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Data Visualization Overview

Date published: 2020-10-30

Date modified: 2022-09-21

CLOUDERA

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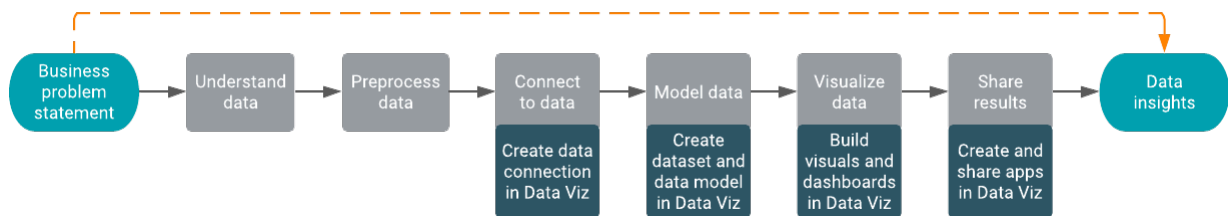
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Data Visualization in the Cloudera Data Platform

Data Visualization in the Cloudera Data Platform (CDP) enables you to explore data and communicate insights across the whole data lifecycle by using visual objects. The fast and easy self-service data visualization streamlines collaboration in data analytics through the common language of visuals.

Data Visualization is integrated with Cloudera Machine Learning (CML) and Cloudera Data Warehousing (CDW) workflows in CDP Public Cloud. You can also use it on-prem with Cloudera Data Science Workbench (CDSW) workflows. You can use the same visualization tool for structured, unstructured/text, and ML analytics, which means deeper insights and more advanced dashboard applications. The user interface is highly intuitive and enables you to build customized data applications with minimum time investment.

Advanced data analysis helps you to find data insights that answer your business problems. You can connect to your data in CDP, create rich visualizations on top of your datasets, build informative dashboards and applications, and publish them anywhere across the data lifecycle. This provides you with a dynamic and data-driven insight in any line of business, and lets you and other stakeholders discover, explore, and curate visualizations.



Self-service data visualization for the full data lifecycle

You can quickly and easily explore data, collaborate, and share insights across the data lifecycle. Delivered as a native part of CDP, Data Visualization provides a consistent and easy to use data visualization experience with intuitive and accessible drag-and-drop dashboards and custom application creation.

Intelligent and automated reporting

You can automate analytics dashboards for updates and consumption. You can set rules for scheduled updates, email reports, and dynamic alerts to ensure everyone has access to the latest insights.

Accelerating collaboration

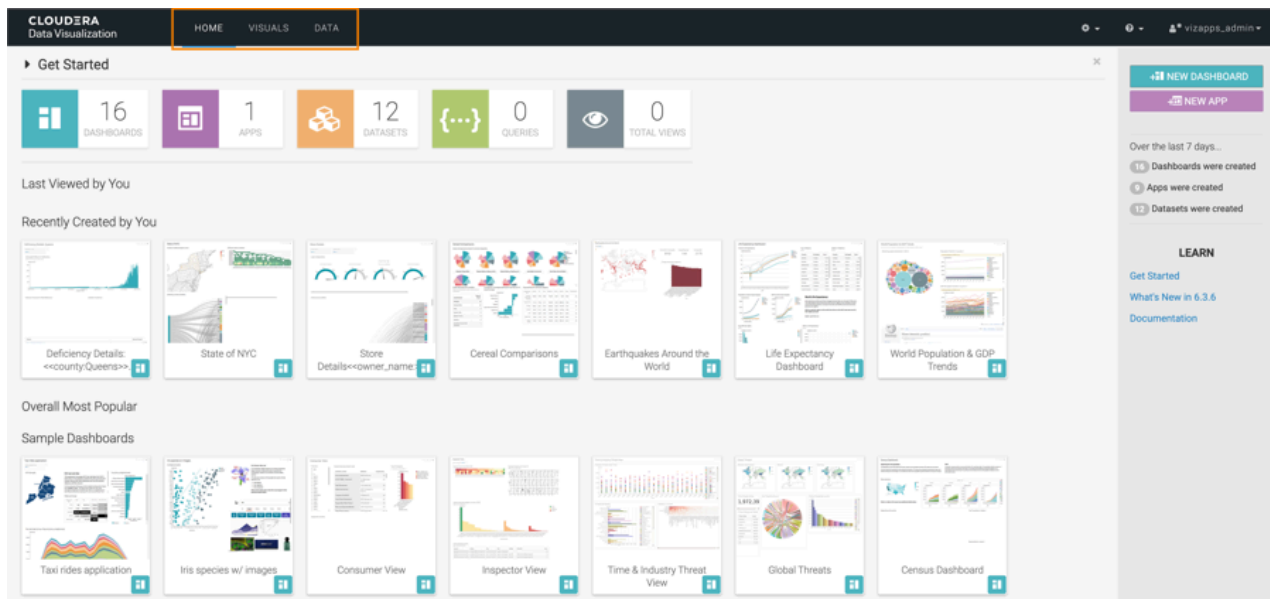
You can build and publish custom dashboards and analytic applications in minutes and you can collaborate across teams to reach stakeholders and decision makers more effectively. Data Visualization enables collaboration and transparency between data, analytics, and business teams without moving data to third party platforms.

