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# CDP Data Visualization Quickstart

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# CLOUDBERA

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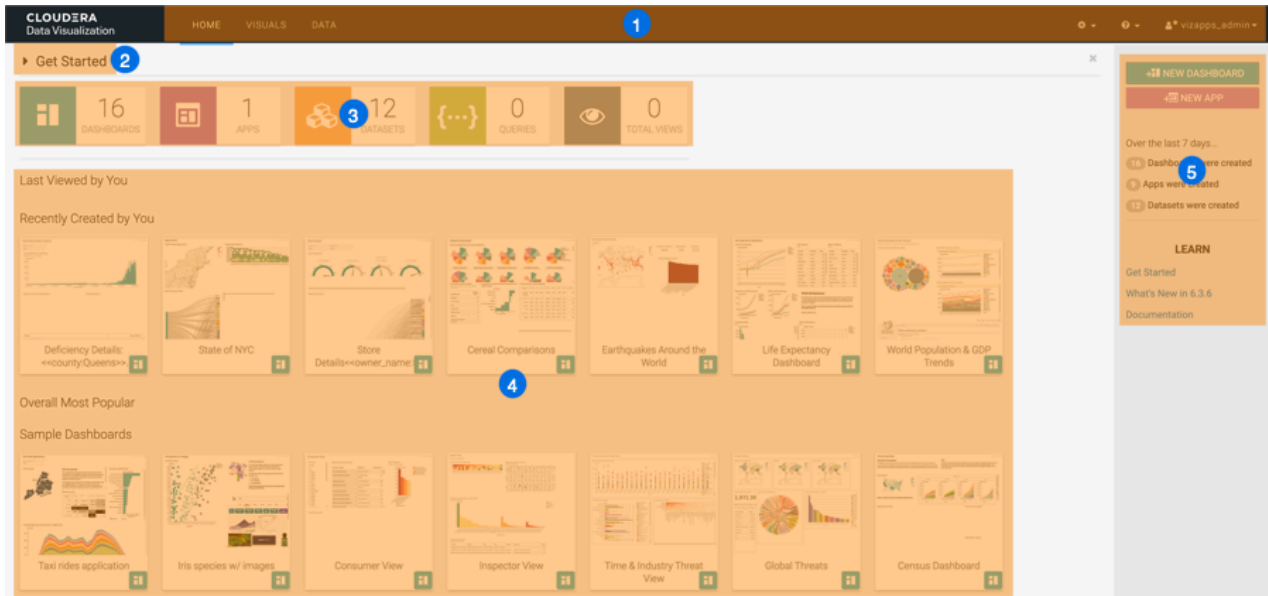
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# Understand the Data Visualization user interface

CDP Data Visualization enables you to explore data and communicate insights across the whole data lifecycle by using visual objects. The web-based user interface provides user-friendly, clear and intuitive navigation in Data Visualization.

The default CDP Data Visualization homepage contains the following main items:



1. The Main navigation bar offers you direct access to the following interfaces:

- Home
- Visuals
- Data
- Settings
- Help
- User management

2. Get Started points to help content embedded in the tool.

3. Statistics banner shows the number of Dashboards, Apps, Datasets, Queries and Total Views that you can access.

4. Visuals preview area provides quick access to the existing visuals and dashboards.

5. Homepage side menu bar offers you access to the following functions:

- NEW DASHBOARD takes you to the Dashboard Designer interface, where you can create new dashboards and visuals.
- NEW APP takes you to the App Designer interface, where you can build and style custom applications from existing dashboards and visuals.
- Over the last 7 days... shows statistics on how many dashboards, apps, and datasets were created.
- In the LEARN section, you can find the following information:
  - The Get Started link points to help content embedded in the tool.
  - The What's New in link opens a modal window showcasing new features.
  - The Documentation link opens this library.

If you need more information about the UI, see *CDP Data Visualization homepage*.

## Related Information

[CDP Data Visualization homepage](#)

## Set up your data

CDP Data Visualization supports a large number of data connections.

### Related Information

[Data connections in CDP Data Visualization](#)

## Creating a data connection

You must connect to your data before you can start using CDP Data Visualization for modeling and visualizing the data. You can define connections to various source systems. Learn how to create a simple data connection.

### About this task

In Cloudera Data Warehouse (CDW), the connection to the database catalog is automatically set up when you enable Data Visualization in a Virtual Data Warehouse.



**Note:** You can create your own connections to other data warehouses, but it is not supported.

Database catalogs and virtual data warehouses automatically inherit the same security restrictions that are applicable to your CDP environment. There is no need to specify the security setup again for each database catalog or virtual warehouse. If you cannot see the data in the connected database catalog after you log in, check and adjust data access permissions or your environment and data warehouse user permissions.

In Cloudera Machine Learning (CML), you can set up several connection types. For example, you can connect Data Visualization to an Impala or Hive data warehouse. For more information on connection types, see *Data connections in CDP Data Visualization*.

