑             | year ≑ | agegrp ≑ | tot_pop \$ | tot_male \$ | tot_female \$ | wa_male ≑ | wa_female \$ | ba_male ≑ | ba_female \$ | ia_male ≑ | ia_female 🗘 | aa_male ≑      |
| 50   | 51          | 149        | Virginia     | Prince George County  | 5      | 0        | 36941      | 20368       | 16573         | 12155     | 10721        | 7230      | 4763         | 171       | 98          | 254            |
| 50   | 51          | 153        | Virginia     | Prince William County | 5      | 0        | 430289     | 213820      | 216469        | 141918    | 138857       | 44291     | 47256        | 2453      | 2331        | 16249          |
| 50   | 51          | 155        | Virginia     | Pulaski County        | 5      | 0        | 34736      | 17284       | 17452         | 15915     | 16222        | 959       | 866          | 35        | 37          | 93             |
| 50   | 51          | 157        | Virginia     | Rappahannock County   | 5      | 0        | 7456       | 3694        | 3762          | 3420      | 3496         | 181       | 171          | 5         | 13          | 19             |
| 50   | 51          | 159        | Virginia     | Richmond County       | 5      | 0        | 9059       | 5066        | 3993          | 3138      | 2925         | 1799      | 961          | 24        | 15          | 31             |
| Showing 1 -  | 5 of 5 rows | ;          |              |                       |        |          |            |             |               |           |              |           |              |           |             |                |



**Note:** If there is a error in the query the line number with the error will be displayed if the database returns it.

### Downloading the results of a Direct Access query

After obtaining query results in the Direct Access interface, you can download the records in CSV format.

You can download the results in CSV format, by clicking DOWNLOAD CSV. The system saves the CSV file to your default download directory.

If you only want to download a subset of the query results, you can specify the Number of rows in CSV. This will limit the number of records in the CSV file.

| Data Con       | nection: s     | samples      |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
|----------------|----------------|--------------|----------------------|--|-------------|--------------|--------------|--------------|---------------|--------------|--------------|-------------|--------------|-----------|-------------|----------------|
| Database       |                | Ent          | ter SQL below        |  |             |              |              |              |               |              |              |             |              |           |             |                |
| main           |                | se           | lect * from          | main.us_counties limi                  | t 5         |              |              |              |               |              |              |             |              |           |             |                |
| IIIdiii        |                |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| Tables         |                |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| restaurant_    | scores_live    | S            |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| retail_food_   | store_inspo    | ə            |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| superstore_    | sales          |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| trips          |                |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| trips_detail   |                |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| us_counties    | 5              |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| world_life_e   | expectancy     |              |                      |  |             |              |              |              |               |              |              |             |              |           | 🗹 Ai        | utocomplete on |
|                |                |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| 🗹 Add in a     | 'LIMIT 100'    | clause to a  | ny SQL select        | query that does not have               | a limit cla | iuse         |              |              |               |              |              |             |              |           |             |                |
| ► RUN          | Enter e        | mail addres: | s here               | RU                                     | N IN BACK   | GROUND AND E | EMAIL RESULT |              |               |              |              |             |              |           |             |                |
| Number o       | f rows in C    | sv           |                      | AD CSV                                 |             |              |              |              |               |              |              |             |              |           |             |                |
| Inditiber o    | 110ws 111 C.   | 34           | O DOWINED            | 40 037                                 |             |              |              |              |               |              |              |             |              |           |             |                |
| □ select *     | from ma        | ain.us_cou   | unties limit         | 5                                      |             |              |              |              |               |              |              |             |              |           |             |                |
| sumlev ≑       | state ≑        | county \$    | stname ≑             | ctyname ≑                              | year \$     | agegrp ≑     | tot_pop ‡    | tot_male \$  | tot_female \$ | wa_male \$   | wa_female \$ | ba_male ≑   | ba_female \$ | ia_male ‡ | ia_female ≑ | aa_male \$     |
| 50             | 51             | 149          | Virginia             | Prince George County                   | 5           | 0            | 36941        | 20368        | 16573         | 12155        | 10721        | 7230        | 4763         | 171       | 98          | 254            |
| 50             | 51             | 153          | Virginia             | Prince William County                  | 5           | 0            | 430289       | 213820       | 216469        | 141918       | 138857       | 44291       | 47256        | 2453      | 2331        | 16249          |
|                | 51             | 155          | Virginia             | Pulaski County                         | 5           | 0            | 34736        | 17284        | 17452         | 15915        | 16222        | 959         | 866          | 35        | 37          | 93             |
| 50             | 01             |              |                      |  |             |              |              |              |               |              |              |             |              |           |             |                |
| 50<br>50       | 51             | 157          | Virginia             | Rappahannock County                    | 5           | 0            | 7456         | 3694         | 3762          | 3420         | 3496         | 181         | 171          | 5         | 13          | 19             |
| 50<br>50<br>50 | 51<br>51<br>51 | 157<br>159   | Virginia<br>Virginia | Rappahannock County<br>Richmond County | 5<br>5      | 0            | 7456<br>9059 | 3694<br>5066 | 3762<br>3993  | 3420<br>3138 | 3496<br>2925 | 181<br>1799 | 171<br>961   | 5<br>24   | 13<br>15    | 19<br>31       |