Secure and integrated visualizations native to CDP

Data Visualization provides out of the box functionality without additional integration efforts, moving data, or creating security issues. From a security and governance perspective, native integration with CDP means SSO for authentication and seamless integration with Cloudera Shared Data Experience (SDX) to manage user access and governance.

Data Visualization user interface

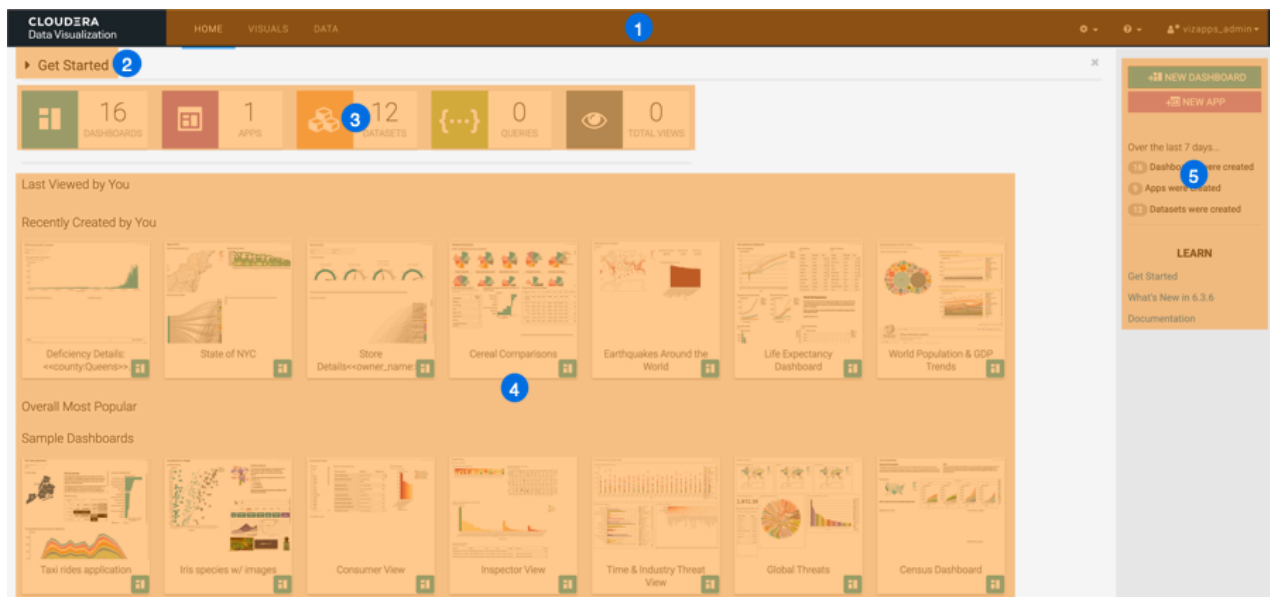
The web interface of Data Visualization has three views: HOME, VISUALS, and DATA. When you log in, you land on the homepage (HOME view) where the menus that you can find on the Main navigation bar enable you to access the other two interfaces.



Cloudera Data Visualization homepage

Data Visualization enables you to explore data and communicate insights across the whole data lifecycle by using visual objects. HOME takes you to the homepage, which is the starting point to your data visualization journey.

The homepage has the following main parts:



1. Main navigation bar
2. Get Started documentation
3. Statistics banner
4. Visuals preview area
5. Homepage side menu bar

Main navigation bar



The main navigation bar enables you to directly access the following interfaces and functions:

1. The HOME interface is described in this topic.
2. The VISUALS interface is for building visuals, dashboards, and applications. For more information, see *CDP Data Visualization, Visuals interface*.
3. The DATA interface for access to datasets, connections, and the Connection Explorer. For more information, see *CDP Data Visualization, Data interface*.
4. The Settings menu provides access to various setting options:
 - With Set Homepage, you can define a custom homepage.
 - With Job Status, you can check job statuses.