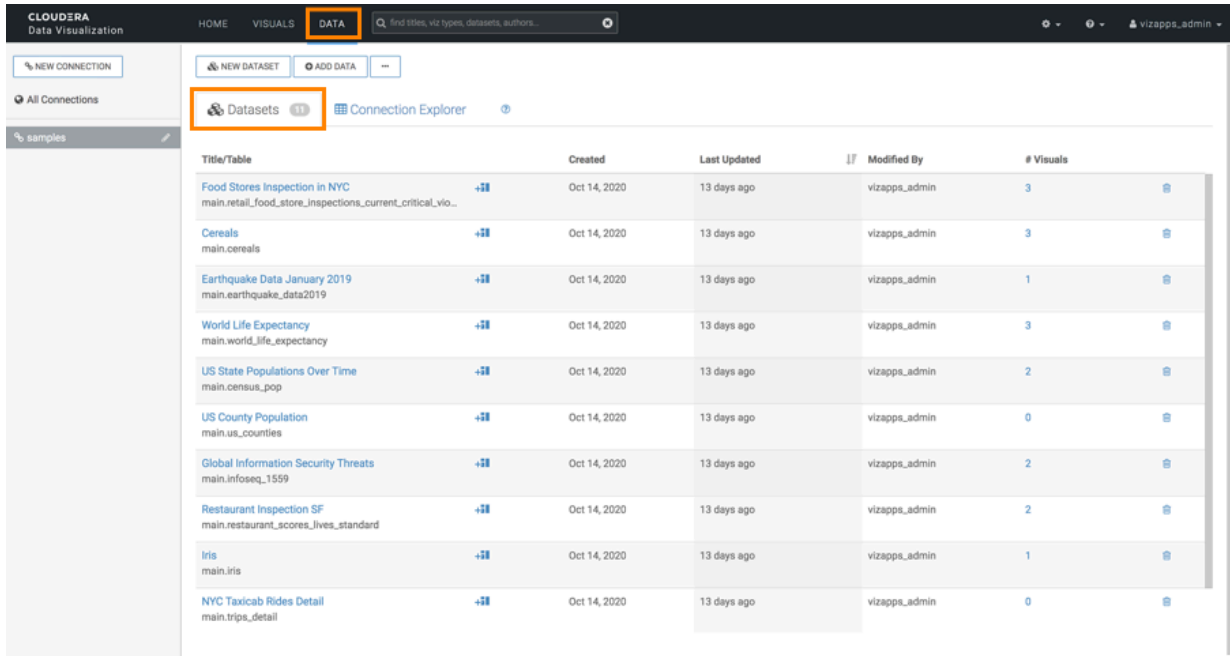


**Important:** Only users with Manage data connections privilege can create and manage connections in Data Visualization. If you create a connection, you automatically have the privileges to create and manage datasets on this connection, and also build dashboards and visuals in these datasets. For more information on user privileges, see *RBAC permissions*.

## Procedure

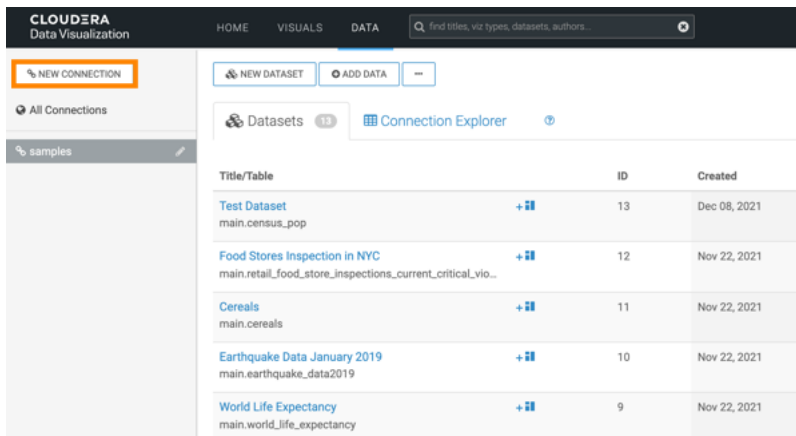
1. On the main navigation bar, click DATA.

You get to the DATA interface, open on the Datasets tab.



Title/Table	Created	Last Updated	Modified By	# Visuals
Food Stores Inspection in NYC main.retail_food_store_inspections_current_critical_vio...	Oct 14, 2020	13 days ago	vizapps_admin	3
Cereals main.cereals	Oct 14, 2020	13 days ago	vizapps_admin	3
Earthquake Data January 2019 main.earthquake_data2019	Oct 14, 2020	13 days ago	vizapps_admin	1
World Life Expectancy main.world_life_expectancy	Oct 14, 2020	13 days ago	vizapps_admin	3
US State Populations Over Time main.census_pop	Oct 14, 2020	13 days ago	vizapps_admin	2
US County Population main.us_counties	Oct 14, 2020	13 days ago	vizapps_admin	0
Global Information Security Threats main.infoseq_1559	Oct 14, 2020	13 days ago	vizapps_admin	2
Restaurant Inspection SF main.restaurant_scores_lives_standard	Oct 14, 2020	13 days ago	vizapps_admin	2
Iris main.iris	Oct 14, 2020	13 days ago	vizapps_admin	1
NYC Taxicab Rides Detail main.trips_detail	Oct 14, 2020	13 days ago	vizapps_admin	0

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



Title/Table	ID	Created
Test Dataset main.census_pop	13	Dec 08, 2021
Food Stores Inspection in NYC main.retail_food_store_inspections_current_critical_vio...	12	Nov 22, 2021
Cereals main.cereals	11	Nov 22, 2021
Earthquake Data January 2019 main.earthquake_data2019	10	Nov 22, 2021
World Life Expectancy main.world_life_expectancy	9	Nov 22, 2021

The Create New Data Connection modal window appears.

- Specify the details of the new connection.

### Create New Data Connection

---

Connection type

Connection name

---

Basic  Cache

---

Hostname or IP address

Port #

Database

---

Credentials

Username

Password

---

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

### Results

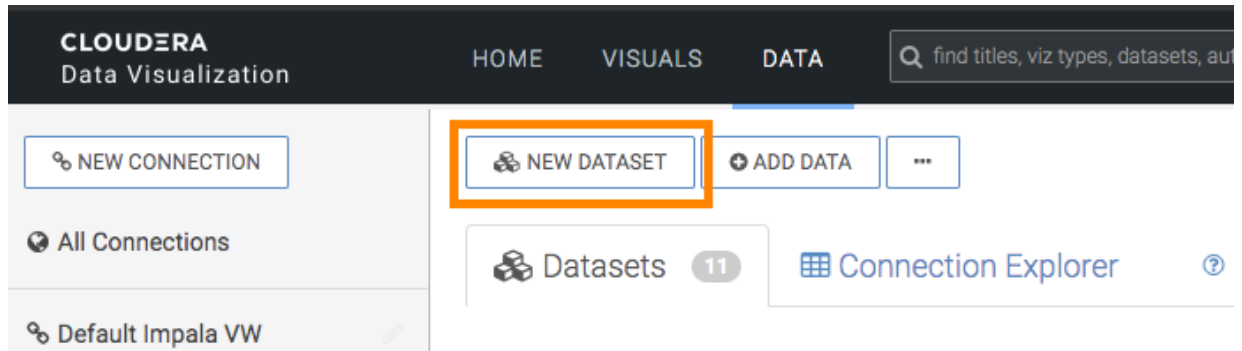
If this operation succeeds, the name of the new connection appears on the side menu bar.

