

Using Filter Widgets on Dashboards

Date published: 2020-10-30

Date modified: 2024-05-30



Legal Notice

© Cloudera Inc. 2024. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 (“ASLv2”), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER’S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

Contents

| | |
|--|-----------|
| Creating dataset filters on dashboards..... | 5 |
| Creating custom filters on dashboards..... | 6 |
| Creating date and time filters on dashboards..... | 8 |
| Using fixed dates (date range picker) mode..... | 9 |
| Using relative dates mode..... | 15 |
| Using quick filters..... | 19 |
| Including null values in date filters..... | 22 |
| Creating a dashboard with date filters..... | 22 |
| Including null values in a visual..... | 23 |
| Moving filter widgets in dashboards..... | 27 |
| Configuring ranges on dashboard filters..... | 32 |
| Configuring values of dashboard filters..... | 34 |
| Customizing output parameters..... | 36 |
| Setting parameters through URL..... | 38 |
| Configuring data options for dashboard filters..... | 41 |
| Changing number of initial options in dashboard filters..... | 42 |
| Changing number of options in search output of dashboard filters..... | 43 |
| Disabling incremental queries in filters..... | 43 |
| Configuring sort order in filter values..... | 44 |
| Configuring display settings for dashboard filters..... | 44 |
| Displaying a textbox parameter..... | 45 |
| Changing the width of the filter text box..... | 46 |
| Entering values manually..... | 46 |
| Using single value mode with radio buttons..... | 49 |
| Selecting all values..... | 50 |
| Using single value, with dropdown menu..... | 50 |
| Displaying distinct parameters..... | 50 |
| Hiding filters..... | 51 |
| Remembering previous selections on dashboard filters when searching..... | 51 |
| Using multi-select mode..... | 52 |
| Configuring dashboard filter scope..... | 52 |

Configuring custom styles for dashboard filters..... 54
 Configuring custom style using CSS code..... 55

Creating dataset filters on dashboards

Cloudera Data Visualization enables you to add a filter widget to the dashboard based on any field in the dataset.

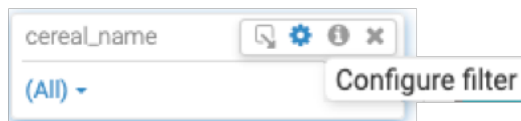
Procedure

1. Open an existing dashboard in Edit mode.
2. Switch to the Filters tab on the Dashboard Designer side menu bar.
3. Check that you are using the correct connection for the filter. If not, switch to the desired connection.
4. Select the dataset for the filter.
5. Click any field of the dataset to add a widget to the dashboard that filters on this field.

Alternatively, you can also drag the field that you want to use as a filter and drop it into the filter bar on the dashboard.

You can see the new filter widget named after the field name you have used.

- To configure the new dashboard filter, hover over the filter and click the Gear icon in the top right of the filter widget.



The Settings modal window opens on the Values tab.

Note that the Dataset of the filter is displayed. You can use the switch action to quickly change the filter across datasets and connections.

Also, there is a Save selections made in edit mode setting available. You can use it to save text, numeric, or date range selections made in Edit mode. When unselected, filter values selected while editing the dashboard will not be the default in Edit mode.

Settings

Values

Data

Display Settings

Scope

Custom Style

Dataset: Cereals

☒ Save selections made in edit mode
 ☒ Permit selection of NULL values

From Base Field

Title

Output Parameter

Filter Fields

CANCEL

APPLY

Creating custom filters on dashboards

Cloudera Data Visualization enables you to create a custom filter based on any parameter.

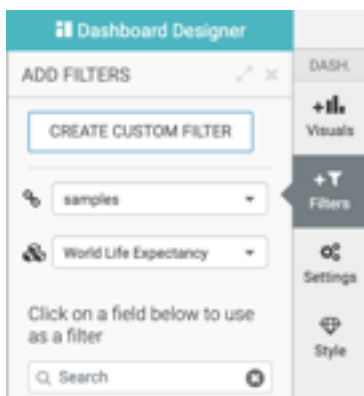
About this task

The following steps demonstrate how to create custom filters in a dashboard.

Procedure

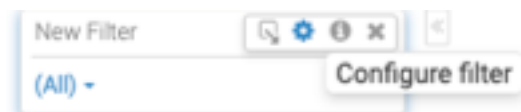
- Open an existing dashboard in Edit mode.
- Switch to the Filters tab on the Dashboard Designer side menu bar.

3. Click CREATE CUSTOM FILTER.



You can see a new filter widget named New Filter on the dashboard.

4. To configure the new dashboard filter, hover over the filter and click the Gear icon in the top right of the filter widget.



The Settings modal window opens on the Values tab.

Note that the Save selections made in edit mode setting is available. You can use it to save text, numeric, or date range selections made in Edit mode. When unselected, filter values selected while editing the dashboard will not be the default in Edit mode.

Settings
×

Values
Data
Display Settings
Scope
Custom Style

☒ Save selections made in edit mode

Title
New Filter

Output Parameter

Specified values

| Value | Label | |
|-------------|-------|--|
| Add new row | | |

CANCEL
APPLY

What to do next

See the *Related Links* section for more information on configuration options.

Related Information

[Configuring values of dashboard filters](#)

[Configuring data options for dashboard filters](#)

[Configuring display settings for dashboard filters](#)

[Configuring dashboard filter scope](#)[Configuring custom styles for dashboard filters](#)

Creating date and time filters on dashboards

In Cloudera Data Visualization, you can use application controls with date or timestamp parameters to filter records based on date and time values.

Procedure

1. Open an existing dashboard in Edit mode.
2. Switch to the Filters tab on the Dashboard Designer side menu bar.
3. Click any date type field of the dataset displayed under Dimensions or Measures.

This adds a new date/time filter widget to the dashboard. The filter widget is named after the field name. If you hover over the filter widget, you can access the filter area actions that allow you to change the date range into a picklist, to configure the filter, or to remove it from the dashboard.

For more information, see *Filter area actions for application control*.

For instructions on how to configure date ranges, see *Configuring ranges on dashboard filters*.

4. To configure the new dashboard filter, hover over the filter and click the Gear icon in the top right of the filter widget.

The Settings modal window opens on the Basic tab.

Note that the Dataset of the filter is displayed. You can use the switch action to quickly change the filter across datasets and connections.

If you want to preserve the adjusted filter settings for View mode, select the Save date range selections made in edit mode option on the Basic tab of the Settings modal window.

If you only want to display the latest available timestamp, you can default the date range to the max date of the dataset column by selecting the Default to the latest available timestamp option. If you select this option, the Save date range selections made in edit mode becomes unavailable.



Important: Make sure that you do not add a field to the filter part of the dashboard if the same field is used on the dashboard as both a daterange picklist AND a time control.

Related Information

[Filter area actions for application control](#)

[Configuring ranges on dashboard filters](#)

Using fixed dates (date range picker) mode

In Cloudera Data Visualization, the fixed dates mode in a date filter enables you to select a subset range of dates for visualizing your data.

About this task

These steps show you how to use the date range picker option of a date and time filter. The instructions use a calendar heatmap visual as an example.