If you have administrative privileges, you can use Site Administration to make changes to the following functionalities:

- Activity Log displays all recorded events generated by the data processing requests.
 - Users & Groups helps you to manage accounts of all users and user groups, and grant them varying privileges and levels of access.
 - Manage Roles helps you to define roles as a set of privileges, and assign them to users or user groups.
 - Manage API Keys helps you to authenticate with the system to perform some of the administrative tasks.
 - Email Templates helps you to create separate email templates for communicating with various stakeholders, departments, or users who have clearly defined roles in the organization.
 - Custom Styles helps you to apply styling options for the appearance of visuals and applications.
 - Custom Colors helps you to define custom color palettes for styling visuals and applications.
 - Custom Dates helps you to define custom sets of date ranges and anchor them to a specific date and time.
 - Static Assets helps you to save and manage images, CSS files, and JS files as static assets and use them across all reports to standardize the appearance and behavior of visuals and dashboards.
 - Site Settings helps you to configure site-wide settings and settings at the level of individual visuals, dashboards, and filters.
5. Help provides you with the following links:

What's New in

- a summary of the major new features and improvements of the latest release

Documentation

- the official Cloudera Data Visualization documentation





Cloudera Support Hub

- access to the support and professional services portal on MyCloudera

It also displays the release number of the running instance of Data Visualization.

6. The user management menu includes password change and logout options.

It also provides information on your last login date. The username displayed identifies the current user. The user icon can include small, additional icons to show if the current user is an admin or an LDAP/SSO user:

Admin user	SSO authenticated user	Admin and SSO authenticated user	Regular user
			

Get Started documentation



Get Started provides access to in-tool documentation. You can expand the main heading and the list items for quick guidance on selected topics. You can close the documentation at the top right corner of the pane.

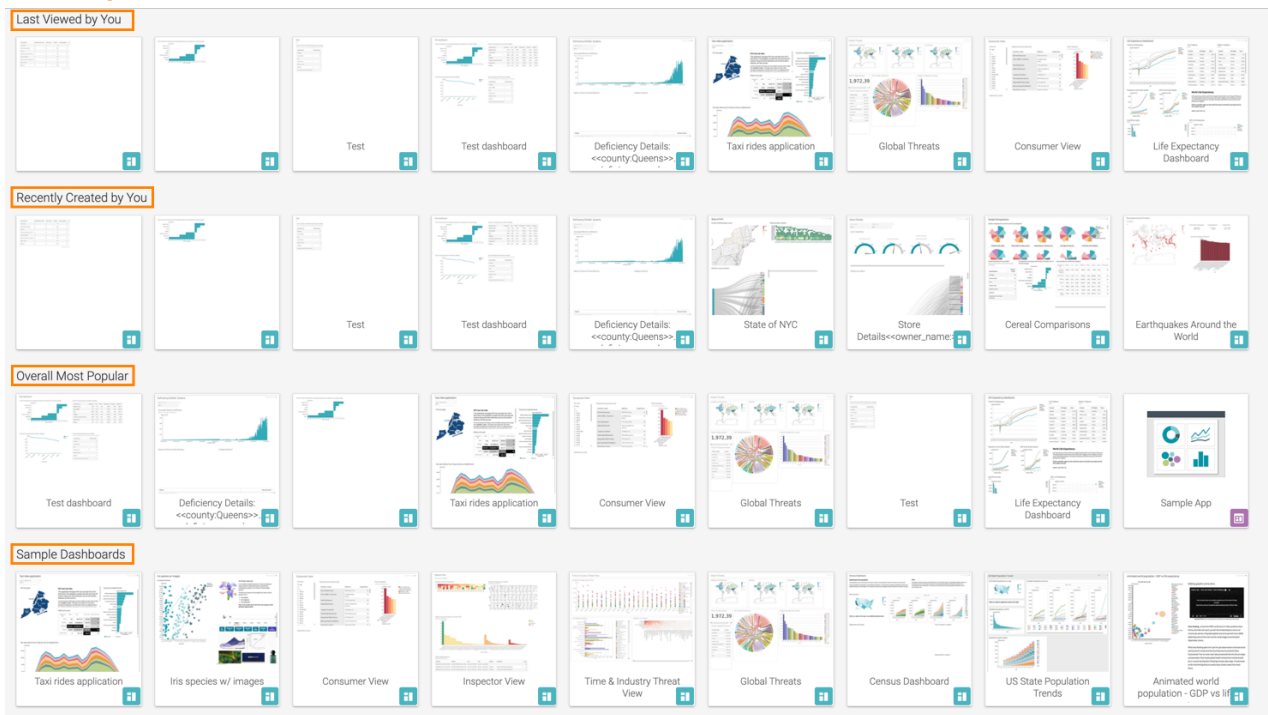
Statistics banner



This pane shows the number of DASHBOARDS, APPS, DATASETS, and QUERIES that you can access in your Data Visualization instance. It also shows you the number of TOTAL VIEWS. You can click each tile to explore further details.