## Creating a dataset

You can define datasets as a semantic layer on top of your data tables and views in the data store. You need to create a dataset before you can create dashboards or apps. Learn how to create a dataset in CDP Data Visualization.

**Procedure**

1. On the main navigation bar, click DATA.
2. Select a connection from the side menu bar.
3. Click NEW DATASET near the top of the screen.



The New Dataset modal window appears.

4. Specify the details of the new dataset.

The screenshot shows the 'New Dataset' modal window. The title is 'New Dataset'. Below the title, there is a message: 'Create a dataset from data on this connection. You need to create a dataset before you can create dashboards or apps.' The form has the following fields:

- Dataset title \***: A text input field.
- Dataset Source**: A dropdown menu with 'From Table' selected.
- Select Database**: A dropdown menu with 'main' selected.
- Select Table**: A dropdown menu with 'Select an Option' selected.

At the bottom right, there are two buttons: 'CANCEL' and 'CREATE'.

5. Click CREATE.



## Results

You can see the newly created dataset under the Datasets tab in the DATA interface.



**Tip:** To find the dataset in the future, you can scroll through the list of datasets on the connection, or use Search at the top of the page.

## What to do next

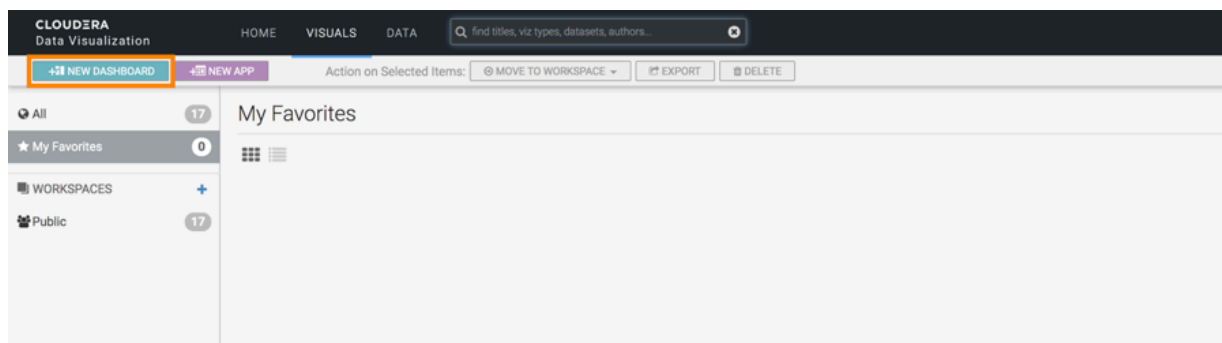
You can now start creating visualizations and organize your visual artifacts into dashboards and applications.

# Create a visual

Learn how you can create a visual in CDP Data Visualization.

## Procedure

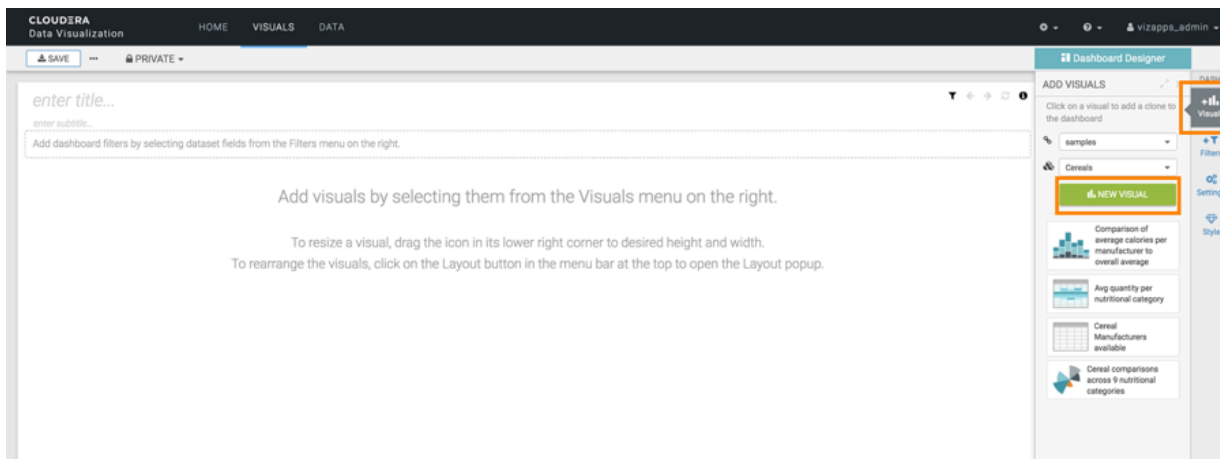
1. On the main navigation bar, click VISUALS.
2. Click NEW DASHBOARD to open a new dashboard in Edit mode.