Showing 1 - 5 of 5 rows

The system saves the CSV file to your default download directory.

# Adding data

Experience the flexibility of importing and integrating data to enhance your data visualization projects. In Cloudera Data Visualization, you have the capability to add data from flat files. The imported data is processed as a new table and it is integrated into an existing data repository. Subsequently, you can use this data as a supplementary information source for your existing datasets by establishing new table joins. You can also create new datasets that reference the imported data as their primary tables.

**Important:** Data import is available for the following connections:

- Hive
- Impala
- MariaDB
- MySQL
- PostgreSQL
- Spark SQL



• SQLite



Note: This connection is not supported in Cloudera Data Warehouse (CDW).

• Snowflake (Technical Preview)

Data Visualization supports two primary forms of data sources: CSV and URL.

You can use the Import Data functionality to enhance your existing datasets, incorporating this data by creating joins within the data model. The choice of creating a new dataset based on the imported data depends on your specific business requirements.

For importing data stored in Excel format, see Preparing Excel files for data import.

### Importing data in CSV format

Learn how to add data to Cloudera Data Visualization from flat CSV files.

### About this task

You can use comma-delimited files or files with other delimiting characters. If you want to import data stored in Excel format, see *Preparing Excel files for data import*.

This feature is available on the following connections:

| Enabled by default:  | Disabled by default:   |
|--|--|
| <ul> <li>SQLite</li> <li>Hive</li> <li>Impala</li> <li>Snowflake [Technical Preview]</li> <li>Solr [Technical Preview]</li> <li>Spark SQL</li> </ul> | <ul> <li>DuckDB</li> <li>MS SQL</li> <li>Teradata</li> </ul> |

### Procedure

1. On the main navigation bar, click DATA.

The Data view appears, opening on the Datasets tab.

| CLOUDERA<br>Data Visualization        | HOME SQL VISUALS DATA Q find to   | iles, viz types, datasets, auth | ors | 8              |              |                 | Q SEARCH      | ¢- 0-        | å* vizapps_admin - |
|---------------------------------------|---|---------------------------------|-----|----------------|--------------|-----------------|---------------|--------------|--------------------|
| % NEW CONNECTION                      | 🗞 Datasets 📧 🕈 Data Extracts 📀  |                                 |     |                |              |                 |               |              |                    |
| % 2050 CloneSamples                   | Title/Table   |                                 | ID  | Tags           | Created      | Last Updated ↓₹ | Modified By   | # Dashboards |                    |
| · · · · · · · · · · · · · · · · · · · | Cereals<br>main.cereals<br>Data Connection: samples   | 8. alt                          | 11  | Extract Source | May 03, 2021 | 19 hours ago    | juno          | 69           | 8                  |
|                                       | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: samples                         | 40 a H                          | 191 |                | Sep 28, 2022 | 19 hours ago    | juno          | 24           | Ê                  |
|                                       | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: 2050_CloneSamples               | €. ÷8                           | 341 |                | May 23, 2023 | 19 hours ago    | vizapps_admin | 19           | 8                  |
|                                       | csimport<br>Solr.csaba_import_20240119<br>Data Connection: SolrTestConnection                     | *: + <b>II</b>                  | 417 |                | Jan 23, 2024 | 2 days ago      | juno          | 1            | ê                  |
|                                       | Dataset-2-test<br>main.census_pop<br>Data Connection: samples                                     | 8. alt                          | 416 |                | Jan 23, 2024 | 2 days ago      | vizapps_admin | 1            | 8                  |
|                                       | Dataset-test-1<br>main.census_pop<br>Data Connection: samples                                     | *: +H                           | 415 |                | Jan 23, 2024 | 2 days ago      | vizapps_admin | 1            | 8                  |
|                                       | vector<br>Solr.cdv_embeddings_out_1536_100_rows_1703174544<br>Data Connection: SolrTestConnection | *C + H                          | 414 |                | Jan 23, 2024 | 2 days ago      | vizapps_admin | 1            | 8                  |
|                                       | asd<br>main.cdv_1937<br>Data Connection: SQLite   | *C + H                          | 413 | Extract Target | Jan 22, 2024 | 2 days ago      | juno          | 0            | â                  |
|                                       | report<br>main.reports_report, main.reports_appgroup, main.rep<br>Data Connection: meta           | 80 A.B                          | 412 |                | Jan 22, 2024 | 2 days ago      | vizapps_admin | 0            | 8                  |