If you click TOTAL VIEWS, you are directed to the Daily Usage tab of the Activity Log interface, where you can check the list of all activities, users, and dashboards in your Data Visualization instance. You can adjust the time interval you want to review (the default is 30 days), and you can download the data in CSV format.

Visuals preview area



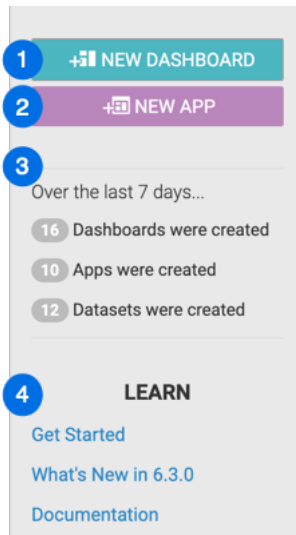
The visuals preview area provides quick access to the following visuals and dashboards:

- Last Viewed by You
- Recently Created by You
- Overall Most Popular

- Sample Dashboards

You can click any of the tiles to explore the selected visual or dashboard.

Homepage side menu bar



1. The NEW DASHBOARD button takes you to the Dashboard Designer interface, where you can create new dashboards and visuals.
2. The NEW APP button takes you to the App Designer interface, where you can build and style custom BI applications from existing dashboards and visuals.
3. Over the last 7 days... includes statistics on how many dashboards, apps, and datasets have been created.
4. 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.

Related Information

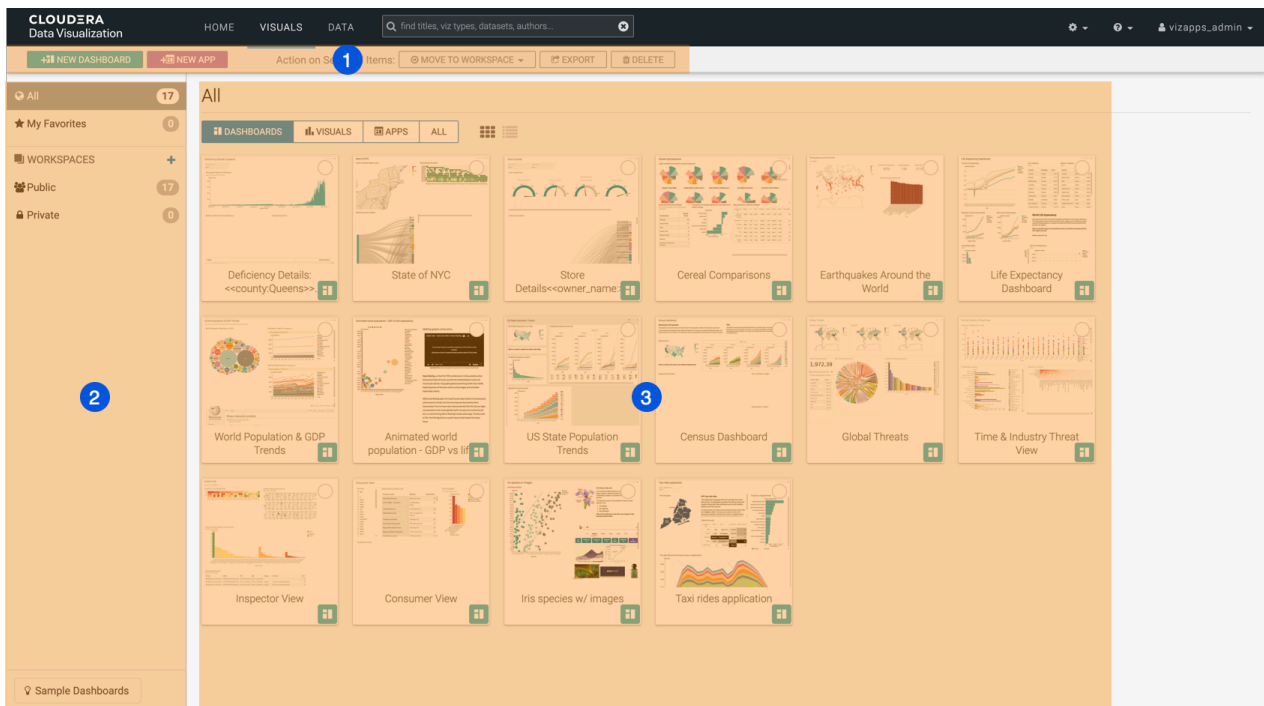
[Visuals interface](#)