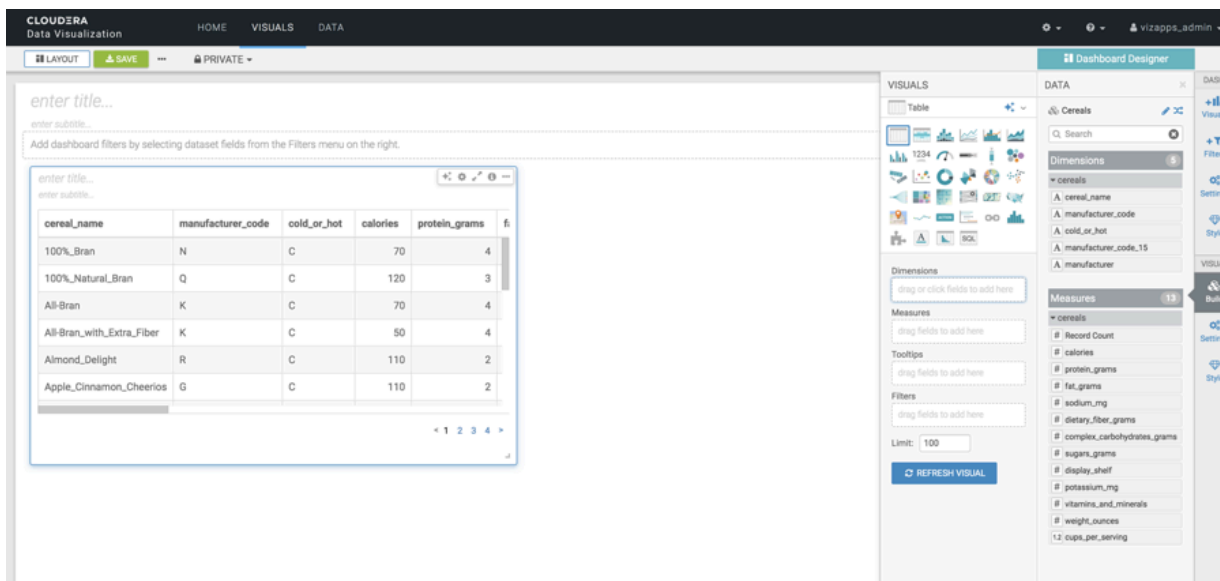
Alternatively, click an existing dashboard, and then click Edit to make changes to it.

3. In the Dashboard Designer menu, click the Visuals icon to open the ADD VISUALS interface.

#### 4. Click NEW VISUAL.



The visual designer interface opens with a default table representation of the dataset you want to visualize.



5. Choose a visual type from the VISUALS catalog, which shows the standard visual types. You can switch between visual types by selecting a different type in the catalog.



#### Tip:

When creating a new visual for a dataset, you can get visualization suggestions for your data. For details, see *Exploring visual options*.

If Explore Options Visual Types is not available on the UI when creating a new visual, enable it in the Site Settings interface. For details, see *Enabling exploring visual options*.

6. Populate the shelves from the available Dimensions and Measure fields.

The shelves of a visual specify the fields and segments that provide the data for visualization. Different visual types require specific information, and have somewhat different shelves.

The screenshot shows the 'Dashboard Designer' interface. The top navigation bar includes a settings icon, a help icon, and the user name 'vizapps\_admin'. The main workspace is divided into three vertical panels:

- VISUALS:** Contains a grid of visualization icons (Table, Bar, Line, Pie, etc.) and a 'SQL' icon. Below the grid are four dashed boxes for 'Dimensions', 'Measures', 'Tooltips', and 'Filters', each with the text 'drag or click fields to add here'. At the bottom of this panel is a 'Limit: 100' input field and a blue 'REFRESH VISUAL' button.
- DATA:** Shows the selected data source 'Food Stores Inspection...'. It has a search bar and two shelves:
  - Dimensions (10):** A list of fields including 'county', 'inspection\_date', 'owner\_name', 'trade\_name', 'street', 'city', 'state', 'deficiency\_code', 'deficiency\_description', and 'location\_1'.
  - Measures (2):** A list of fields including '# Record Count' and '# zip\_code'.
- DASH.:** A vertical sidebar on the right with icons for 'Visuals', 'Filters', 'Settings', 'Style', and 'Build'.

7. Click REFRESH VISUAL.

8. Add a title for the visual by clicking into the enter title... field to edit it.

9. [Optional] Add a brief description of the visual by clicking into the enter subtitle... field under the title of the visual.
10. At the top left corner of the visual designer, click SAVE.

The screenshot displays the Cloudera Data Visualization interface. At the top, there are navigation tabs for HOME, VISUALS, and DATA. Below these, there are buttons for LAYOUT, SAVE (highlighted with a red box), and PRIVATE. The main workspace shows a visual titled "Example visual" with a subtitle "with subtitle". The visual is a histogram showing the distribution of calories, with two data series: sum(fat\_grams) and sum(protein\_grams). The x-axis is labeled "calories" and ranges from 0 to 200. The y-axis represents the count of items. The right-hand side of the interface is the "Dashboard Designer" panel, which includes a "DATA" section with a search bar and a list of dimensions (cereal\_name, manufacturer\_code, cold\_or\_hot, manufacturer\_code\_15, manufacturer) and measures (Record Count, calories, protein\_grams, fat\_grams, sodium\_mg, dietary\_fiber\_grams, complex\_carbohydrates\_grams, sugars\_grams, display\_sheff, potassium\_mg, vitamins\_and\_minerals, weight\_ounces, cups\_per\_serving). There are also sections for X Axis (calories), Y Axis (sum(fat\_grams)), Colors (sum(protein\_grams)), Tooltips, Drill, Labels, and Filters, each with a "drag fields to add here" prompt. A "REFRESH VISUAL" button is located at the bottom of the Designer panel.