### 2. Click ADD DATA.

The Add Data modal window appears.

| Add Data   |              |          |
|--|--------------|----------|
| Import data from CSV file<br>For performance reasons, we suggest uploading files 50<br>The maximum number of rows that can be imported in fi | Omb or less. | ic 10000 |
| Choose file No file chosen   |              |          |
|  | CLOSE        | GET DATA |

- 3. Select the CSV option and click Choose file.
- 4. Using your computer's native browser, locate and select the data file, and confirm the file selection.
- 5. In the Add Data modal window, verify the name of the file you added and click GET DATA.
- 6. Ensure that your data is configured correctly before confirming the import:
  - a. Under Database, specify samples. Alternatively, you can select another database.
  - b. Under Table Name, specify a table. The system usually assigns a numerical suffix, which you can remove.
  - **c.** Under Upon Import, select whether you only want to import data or create a dataset and a dashboard based on the data.
    - If you select Create Dataset, you are directed to the Detail page of the dataset you have created after the import is completed.
    - If you select Create Dataset and Dashboard, you are directed to the newly created dashboard when the import is completed.
  - **d.** For Column Delimiter, define the delimiter used in the source file. In this case, the column delimiter is Comma, but it can also be Tab, Space, Semicolon, Colon, Pipe, Control A, or Other. Make the necessary adjustments to this field.
  - e. Under Locale Setting, you can select one of the common options: United States, United Kingdom, Sweden, Norway, or Other. Selecting Other adds a separate field next to the locale setting where you can specify the supported locale. For more information, see *Changing the locale setting of an imported file*.
  - **f.** Under Options, select the data clean-up tasks that Data Visualization provides prior to data import. These include File contains headers, Fill missing columns, Skip malformed rows, and Use '\' as escape character.



**Note:** Data Visualization can detect many items, for example the presence of header rows, automatically.

**g.** In the Data Table preview, each column of the table appears with its data type and name. Data Visualization detects the data type automatically, but you can modify it in this interface before importing. For example,

you may want to store numerical categories as strings. The data types are Boolean, Integer, Real, String, and Timestamp.