[Data interface](#)

Cloudera Data Visualization, Visuals interface

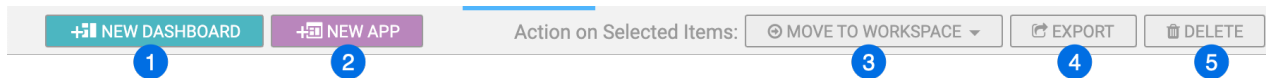
The VISUALS interface provides you with visualization features. You can initiate a number of operations when working with visuals.

The VISUALS interface of Data Visualization has the following main parts:



1. Visuals top menu bar
2. Visuals side menu bar
3. Visuals preview area

Visuals top menu bar



1. The NEW DASHBOARD button allows you to start a new dashboard.
2. The NEW APP button allows you to start a new application.
3. The MOVE TO WORKSPACE button helps you to move selected items to a new workspace.



Note: The button is only active if you select an item in the preview area.

4. The EXPORT button helps you to export visual artifacts to your default download folder.



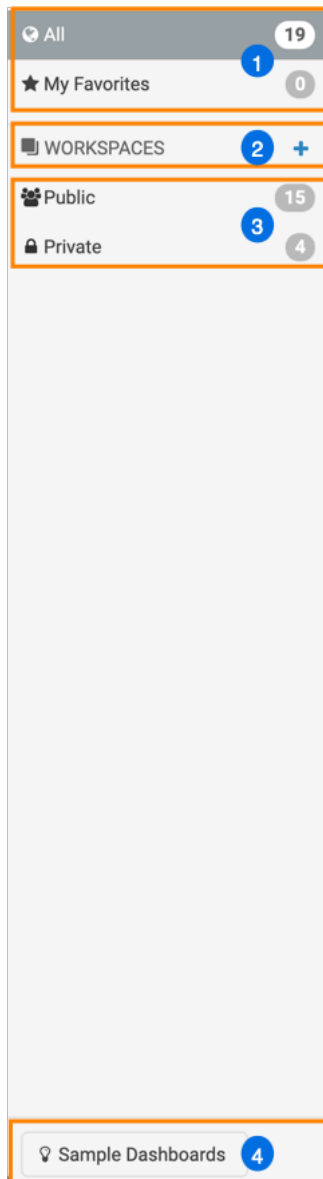
Note: The button is only active if you select an item in the preview area.

5. The DELETE button deletes the selected items.



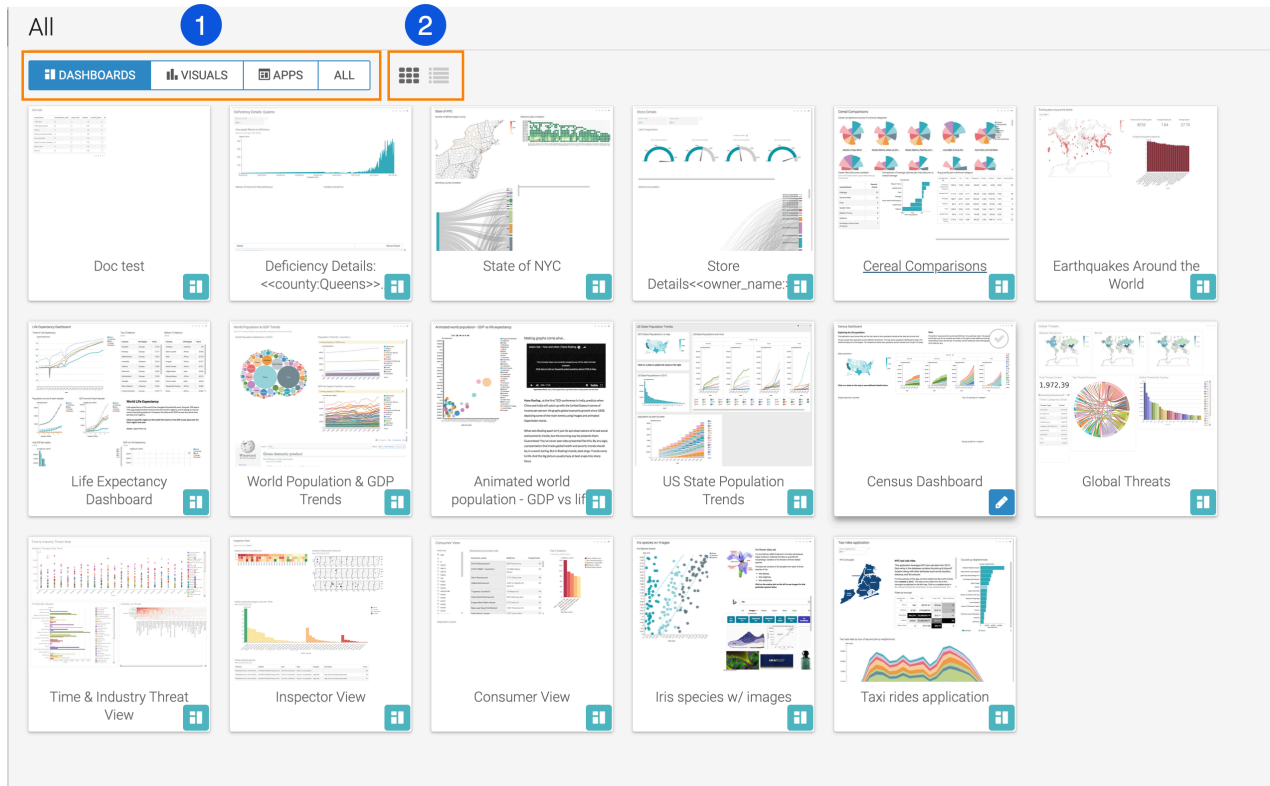
Note: The button is only active if you select an item in the preview area.