### Related Information

[Exploring visual options](#)

[Enabling exploring visual options](#)

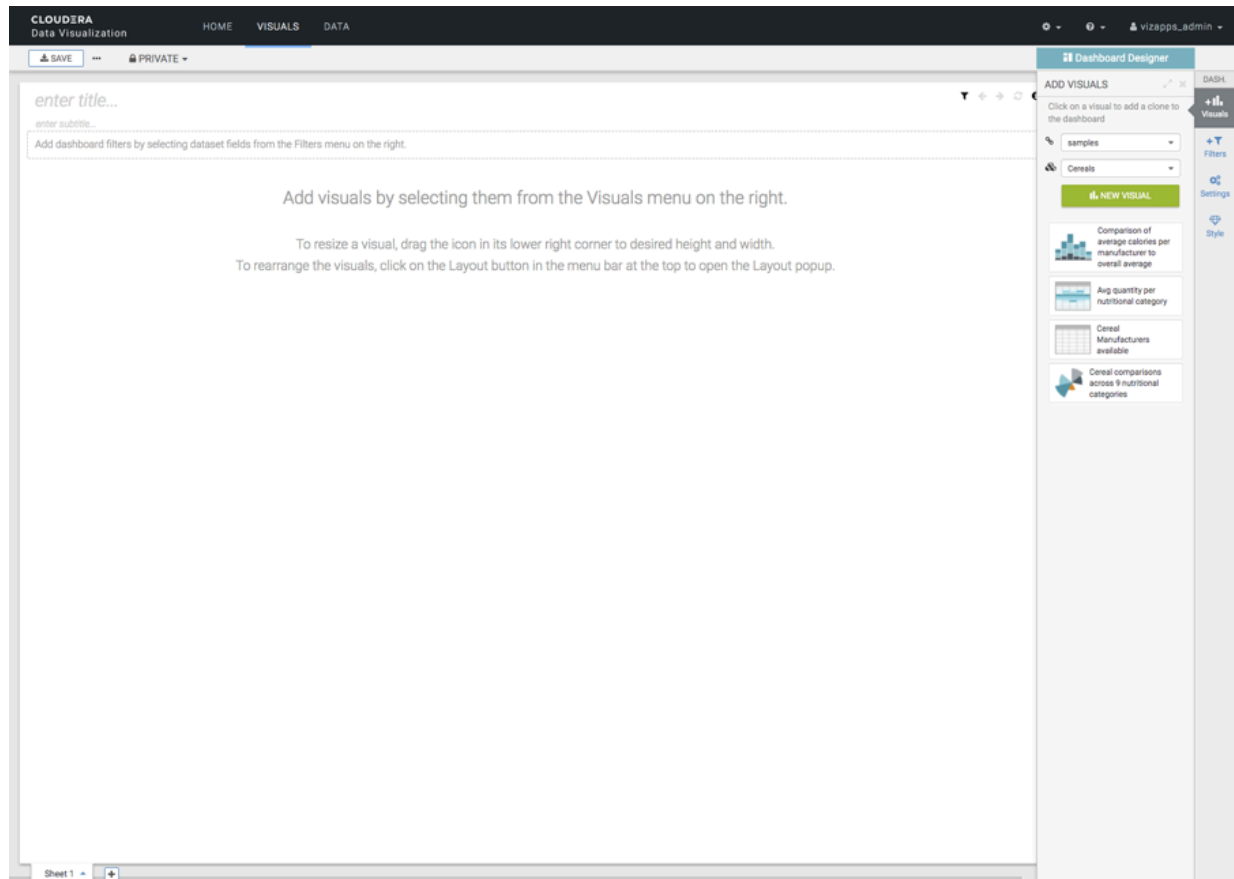
## Create a dashboard

Learn how you can create a dashboard in CDP Data Visualization.

## Procedure

1. There are several possible starting points for creating new dashboards:
  - Click NEW DASHBOARD on the main HOME interface, in the top right corner on the side panel.
  - Click NEW DASHBOARD on the main VISUALS interface, in the top left corner.
  - Click the new dashboard icon next to the name of a particular dataset on the DATA interface.
  - Click NEW DASHBOARD in the top right corner when in the Dataset Detail view for a particular dataset.

The Dashboard Designer opens on an empty dashboard.



2. Check the dataset of the dashboard In the Visuals menu of the Dashboard Designer, and change it if needed.

The screenshot displays the 'Dashboard Designer' interface. At the top, there is a dark header with a settings gear, a help icon, and the user name 'vizapps\_admin'. Below this is a teal bar with the 'Dashboard Designer' title. The main area is divided into a left sidebar with navigation icons and a central 'ADD VISUALS' panel. The 'ADD VISUALS' panel has a title bar with a search icon and a close button. Below the title bar, there is a text instruction: 'Click on a visual to add a clone to the dashboard'. Underneath, there is a section for 'Recently Created Visuals' with two 'Example visual' entries. A red box highlights two dataset selection options: 'samples' and 'Cereals'. Below these is a green 'NEW VISUAL' button. The bottom section of the panel shows a list of visual types: 'Example visual' (bar chart), 'Example visual' (donut chart), 'Comparison of average calories per manufacturer to overall average' (bar chart), 'Avg quantity per nutritional category' (table), and 'Cereal Manufacturers available' (table). On the right side of the interface, there is a vertical sidebar with 'DASH.' at the top, followed by 'Visuals', 'Filters', 'Settings', and 'Style' buttons.