Before you begin

- You have created a calendar heat map visual using the SFPD Incidents dataset. For more information on this visual type, see *Calendar heat maps*.
- You have added this visual to a dashboard.

Procedure

1. Open your dashboard that contains the heatmap visual in Edit mode.
2. Switch to the Filters tab on the Dashboard Designer side menu bar.

3. Under Dimensions, click the date field.

FILTERS

CREATE CUSTOM FILTER

SFPD Incidents

Click on a field below to use as a filter

Search

Dimensions10

date

Month

A Day of Week

Year

A Time

A pddistrict

Measures4

sfpd_incidents

incidntnum

1.2 longitude

Shared Visuals

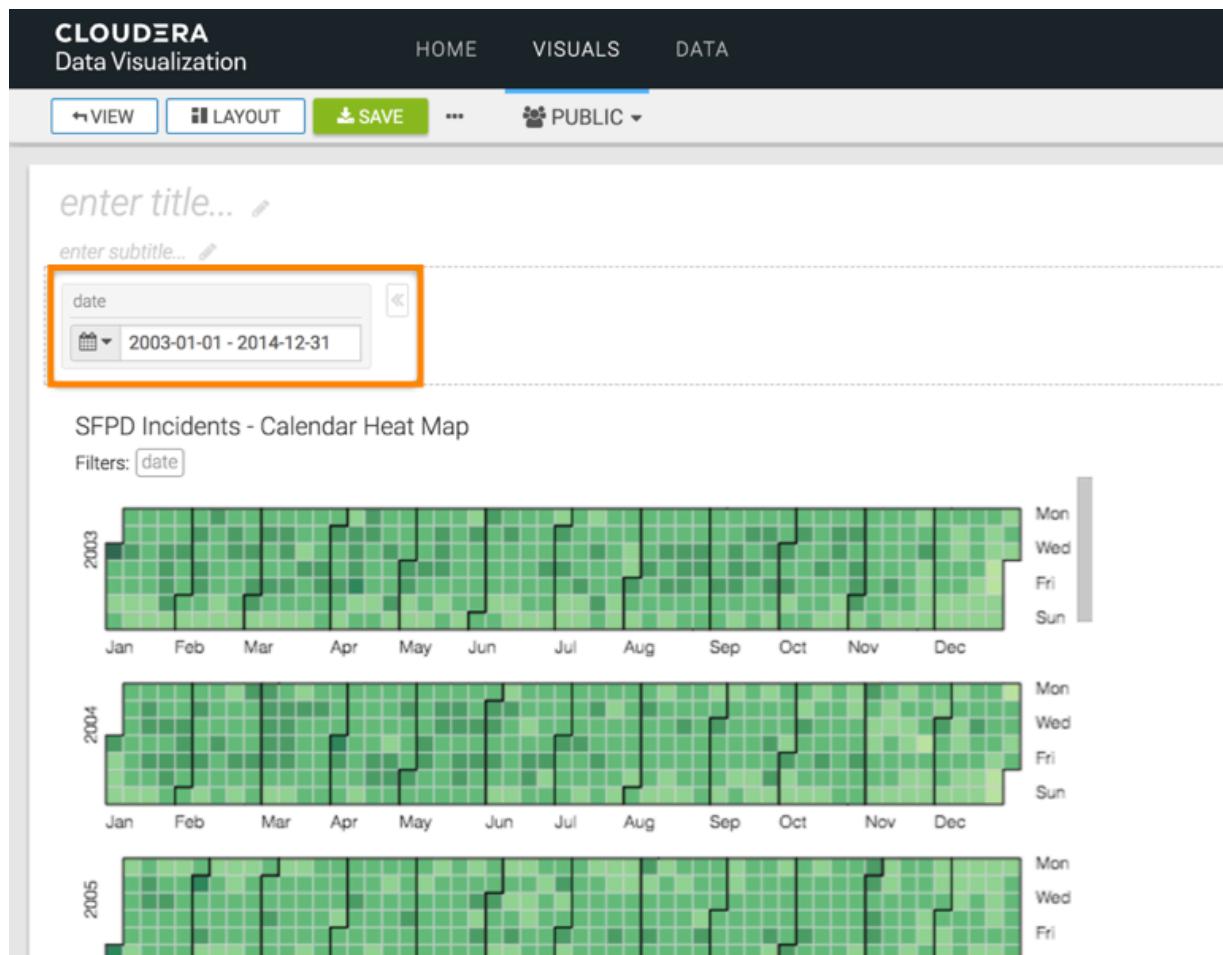
Filters

Settings

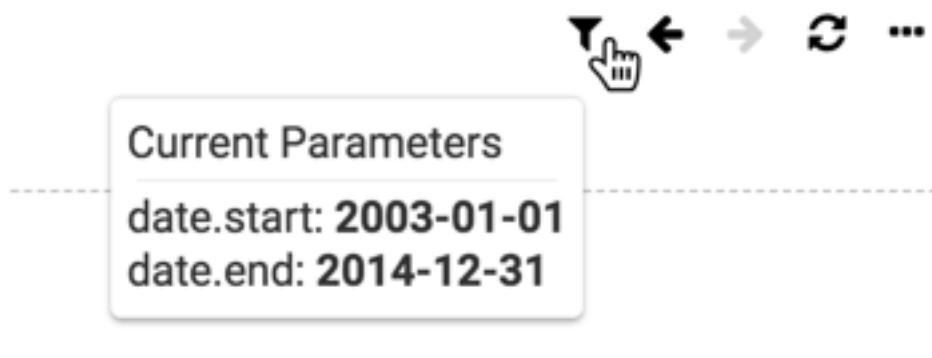
Style

Custom Style

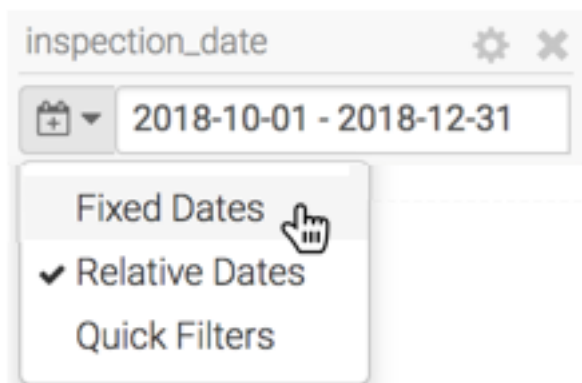
This adds a filter to the dashboard. This filter is based directly on the date field and has a timestamp type.