**h.** You can change the name of the table column before importing.

| CLOUDERA<br>Data Visualization | номе   | SQL VISUALS              | DATA                      |                    |                 |   |   | Q SEARCH   | ¢ 0-                              | 0-   | <b>≜*</b> vizapps_admin <del>v</del>                              |
|--------------------------------|--|--------------------------|---------------------------|--------------------|-----------------|---|---|--|-----------------------------------|--|---|
| Imported File:                 | annual-enterpri  | se-survey-2021           | -financial-year-p         | provisional-csv    | CSV 2 APPLY CHA | NGES & CONFIRM IMPORT                           | 1   |  |                                   |  |   |
| Databa                         | main   |                          |                           | ~                  |                 | Column De                                       | limiter   |  | ~                                 |  |   |
| Table Nan                      | annual_enterprise  | _survey_2021_financial_y | ear_provisional_csv_16835 | 57174              |                 | Locale  | Setting Default   |  | ~                                 |  |   |
| Upon Impo                      | rt <ul> <li>Import only</li> <li>Create Dataset</li> <li>Create Dataset a</li> </ul> | nd Dashboard             |                           |                    |                 | c   | Deptions<br>☐ File conta<br>☐ Fill missin<br>☐ Skip malfe<br>☐ Use '\' as e | ins headers<br>g columns<br>ormed rows<br>escape character |                                   |  |   |
| Data Table                     |  |                          |                           |                    |                 |   |   |  |                                   |  | Rows 1-100  |
| ₩ • year                       | A · industry_aggr  | A v industry_code        | A • industry_nam          | A • units          | A variable_code | A • variable_nam                                | A • variable_cate   | value  | A -                               | industry                                     | r_code  |
| 2021                           | Level 1  | 99999                    | All industries            | Dollars (millions) | H01             | Total income                                    | Financial performance   | 757,504  | ANZSI<br>classe<br>0771,<br>S9603 | C06 divisio<br>s K6330, L<br>0772, S954<br>) | ons A-S (excluding<br>6711, 07552, 0760,<br>40, S9601, S9602, and |
| 2021                           | Level 1  | 99999                    | All industries            | Dollars (millions) | H04             | Sales, government funding, grants and subsidies | Financial performance   | 674,890  | ANZSI<br>classe<br>0771,<br>S9603 | C06 divisio<br>s K6330, L<br>0772, S954<br>) | ons A-S (excluding<br>6711, 07552, 0760,<br>40, S9601, S9602, and |
| 2021                           | Level 1  | 99999                    | All industries            | Dollars (millions) | H05             | Interest, dividends and donations               | Financial performance   | 49,593   | ANZSI<br>classe<br>0771,<br>S9603 | C06 divisio<br>s K6330, L<br>0772, S954<br>) | ons A-S (excluding<br>6711, 07552, 0760,<br>40, S9601, S9602, and |
| 2021                           | Level 1  | 99999                    | All industries            | Dollars (millions) | H07             | Non-operating income                            | Financial performance   | 33,020   | ANZSI<br>classe<br>0771,<br>S9603 | C06 divisio<br>s K6330, L<br>0772, S954<br>) | ons A-S (excluding<br>6711, 07552, 0760,<br>40, S9601, S9602, and |
| 2021                           | Level 1  | 99999                    | All industries            | Dollars (millions) | H08             | Total expenditure                               | Financial performance   | 654,404  | ANZSI<br>classe<br>0771,<br>S9603 | C06 divisio<br>s K6330, L<br>0772, S954<br>) | ons A-S (excluding<br>6711, 07552, 0760,<br>40, S9601, S9602, and |
| 2021                           | Level 1  | 99999                    | All industries            | Dollars (millions) | H09             | Interest and donations                          | Financial performance   | 26,138   | ANZSI<br>classe<br>0771,<br>S9603 | C06 divisio<br>s K6330, L<br>0772, S954<br>) | ons A-S (excluding<br>6711, 07552, 0760,<br>40, S9601, S9602, and |

- 7. Click APPLY CHANGES to save all the adjustments you have made.
- 8. Click CONFIRM IMPORT.

Г

The Confirm File Import modal window appears, where you have to click CONFIRM IMPORT once more3.

| Confirm File Import   | • |
|---|---|
| <ul> <li>After confirming import, you can use this data in the following manner:</li> <li>As supplemental data to an existing dataset; in the Data interface, select the dataset and edit its Data Model to create new table joins.</li> <li>As the foundation of a new dataset; in the Data interface, click New Dataset.</li> </ul> |   |
| This operation may take a long time. It cannot be canceled.   |   |
| Are you sure you want to confirm the import?  |   |
| CANCEL CONFIRM IMPORT   |   |

9. To verify that the data has been imported correctly into your system, check the Connection Explorer interface.

#### **Related Information**

Preparing Excel files for data import Changing the locale setting of an imported file

### Adding data through URL

Learn how to how to add a data file using a URL in Cloudera Data Visualization.

#### About this task

These data files are typically in JSON format. The files may be comma-delimited or they use other delimiting characters.