3. In the Visuals menu, click NEW VISUAL to add a new visual to the dashboard.

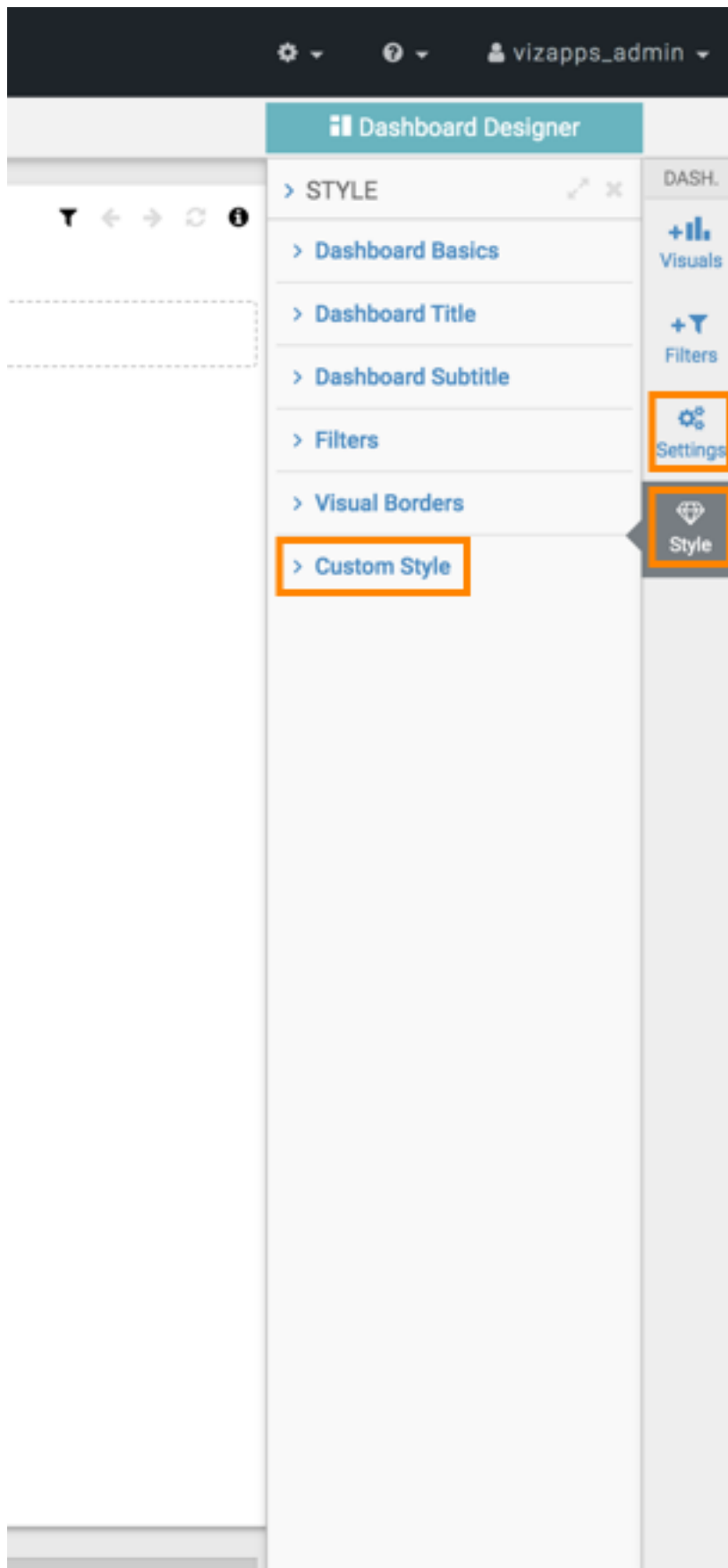


**Important:** You cannot save an empty dashboard. You must add at least one visual to a sheet before saving the dashboard.

4. Add a title for the dashboard. Optionally, you can also add a subtitle.

5. [Optional] You can customize Settings, Styles, and Custom Styles for the dashboard in the Dashboard Designer side menu bar.





6. Click SAVE in the top left corner.

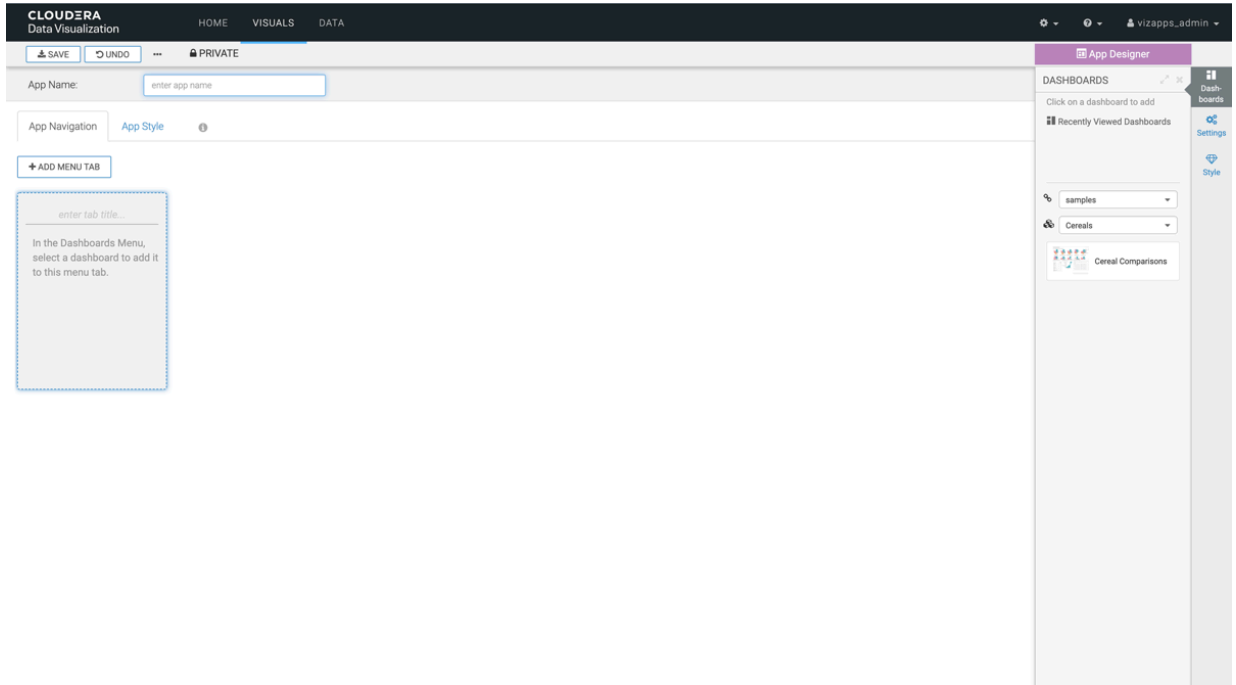
## Create an app

Learn how you can create an app in CDP Data Visualization.