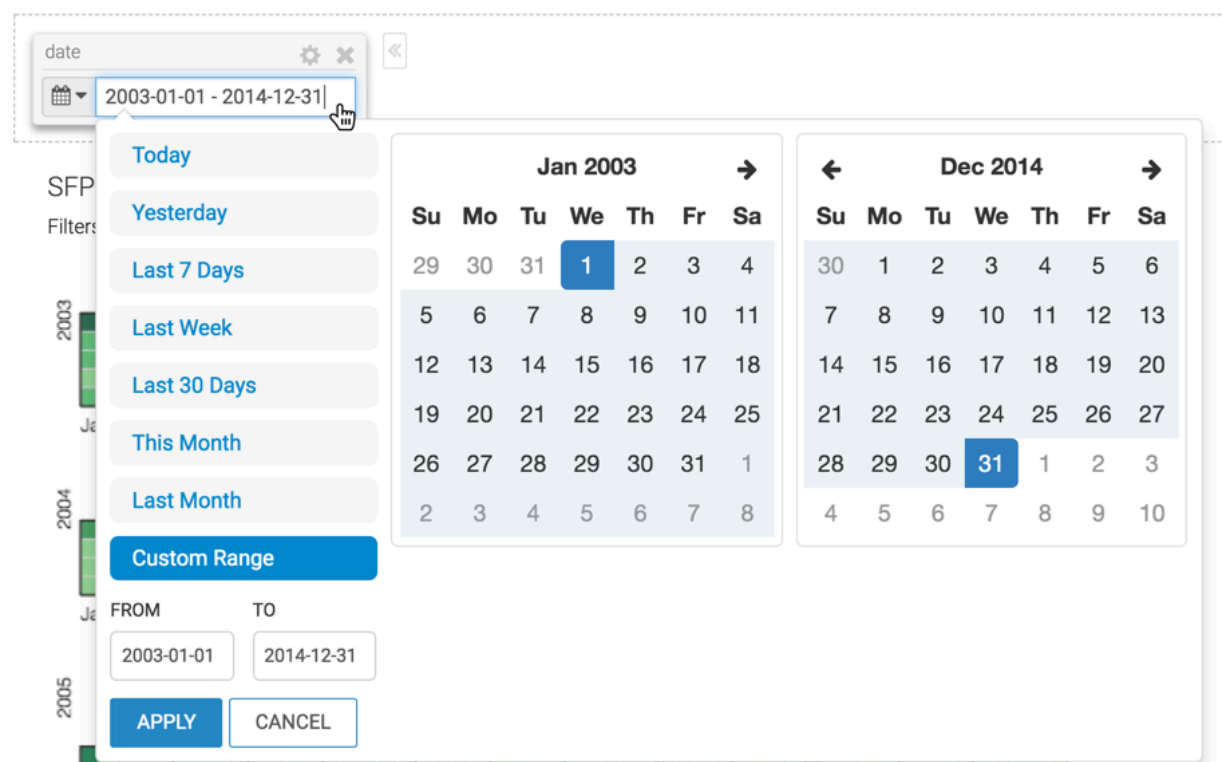
The dashboard filter contains the date range for the entire dataset; in this case, it is from 2003-01-01 through 2014-12-31.



- To use the date range picker interface, click the Calendar icon on the filter, and select Fixed Dates from the menu.



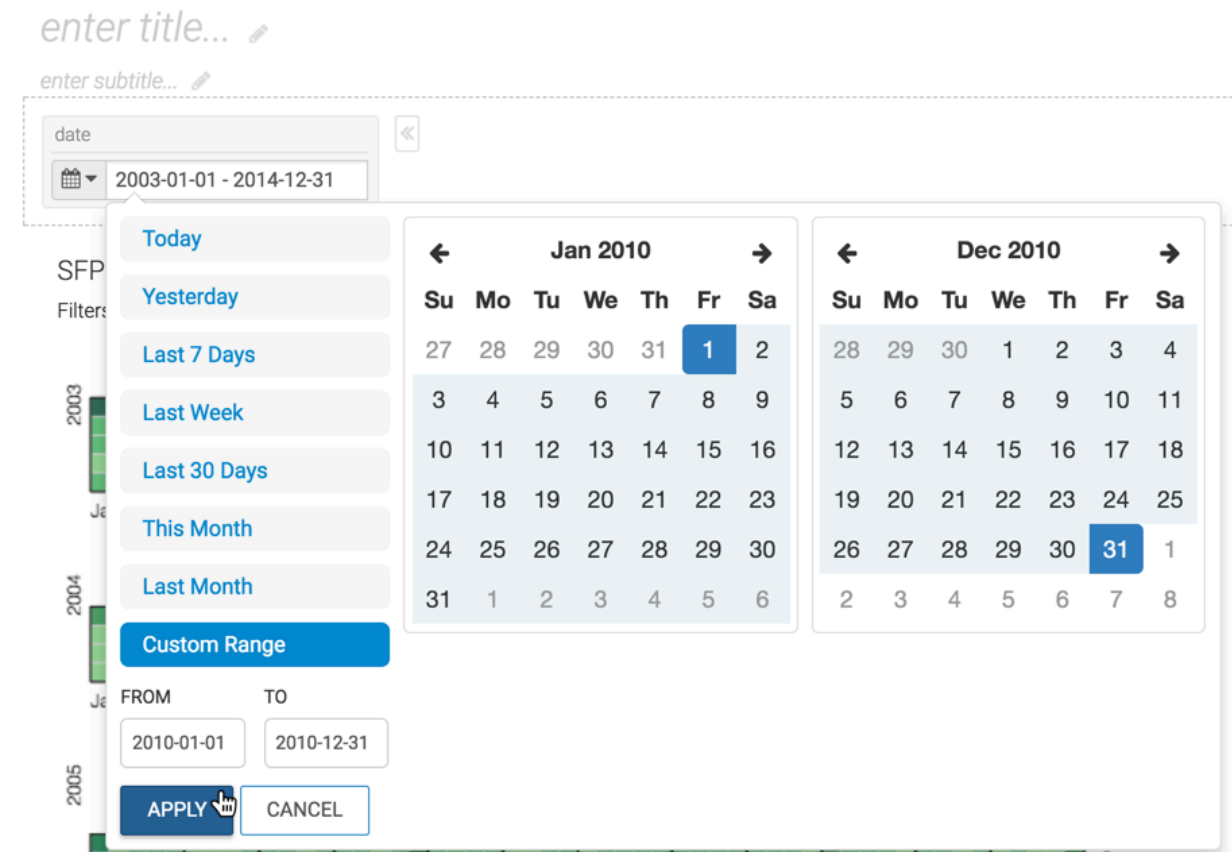
You can also click the date field of the dashboard filter to see the date range picker interface.



You can change the date range in various ways:

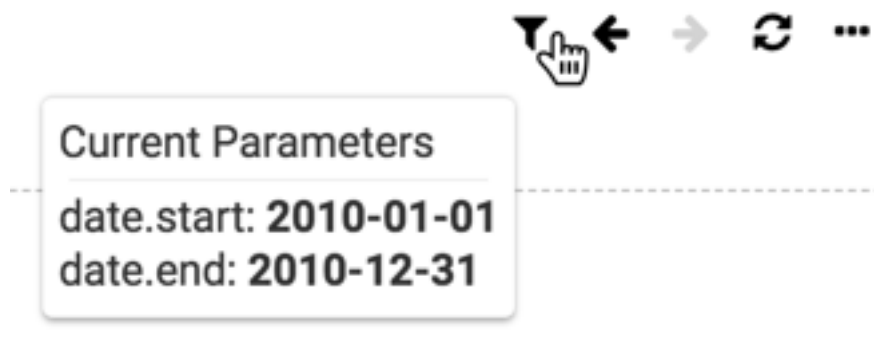
- By selecting the default options:
 - Today
 - Yesterday
 - Last 7 Days
 - Last Week
 - Last 30 Days
 - This Month
 - Last Month
- By changing the date entries for FROM and TO fields
- By picking the start and end dates directly on the calendar interface

5. Change the date range to 2010-01-01 through 2010-12-31, and click APPLY.



Results

The visual output is now limited to the 2010 calendar year and the application filter shows this new date range.