Note: This feature is available on the following connections:

| Enabled by default:  | Disabled by default:   |
|--|--|
| <ul> <li>SQLite</li> <li>Hive</li> <li>Impala</li> <li>Snowflake</li> <li>Spark SQL</li> </ul> | <ul> <li>DuckDB</li> <li>MS SQL</li> <li>Teradata</li> </ul> |

### Procedure

1. On the main navigation bar, click DATA.

The Data view appears, open on the Datasets tab.

| CLOUDERA<br>Data Visualization | HOME SQL VISUALS DATA Q find th   | tles, viz types, datasets, auth | ors | S              |              |                | Q SEARCH      | ¢- 0-        | ≛* vizapps_admin <del>-</del> |
|--------------------------------|---|---------------------------------|-----|----------------|--------------|----------------|---------------|--------------|-------------------------------|
| % NEW CONNECTION               |   |                                 |     |                |              |                |               |              |                               |
| All Connections                |   |                                 |     |                |              |                |               |              |                               |
| % 2050_CloneSamples            | Title/Table   |                                 | ID  | Tags           | Created      | Last Updated ↓ | Modified By   | # Dashboards |                               |
|                                | Cereals<br>main.cereals<br>Data Connection: samples   | € all                           | 11  | Extract Source | May 03, 2021 | 19 hours ago   | juno          | 69           | â                             |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: samples                         | +: +II                          | 191 |                | Sep 28, 2022 | 19 hours ago   | juno          | 24           | â                             |
|                                | cereal<br>main.cereals, main.chicago_govt_pay<br>Data Connection: 2050_CloneSamples               | 8. su                           | 341 |                | May 23, 2023 | 19 hours ago   | vizapps_admin | 19           | 8                             |
|                                | csimport<br>Solr.csaba_import_20240119<br>Data Connection: SolrTestConnection                     | e su                            | 417 |                | Jan 23, 2024 | 2 days ago     | juno          | 1            | ŝ                             |
|                                | Dataset-2-test<br>main.census_pop<br>Data Connection: samples                                     | 8. su                           | 416 |                | Jan 23, 2024 | 2 days ago     | vizapps_admin | 1            | 8                             |
|                                | Dataset-test-1<br>main.census_pop<br>Data Connection: samples                                     | 40 a H                          | 415 |                | Jan 23, 2024 | 2 days ago     | vizapps_admin | 1            | Û                             |
|                                | vector<br>Solr.cdv_embeddings_out_1536_100_rows_1703174544<br>Data Connection: SolrTestConnection | 40 - 6 H                        | 414 |                | Jan 23, 2024 | 2 days ago     | vizapps_admin | 1            | 8                             |
|                                | asd<br>main.cdv_1937<br>Data Connection: SQLite   | 40 a H                          | 413 | Extract Target | Jan 22, 2024 | 2 days ago     | juno          | 0            | â                             |
|                                | report<br>main.reports_report, main.reports_appgroup, main.rep<br>Data Connection: meta           | 40 a H                          | 412 |                | Jan 22, 2024 | 2 days ago     | vizapps_admin | 0            | Ê                             |

### 2. Click ADD DATA.

The Add Data modal window appears.

| Add Data   |
|--|
| CSV       URL         Enter a URL to a page that contains a CSV file (example) or an Open Data API endpoint (example). |
| CANCEL GET DATA  |

- 3. Select the URL option, and add the address of the file to the text window, and click GET DATA.
- 4. Ensure that your data is configured correctly before confirming the import:
  - a. Under Database, specify documentation. Alternatively, select another database.
  - **b.** Under Table Name, specify city\_chicago\_staff. The system typically assigns a numerical suffix that you can remove.
  - **c.** Under Upon Import, select whether you only want to import the data or create a dataset and a dashboard based on the data.
    - If you select Create Dataset, you are taken to the Detail page of the dataset you have created when the import is completed.
    - If you select Create Dataset and Dashboard, you are taken to the newly created dashboard when the import is completed.
  - **d.** For Column Delimiter, define the delimiter used in the source file. In this case, the column delimiter is Comma, but it can also be Tab, Space, Semicolon, Colon, Pipe, Control A, or Other. Make the necessary adjustments to this field.
  - e. Under Locale Setting, you can select one of the common options: United States, United Kingdom, Sweden, Norway, or Other. Selecting Other adds a separate field next to the locale setting where you can specify the supported locale. For more information, see *Changing the locale setting of an imported file*.
  - **f.** Under Options, select the data clean-up tasks that Data Visualization provides prior to data import. These include File contains headers, Fill missing columns, Skip malformed rows, and Use '\' as escape character.