Visuals side menu bar



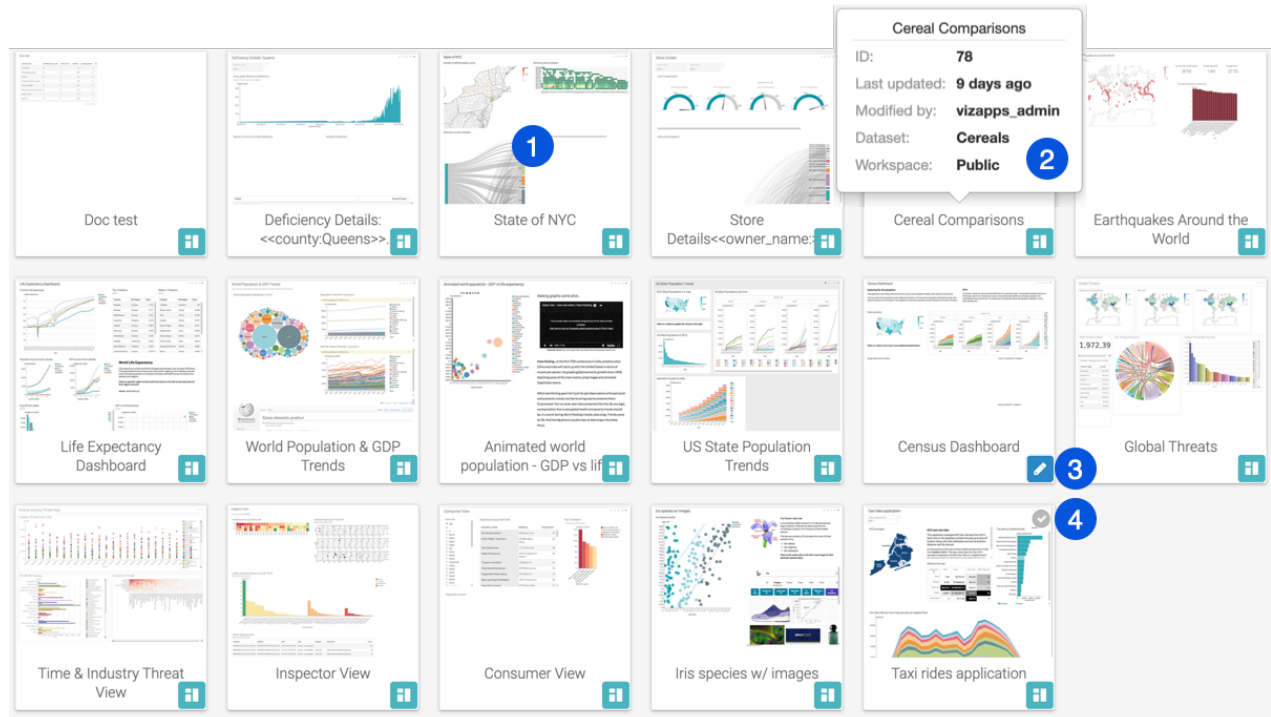
1. You can access standard groupings of visual artifacts by clicking All or My Favorites.
2. You can create a workspace by clicking the plus sign next to WORKSPACES.
3. Under WORKSPACES, you can see the default workspaces that are available: Private and Public. If you create a custom workspace, it is added to this side menu bar under Private. The number next to each workspace shows you how many dashboards are available in the workspace.
4. The Sample Dashboards button gives you access to examples available in CDP Data Visualization.