Related Information

[Calendar heat maps](#)

Using relative dates mode

In Cloudera Data Visualization, the relative date mode in a date filter enables you to select a subset range of dates anchored to a particular date.

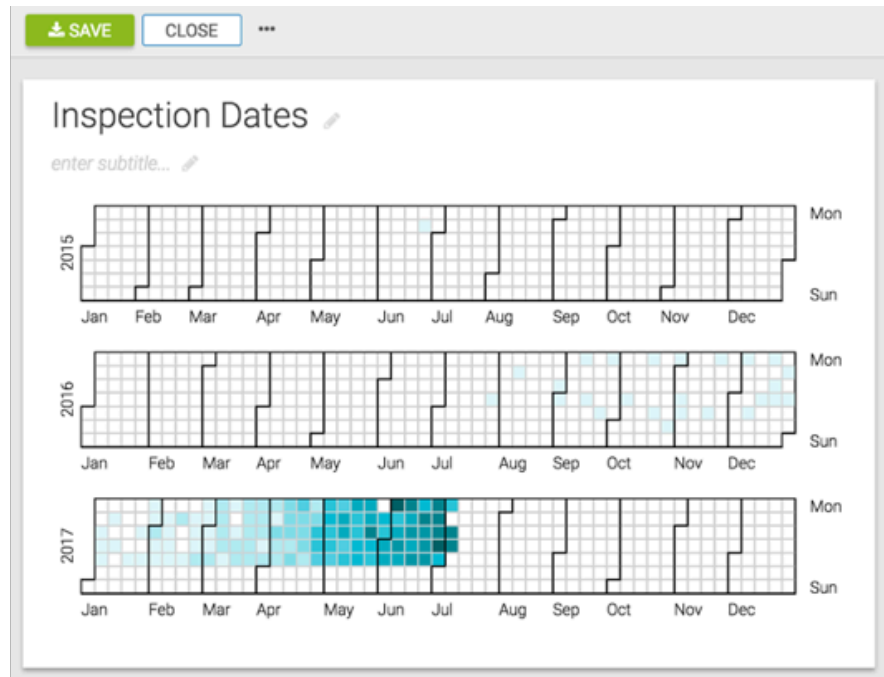
About this task

These steps show you how to use relative date mode of a date and time filter.

The instructions use a calendar heat map visual as an example. You can learn how to anchor a date to 2015-01-01 and limit the visual output to the next two years from this date.

Before you begin

- You have created a calendar heat map visual using the Food Stores Inspection in NYC dataset with the inspection_date dimension on the Date shelf and the Record Count measure on the Measures shelf.



For more information on this visual type, see *Calendar heat maps*.

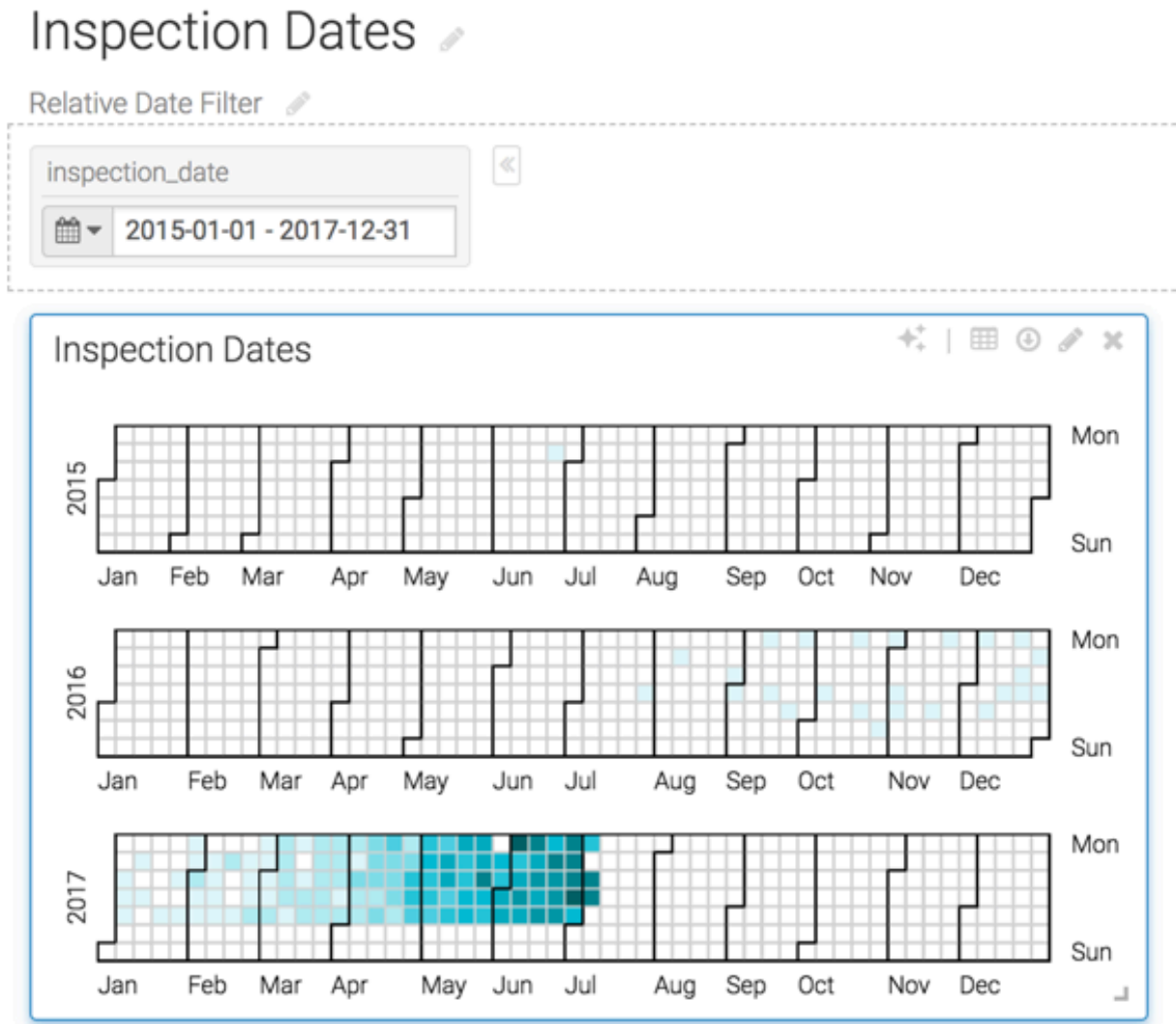
- You have added this visual to a dashboard.