**Note:** Data Visualization can detect many items automatically, such as the presence of header rows.

**g.** In the Data Table preview, each column of the table appears with its data type and name. Data Visualization detects the data type automatically, but you can change it in this interface prior to import. For example, you

may wish to store numerical categories as strings. The data types are Boolean, Integer, Real, String, and Timestamp.

**h.** You can change the name of the table column before importing.

| Database   | main   | Y  | Column Delimiter   | Comma  |  |
|--|--|--|--|--|--|
| Table Name   | httpsen_1683558848   |  | Locale Setting   | Default  |  |
| Upon Import  | Import only     Create Dataset     Create Dataset and Dashboard  |  | Options  | File contains headers     Fill missing columns     Skip malformed rows     Use '\' as escape character   |  |
| Data Table   |  |  |  |  | Rows 1-100                                 |
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5. Click APPLY CHANGES to ensure that all adjustments you made are saved.

### 6. Click CONFIRM IMPORT.

The Confirm File Import modal window appears, where you have to click CONFIRM IMPORT again.

| Confirm File Import   |                       | × |  |  |  |  |  |
|---|-----------------------|---|--|--|--|--|--|
| <ul> <li>After confirming import, you can use this data in the following manner:</li> <li>As supplemental data to an existing dataset; in the Data interface, select the dataset and edit its Data Model to create new table joins.</li> <li>As the foundation of a new dataset; in the Data interface, click New Dataset.</li> </ul> |                       |   |  |  |  |  |  |
| This operation may take a long time. It cannot be canceled.<br>Are you sure you want to confirm the import?   |                       |   |  |  |  |  |  |
|   | CANCEL CONFIRM IMPORT |   |  |  |  |  |  |

7. To verify that the data has been imported correctly into your system, check the Connection Explorer interface.

#### **Related Information**

Changing the locale setting of an imported file

### Changing the locale setting of an imported file

When importing a data file, you can specify the localization for the data. This will specifically handle differences in specifying floating-point number.

Under Locale Setting, which is the default for your system, select one of the common options: United States, United Kingdom, Sweden, Norway, or Other.

Selecting Other brings adds a new text entry box. Clicking on the information icon opens a separate menu, where you can select another supported locale. In our case, we selected Russian, ru\_RU.

| Colun   | nn Delimiter | Comma | 1                  | `          | /   |  |          |  |
|---|--------------|-------|--------------------|------------|---|--|----------|--|
| Lo  | cale Setting | Other |                    |            |   | )  |          |  |
| Options   File contains headers<br>  Fill missing columns<br>  Skip malformed rows<br>  Use '\' as escape character |              |       |                    |            | CountryCodeBulgarianbg_BCChinesezh_CNCroatianhr_HRCzechcs_CZDanishda_DRDutchnl_NLEnglishen_USEstonianet_EEFinnishfi_FIErenchfr_ER | Code<br>bg_BG<br>zh_CN<br>hr_HR<br>cs_CZ<br>da_DK<br>nl_NL<br>en_US<br>et_EE<br>fi_FI<br>fr_FR | vs 1-100 |  |
| ,   | A - column   | n_7   | A - column_8       |            | German<br>Greek   | de_DE<br>el_GR   |          |  |
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|   | Sep 16       |       | Sep 19             | Sep 20     |   | pl_PL<br>pt_PT   | .6       |  |
|   | Sep 29       |       | Sep 29             | Oct 7      | Romanian  | ro_RO  | 5        |  |
|   | Oct 18       |       | Oct 18             | Oct 24     | Russian<br>Slovak   | ru_RU<br>sk_SK   |          |  |
|   | Oct 19       |       | Oct 20             | Oct 27     | Slovenian<br>Spanish<br>Swedish   | sl_SI<br>es_ES<br>sv_SE  |          |  |
|   | Oct 27       |       | Oct 27             | Oct 27     | TURKISN   |  |          |  |
|   |              |       |                    |            |   |  |          |  |

### **Preparing Excel files for data import**

Learn how you can import data from Microsoft Excel or other similar formats into Cloudera Data Visualization.

### About this task

You must save the files in character-delimited format.

### Procedure

- 1. In Microsoft Excel, open the file that contains the data you are importing.
- 2. Click Save as, then select Comma Separated Values (.csv).
- **3.** Choose a file name, such as MyCSVdata, and click Save.