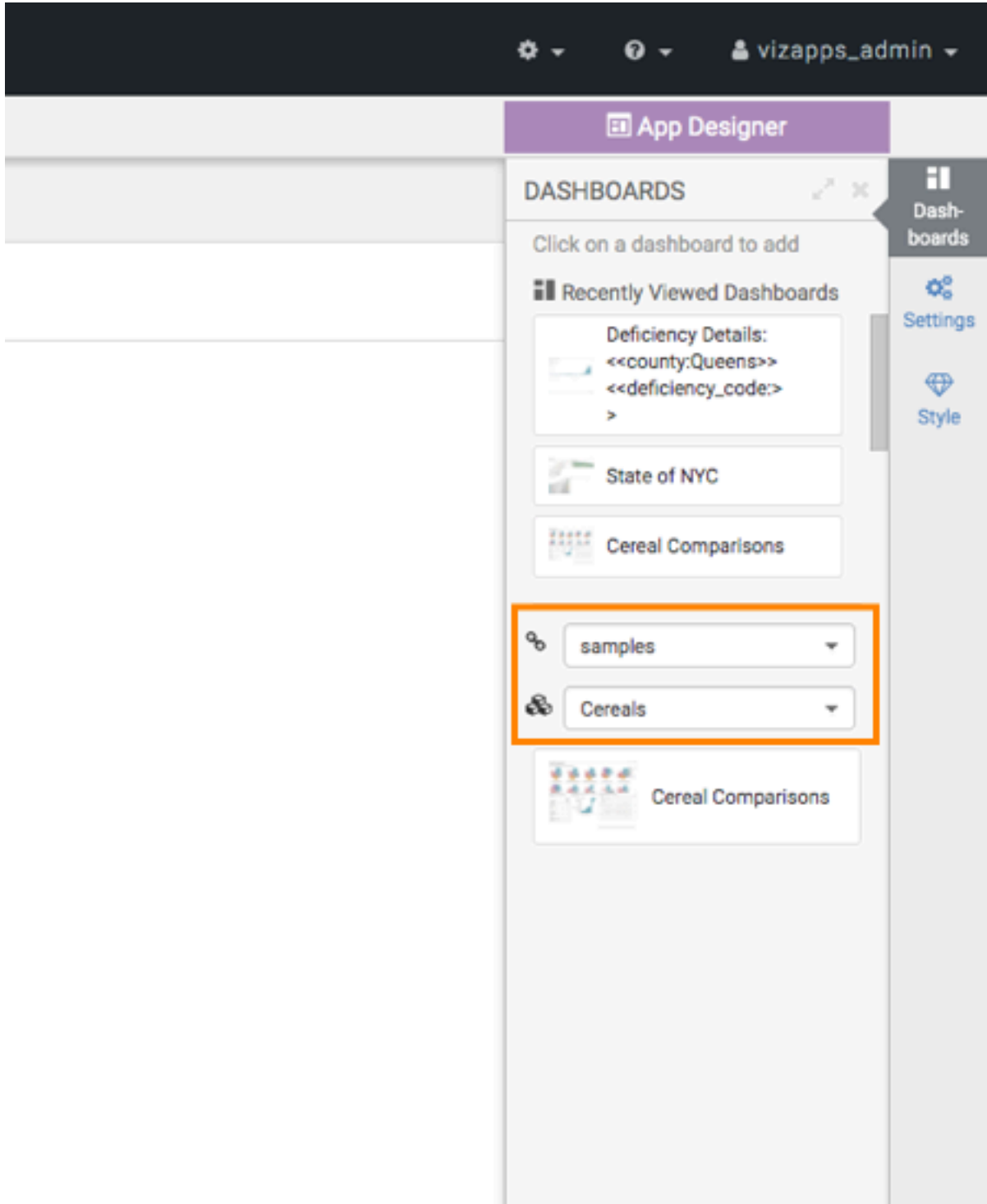
### Procedure

1. Click NEW APP on the HOME interface, in the top right corner on the side panel.  
Alternatively, click NEW APP on the VISUALS interface, in the top left corner.

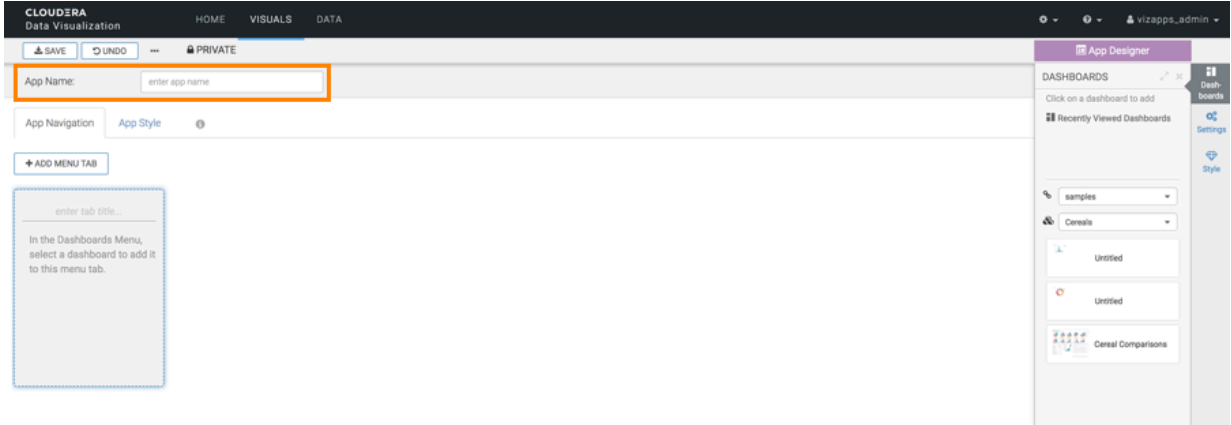
The App Designer interface is displayed. It opens on the App Navigation tab, and it shows a default menu tab tile.