Procedure

1. Open your dashboard in Edit mode.
2. Switch to the Filters tab on the Dashboard Designer side menu bar.

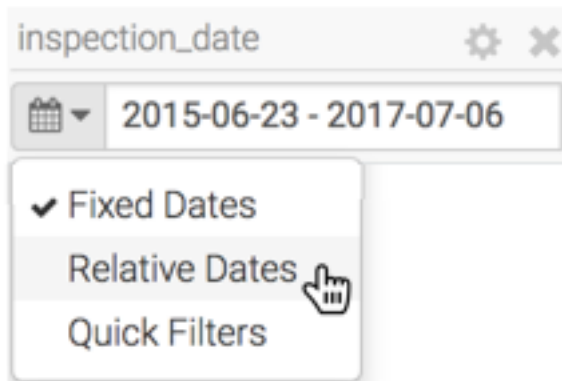
- Under Dimensions, click the `inspection_date` field.

This adds a filter to the dashboard. This filter is based directly on the `inspection_date` field, and has a timestamp type.



The dashboard filter contains the date range for the entire dataset. In this case, it is for three years from 2015-01-01 through 2017-12-31.

4. Click the Calendar icon on the filter and select Relative Dates from the menu.



The Relative Date modal window appears.

☐ Anchor to Today ☒ Anchor to

Units

☐ Previous Year ☐ Last Years

☐ This Year ☒ Next Years

☐ Next Year ☐ Year to date

☐ Custom

5. Anchor the date to 2015-01-01 and limit the visual output to the next two years from this date:
 - Select Anchor to and click in the date field to select 2015-01-01 from the calendar interface.
 - The other option is Anchor to Today (default).
6. Under Units, select Years.

The other options are:

 - Days
 - Weeks
 - Months
 - Quarters

7. Select Next and enter '2' in the field next to it.

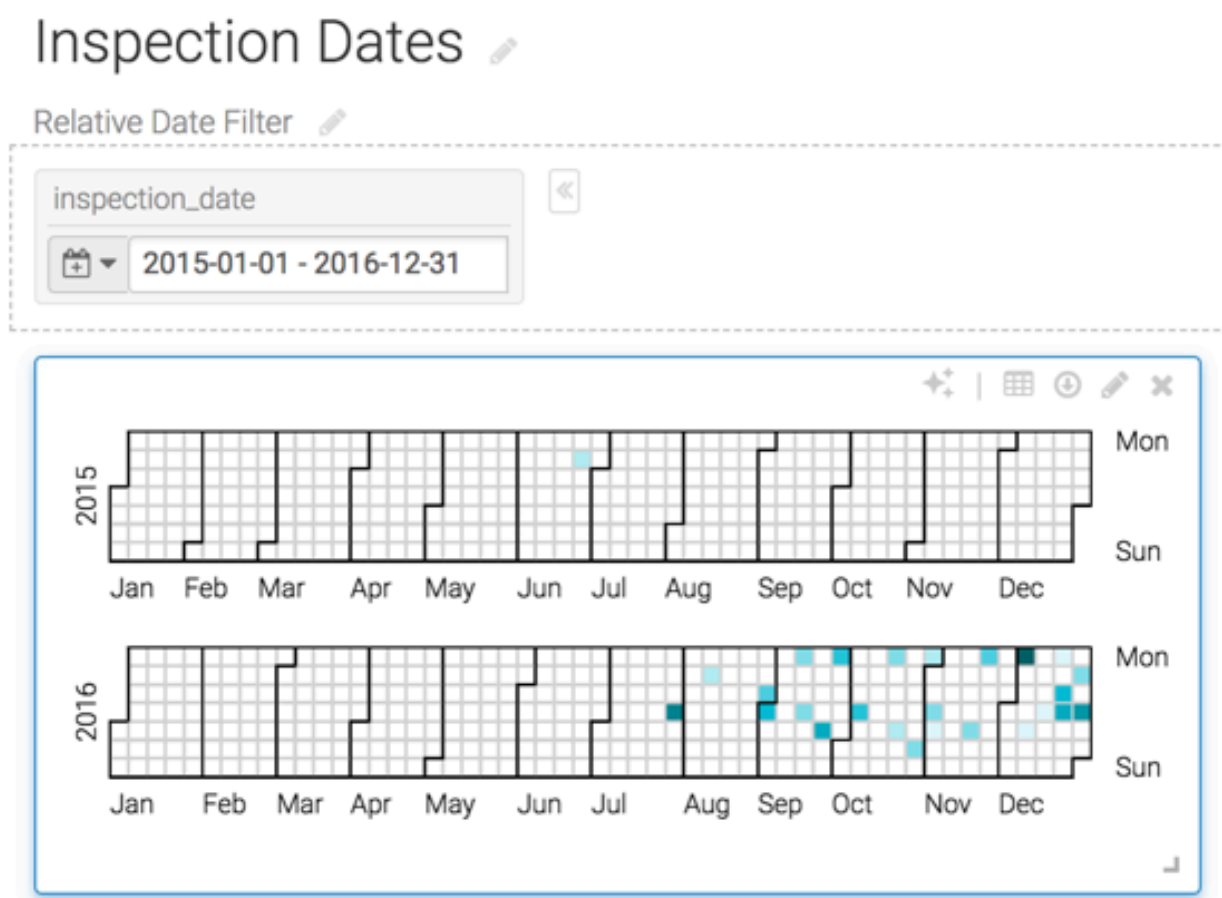
The other options are:

- Previous Year
- This Year
- Next Year
- Custom
- Last <number> Years
- Next <number> Years
- Year to date

8. Click APPLY.

Results

The visual output is now limited to two years, starting from the anchor year of 2015 and the application filter shows the new date range of 2015-01-01 - 2016-12-31.



Using quick filters

In Cloudera Data Visualization, the quick date filter enables you to provide a quick selection of date ranges for visualizing your data.

About this task

These steps show you how to use the quick filters option for a date and time filter. The instructions use a calendar heatmap visual as an example.

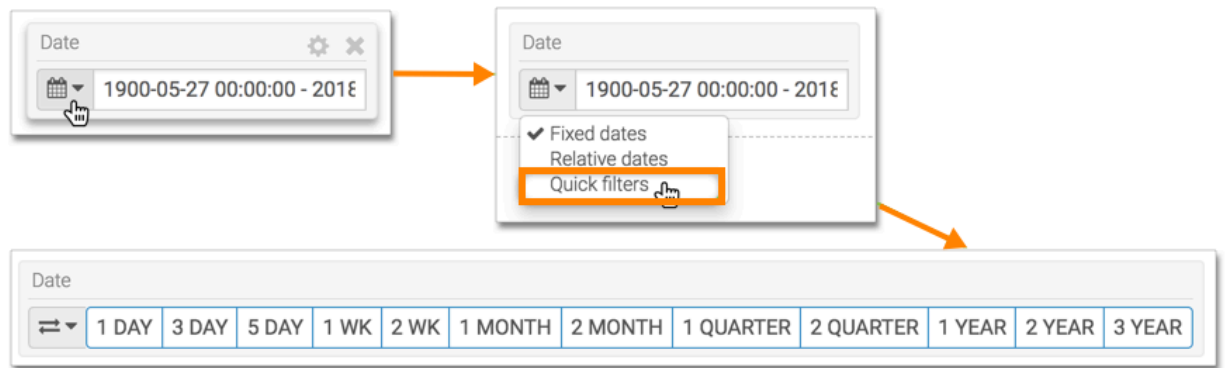
Before you begin

You have created dashboard with quick filters. For instructions, see *Managing custom dates* and *Configuring ranges on dashboard filters*.