Visuals preview area



1. These buttons allow you to switch between displaying dashboards, visuals, apps, or all visual artifacts in the preview area.
2. These two icons allow you to switch between Grid View and List View. Grid View shows you thumbnail previews of your visuals, dashboards, and applications, while List View presents the same items vertically arranged as a single, continuous, multiple-line list.

Visuals interface; Grid view



1. You can open a visual artifact by clicking the tile.



Note: Dashboards are marked with a teal icon in the bottom right corner, visuals are marked with a green icon, and apps use a purple icon.

2. You can preview information about a visual artifact by hovering over the title until a tooltip appears.

3. You can open a dashboard, visual, or app in Edit mode if you hover over the bottom right corner to change the original icon to a (blue pencil/edit) icon.





























4. You can select visuals, dashboards, or apps if you hover over the top right corner of a tile and click the checkmark. You can deselect selected visuals and dashboards by clicking the checkmark again.



Note: When you select one or more items, the options for selected visuals become active in the top menu bar.

Visuals interface; List view

List View exposes the ID of the visuals, dashboards, and apps, and it also shows the number of related dashboards and linked visuals with their IDs.

	Title	ID	Related Dashboards / Linked Visuals	Created	Last Updated	Modified By	Total Views	Dataset	Workspace	
<input type="checkbox"/>	 Doc test	128		Jun 30, 2021	11 minutes ago	vizapps_admin	1	Cereals samples	Private	 
<input type="checkbox"/>	 Deficiency Details: <<county:Queens>> <<deficiency_code>>	94		Jun 21, 2021	9 days ago	vizapps_admin	6	Food Stores Inspection in NYC samples	Public	 
<input type="checkbox"/>	 State of NYC	93		Jun 21, 2021	9 days ago	vizapps_admin	1	Food Stores Inspection in NYC samples	Public	 
<input type="checkbox"/>	 Store Details<<owner_name:>>	92		Jun 21, 2021	9 days ago	vizapps_admin	0	Food Stores Inspection in NYC samples	Public	 
<input type="checkbox"/>	 Cereal Comparisons	78		Jun 21, 2021	9 days ago	vizapps_admin	0	Cereals samples	Public	 
<input type="checkbox"/>	 Earthquakes Around the World	73		Jun 21, 2021	9 days ago	vizapps_admin	0	Earthquake Data January 2019 samples	Public	 
<input type="checkbox"/>	 Life Expectancy Dashboard	66		Jun 21, 2021	9 days ago	vizapps_admin	2	World Life Expectancy samples	Public	 

1. You can open a dashboard, a visual, or an app in View mode if you click the reduced size image or the title of the visual artifact.
2. You can open a dashboard, a visual, or an app in Edit mode if you hover over the bottom right corner of the reduced size image to change the original icon to a (pencil/edit) icon and click it.
3. You can also click the (pencil/edit) at the end of the row if you want to edit a visual artifact.
4. You can select visuals, dashboards, and apps if you mark the check box that corresponds to the item.
5. You can delete a single visual artifact by clicking the (trash/delete) icon at the end of the row that corresponds to it.

Related Information

[Homepage](#)

[Data interface](#)

Cloudera Data Visualization, Data interface

The information and functionalities available on the DATA interface of Data Visualization enable you to manage the data you need for your visualizations and to initiate a number of operations when working with datasets.

The DATA interface shows your existing data connections. You can also add new connections to data sources, create new datasets, and work with your data tables. The interface has the following main parts:

The screenshot shows the Cloudera Data Visualization interface. At the top, there is a navigation bar with 'HOME', 'VISUALS', and 'DATA' tabs. A search bar is present with the placeholder text 'find titles, viz types, datasets, authors'. Below the navigation bar, there are three buttons: '% NEW CONNECTION', '% NEW DATASET', and '% ADD DATA'. A blue circle '1' is placed over the '% NEW DATASET' button. On the left side, there is a side menu bar with three items: '% All Connections', '% samples', and a search icon. A blue circle '2' is placed over the '% samples' item. The main area displays a table of datasets with columns: Title/Table, ID, Created, Last Updated, Modified By, and # Visuals. A blue circle '3' is placed over the 'Created' column header. The table contains the following data:

Title/Table	ID	Created	Last Updated	Modified By	# Visuals
Food Stores Inspection in NYC main.retail_food_store_inspections_current_critical_vio...	12	Nov 22, 2021	16 days ago	vizapps_admin	3
Cereals main.cereals	11	Nov 22, 2021	16 days ago	vizapps_admin	1
Earthquake Data January 2019 main.earthquake_data2019	10	Nov 22, 2021	16 days ago	vizapps_admin	1
World Life Expectancy main.world_life_expectancy	9	Nov 22, 2021	16 days ago	vizapps_admin	4
US County Population main.us_counties	8	Nov 22, 2021	16 days ago	vizapps_admin	0
US State Populations Over Time main.census_pop	7	Nov 22, 2021	16 days ago	vizapps_admin	2
Global Information Security Threats main.infosec_1559	6	Nov 22, 2021	16 days ago	vizapps_admin	2
Restaurant Inspection SF main.restaurant_scores_lives_standard	5	Nov 22, 2021	16 days ago	vizapps_admin	1
Restaurant Inspection SF main.restaurant_scores_lives_standard	4	Nov 22, 2021	16 days ago	vizapps_admin	1
Iris main.iris	3	Nov 22, 2021	16 days ago	vizapps_admin	1
NYC Taxicab Rides Detail main.nyc_taxicab_rides_detail	2	Nov 22, 2021	16 days ago	vizapps_admin	0

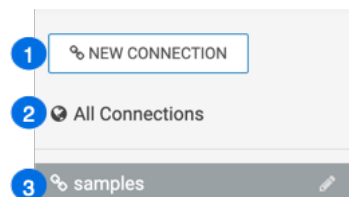
1. Data top menu bar
2. Data side menu bar
3. Data preview area

Data top menu bar



1. The NEW DATASET button is for creating datasets. Datasets are needed for developing dashboards and visuals. You can also start a new dataset from a specified table.
2. For SQLite connections, the ADD DATA button enables you to introduce data from outside sources to enrich your datasets.
3. The Supplemental menu provides access to additional functions:
 - Clear result cache forces a reload of the full table definition.
 - Import Visual Artifacts enables you to restore or import visual artifacts from a backup JSON file.
 - Direct Access lets you access data on the connections directly and build datasets from specific SQL queries, as opposed to starting with an existing table.

Data side menu bar



1. The NEW CONNECTION button is for connecting to any source of data.
2. You can list all your datasets by clicking All Connections.
3. samples is the SQLite connection that contains the example datasets in CDP Data Visualization.

Data preview area

The data preview area has two tabs: Datasets and Connection Explorer.

In the Datasets view, you can see all existing datasets on a connection available for creating visuals.

Title/Table	ID	Created	Last Updated	Modified By	# Visuals
Test Dataset main.census_pop	14	Dec 08, 2021	a few seconds ago	vizapps_admin	0
Test Dataset main.census_pop	13	Dec 08, 2021	19 minutes ago	vizapps_admin	0
Food Stores Inspection in NYC main.retail_food_store_inspections_current_critical_vio...	12	Nov 22, 2021	16 days ago	vizapps_admin	3
Cereals main.cereals	11	Nov 22, 2021	16 days ago	vizapps_admin	1
Earthquake Data January 2019 main.earthquake_data2019	10	Nov 22, 2021	16 days ago	vizapps_admin	1
World Life Expectancy main.world_life_expectancy	9	Nov 22, 2021	16 days ago	vizapps_admin	4
US County Population main.us_counties	8	Nov 22, 2021	16 days ago	vizapps_admin	0
US State Populations Over Time main.census_pop	7	Nov 22, 2021	16 days ago	vizapps_admin	2
Global Information Security Threats main.infoseq_1559	6	Nov 22, 2021	16 days ago	vizapps_admin	2
Restaurant Inspection SF main.restaurant_scores_lives_standard	5	Nov 22, 2021	16 days ago	vizapps_admin	1
Restaurant Inspection SF	4	Nov 22, 2021	16 days ago	vizapps_admin	1

In the Connection Explorer view, you can manage functions related to the data on a connection. You can check the databases and preview table details in the data connection.

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

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
4	james	34	456	944.23	j-dog	seagul	99
5	jake	31	543	23.45	nate	dog	87
6	john	22	34	34.4	nate	dog	66

Showing 1 - 6 of 6 rows

1. The database area shows all databases that you can access through the current connection. Selecting a database displays its tables.
2. The Datasets column lists the number of datasets that use the particular table as their initial definition.
3. You can click the New dataset link to create a dataset on a specific table.
4. To see more information about data tables, you can click the row of each table. The additional information is displayed under two tabs: Sample Data and Datasets.

Related Information

[Homepage](#)

[Visuals interface](#)