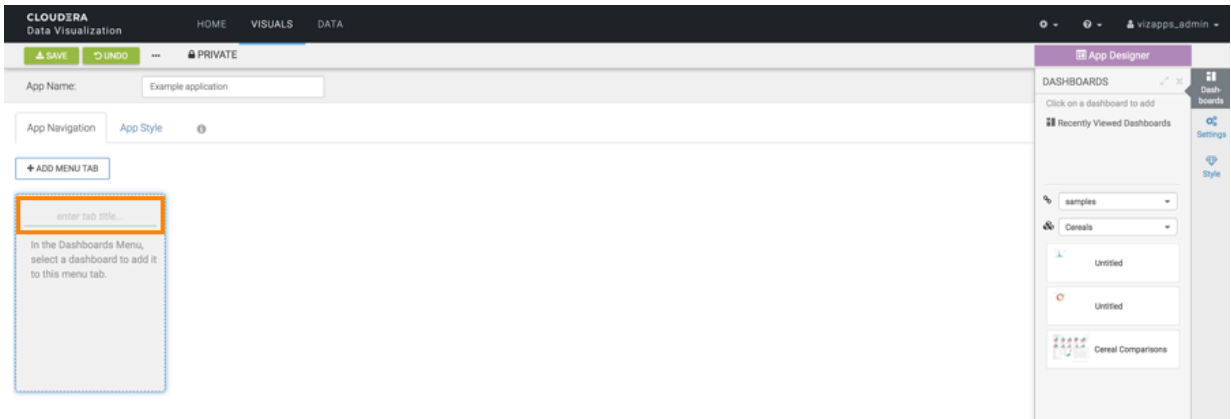
2. In the DASHBOARDS menu of the App Designer, select a dataset.



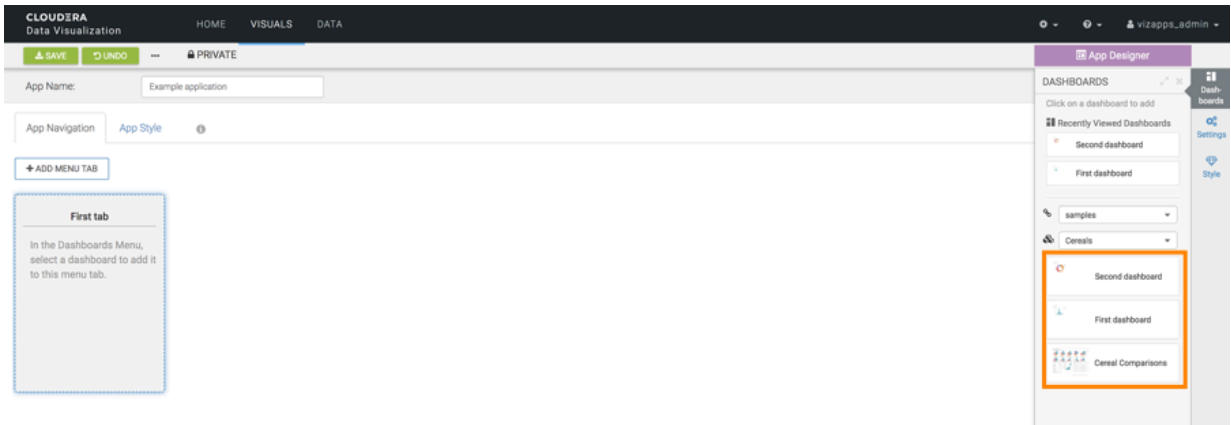
3. Enter a name for your app in the App Name text box.



4. In the highlighted empty tab, enter the tab title.

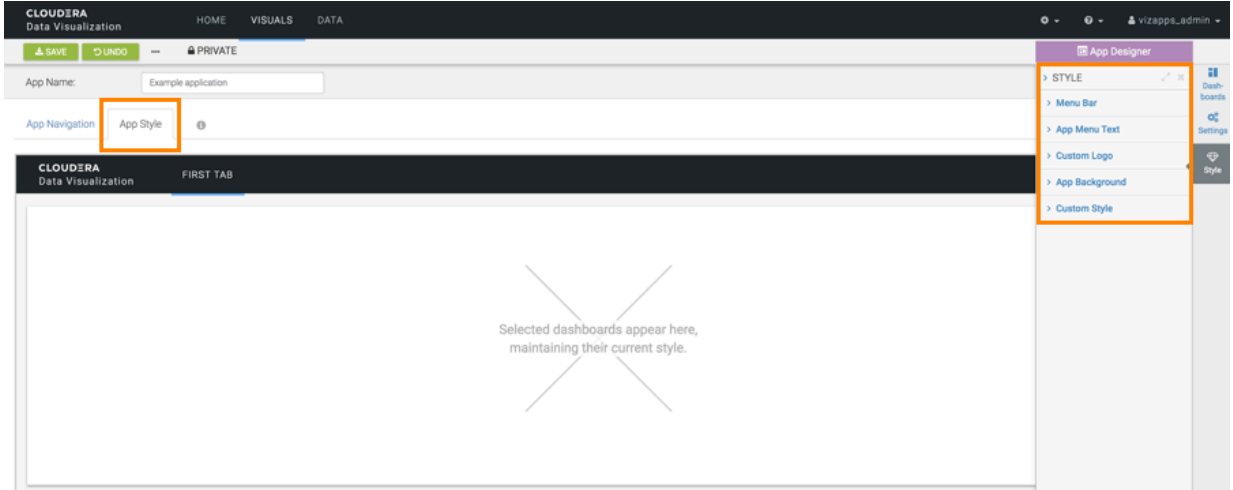


5. In the DASHBOARDS menu, select a dashboard to add it to this tab.



6. Switch to the App Style tab.

7. Design the appearance of your new app using the various style menu options on the side panel.



8. Click SAVE.

### Results

You have created a new Data Visualization app. To the right of the App Name, you can see the ID of the app, its update time information, and the last user who modified it.