Procedure

1. Open your dashboard in Edit mode.
2. Click the Calendar icon on the filter and select Quick filters from the menu.

The appearance of the filter changes to show the set of custom date ranges.



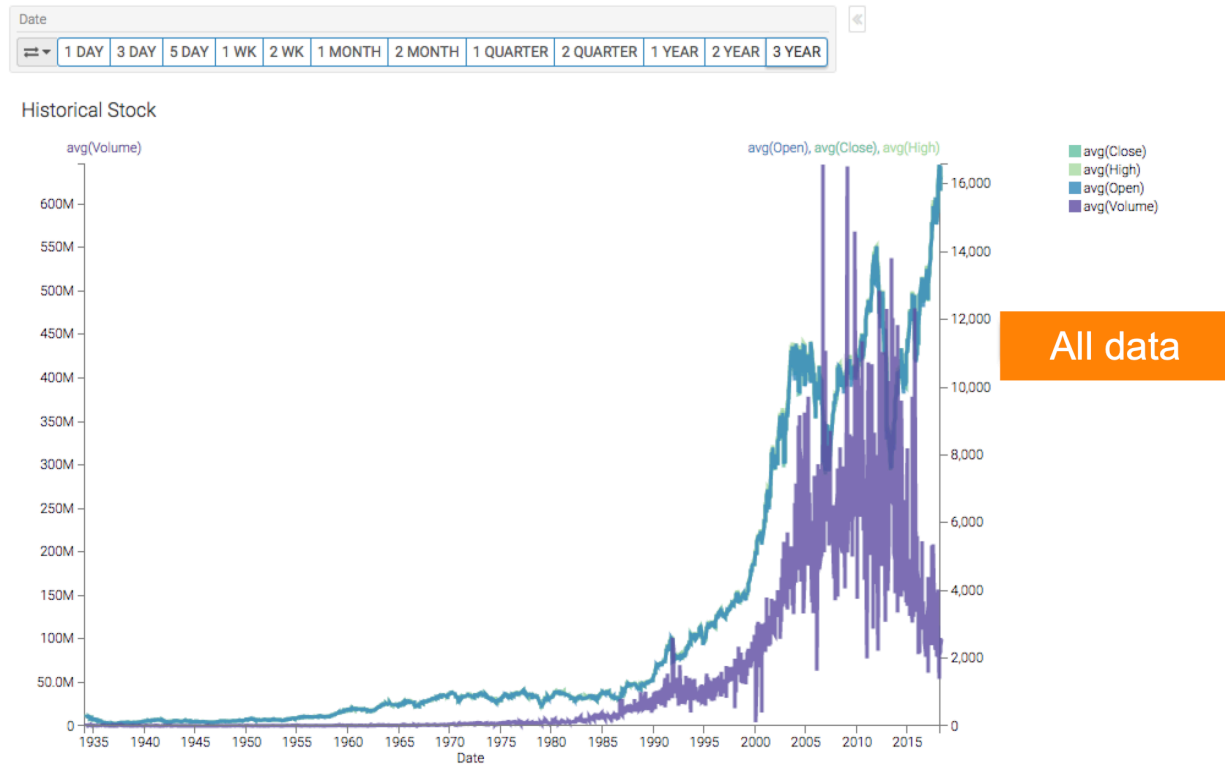
3. To use the quick filter, save the dashboard and switch to View mode.
4. Explore how the visual display changes when you click the different filter ranges.

Example

In these examples, you can see how the visual changes when the following filter date ranges are applied: none (all data), 3 years, and 1 quarter.

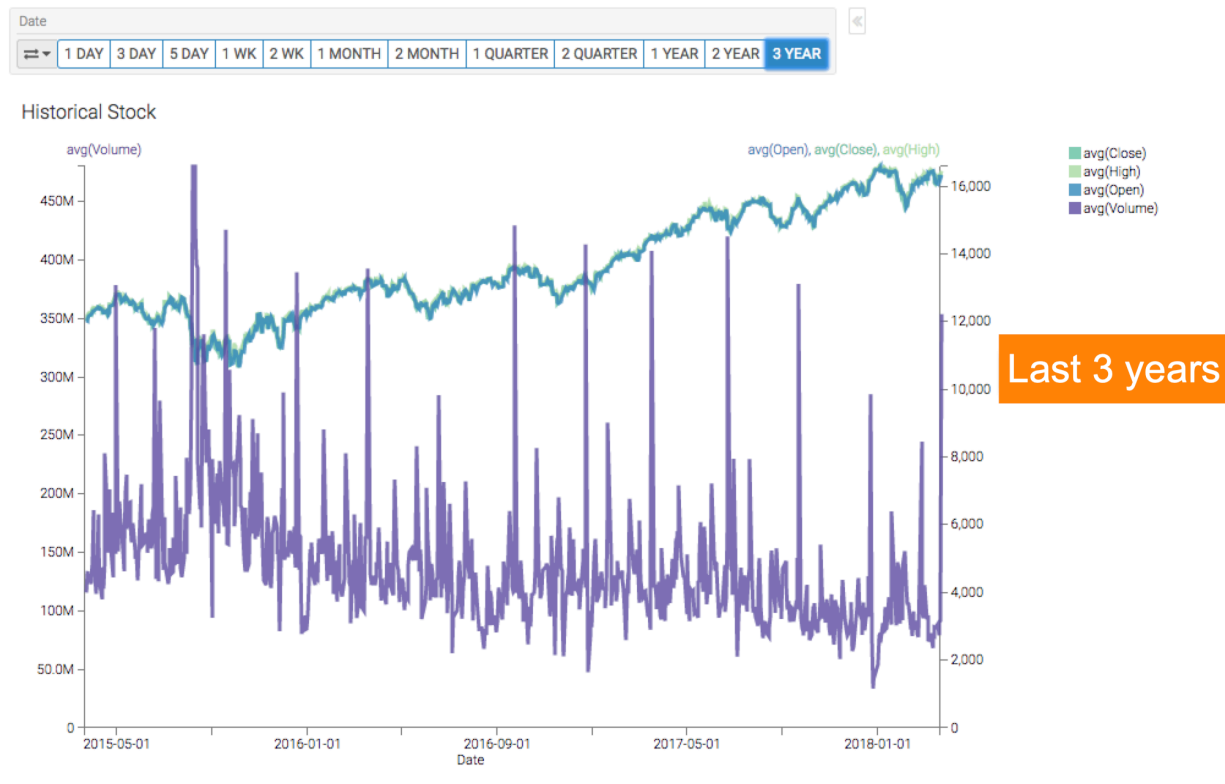
Historical Stock Sales

T ← → ↺ ⋮



Historical Stock Sales

T ← → ↺ ⋮



Historical Stock Sales

T ← → ↺ ⋮



Related Information

[Managing custom dates](#)

[Configuring ranges on dashboard filters](#)

Including null values in date filters

In Cloudera Data Visualization, the date filter enables you to select null values for visualization.

About this task

The following steps use a Scatter visual, which is built on the Issue Tracker dataset. This dataset includes issues that are created and resolved and also issues that are created but still open. Resolved issues have a timestamp and open issues have a 'null' value.

By default, visuals only display values with a timestamp. This feature enables you to configure the date filter and display 'null' values in the visuals.

Creating a dashboard with date filters

In Cloudera Data Visualization, the quick date filter enables you to provide a quick selection of date ranges for visualizing your data.

About this task

This example shows a dashboard with a Scatter visual that plots created and resolved issues.

Procedure

1. Create a new dashboard and name it 'Issue Completeness'.
2. In the Dashboard Designer, create a Scatter visual based on the Issue Tracker dataset.
3. Populate the shelves from the available Dimensions and Measures fields in the DATA menu.

- a. Under the X shelf, add created from Measures.
- b. Under the Y shelf, add resolved from Measures.
- c. Click the field to open the Field Properties menu and make the following changes:
 - Select Enter/Edit Expression, enter the following expression, and click SAVE:

```
if([resolved] IS NOT NULL,datediff([resolved],[created]),datediff(now(),[created]))
```

- d. Select Alias and name the field 'Days Open'.
 - d. Under Colors, add assignee from Dimensions.
 - e. Under Tooltips, add the following fields:
 - Description
 - Issue Key
 - Assignee
 - Date Open
 - Date Closed
 - f. Under Filters, add created and resolved from Dimensions.
4. Click REFRESH VISUAL.
 5. Click SAVE.

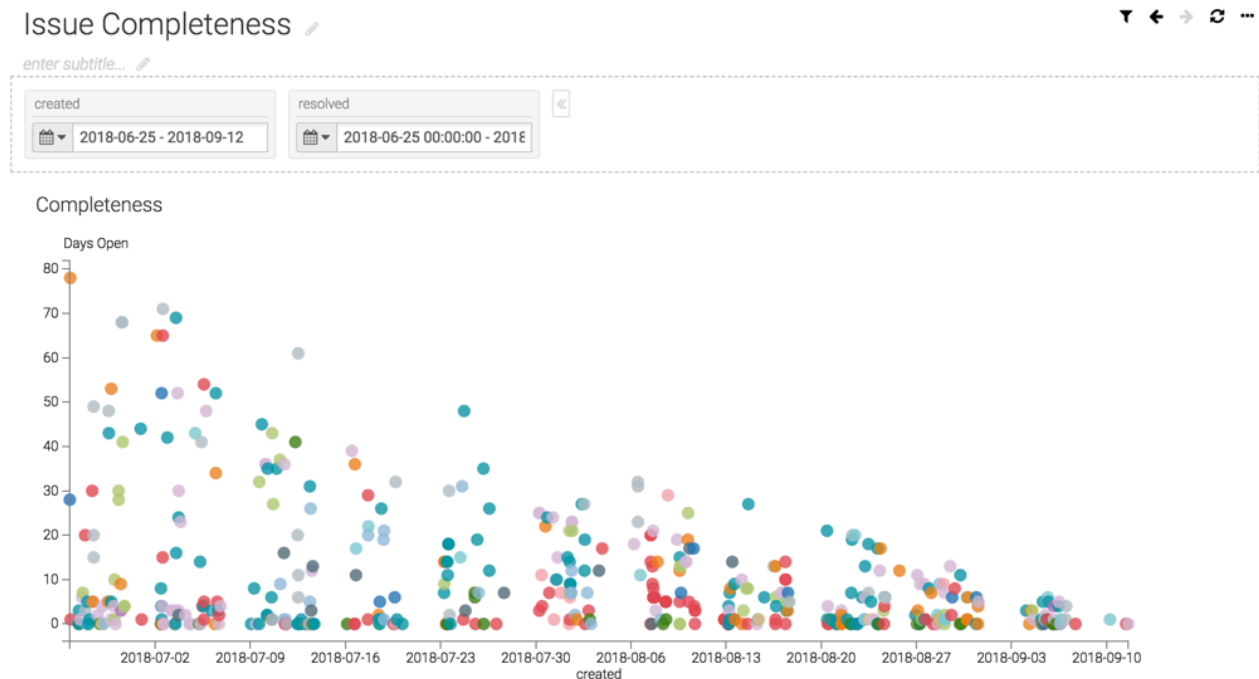
The visual appears in the main area of the dashboard interface.

6. Add two date filters, created and resolved in the dashboard, with a date range from 2018-06-25 to 2018-09-12.
For information on how to create date filters in a dashboard, see *Using fixed dates (date range picker) mode*.

7. Click SAVE.

Results

The following image shows the new dashboard you have created. This visual does not include the null values in the dataset.



What to do next

Proceed to the next section to learn how to include null values in a visual.

Including null values in a visual

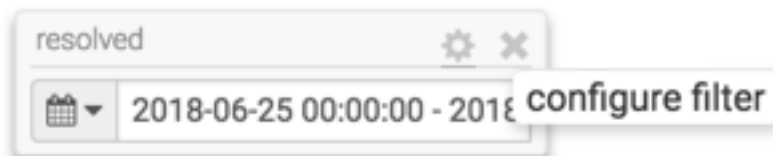
In Cloudera Data Visualization, the quick date filter enables you to provide a quick selection of date ranges for visualizing your data.

Before you begin

You have created dashboard with a scatter visual that plots created and resolved issues. For instructions on how to create this dashboard, see *Creating a dashboard with date filters*.

Procedure

1. Hover over the upper right corner of the resolved filter, and click the (Gear) icon to configure the filter.



2. On the Values tab of the Settings modal window, select the Permit selection of NULL values option.

Settings

Values

Data

Display Settings

Scope

Custom Style

Dataset:

Issue Tracker

☒ Save selections made in edit mode

☒ Permit selection of NULL values

From Base Field

resolved

Title

resolved

Output Parameter

Filter Fields ⓘ

CANCEL

APPLY

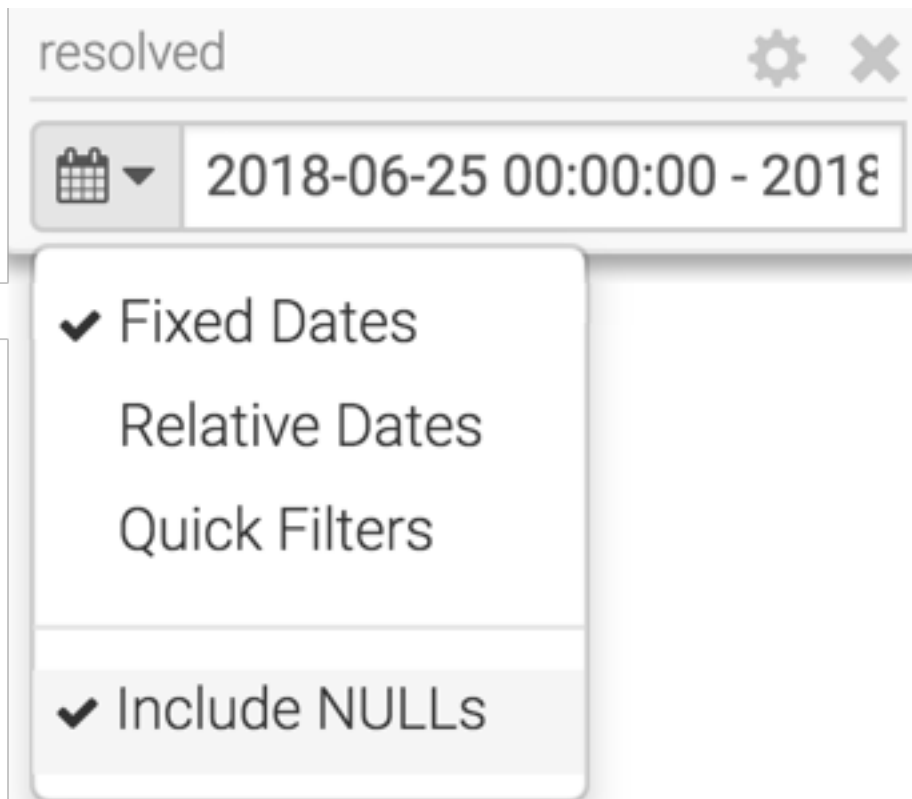
3. Click APPLY.

4. Click the Calendar icon on the resolved filter.

The Include NULLs option appears in the drop-down menu.

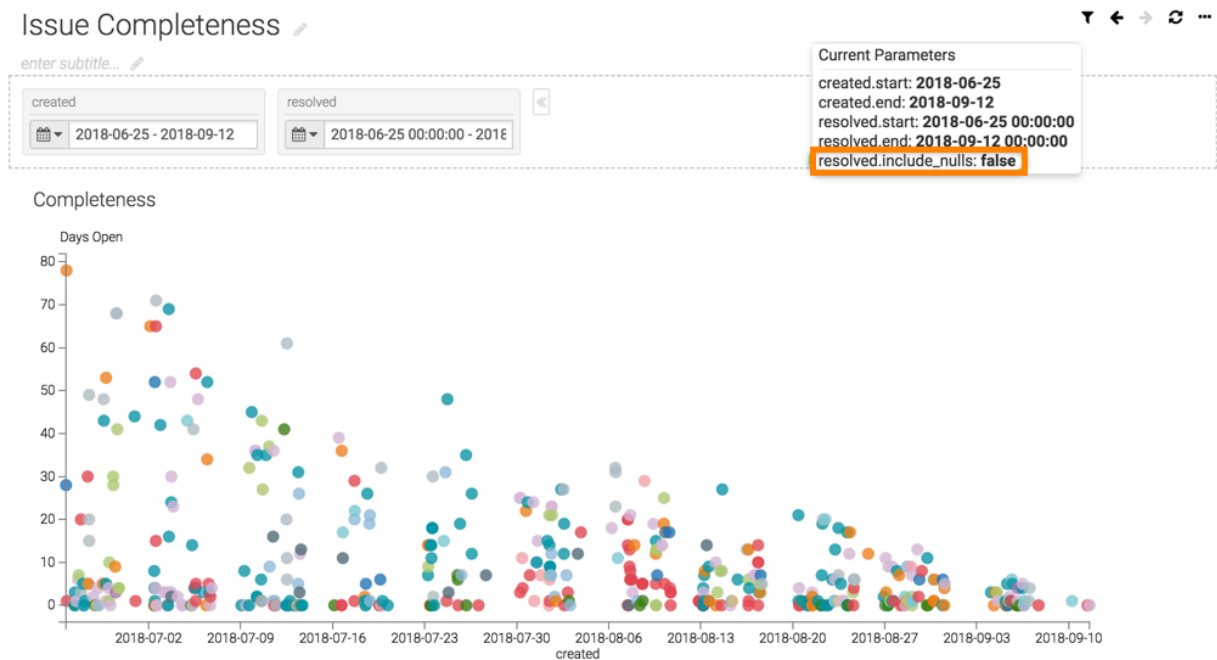


Note: If the Permit selection of Null values option is not selected in the previous step, the Include NULLs option is not visible in the dropdown.



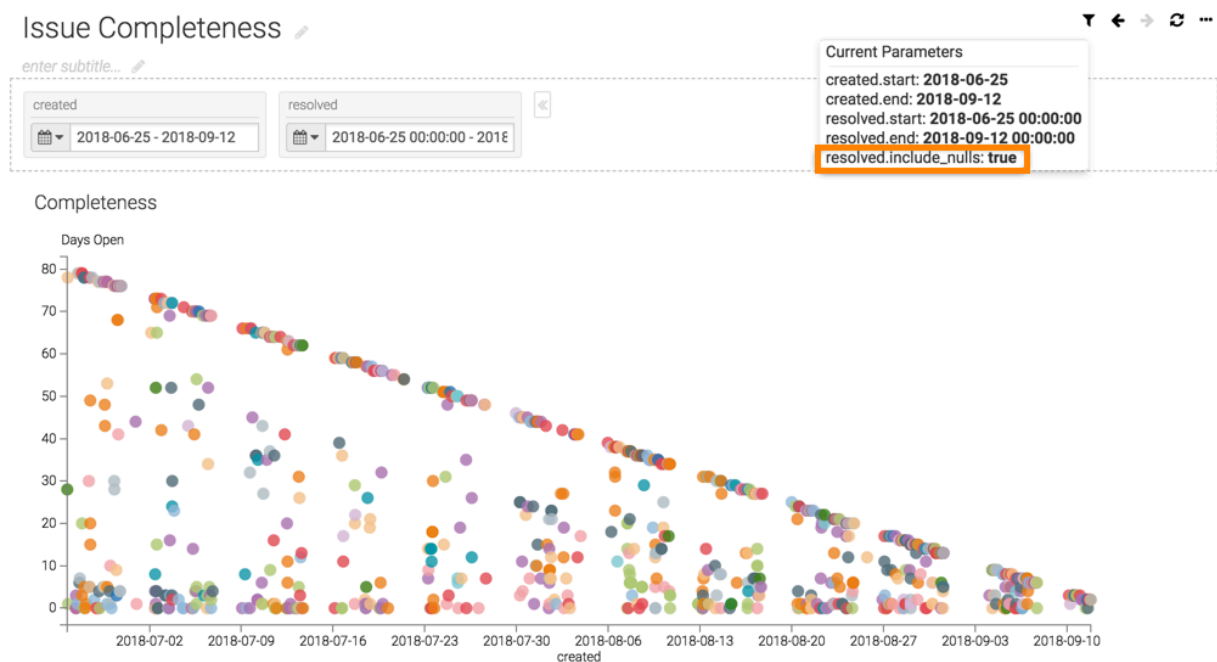
5. Close the drop-down menu without selecting the Include NULLs option.

The following image shows that the Current Parameters on the top right corner shows `resolved.include_nulls: false`, indicating that the Include NULLs option was not selected in the filter.



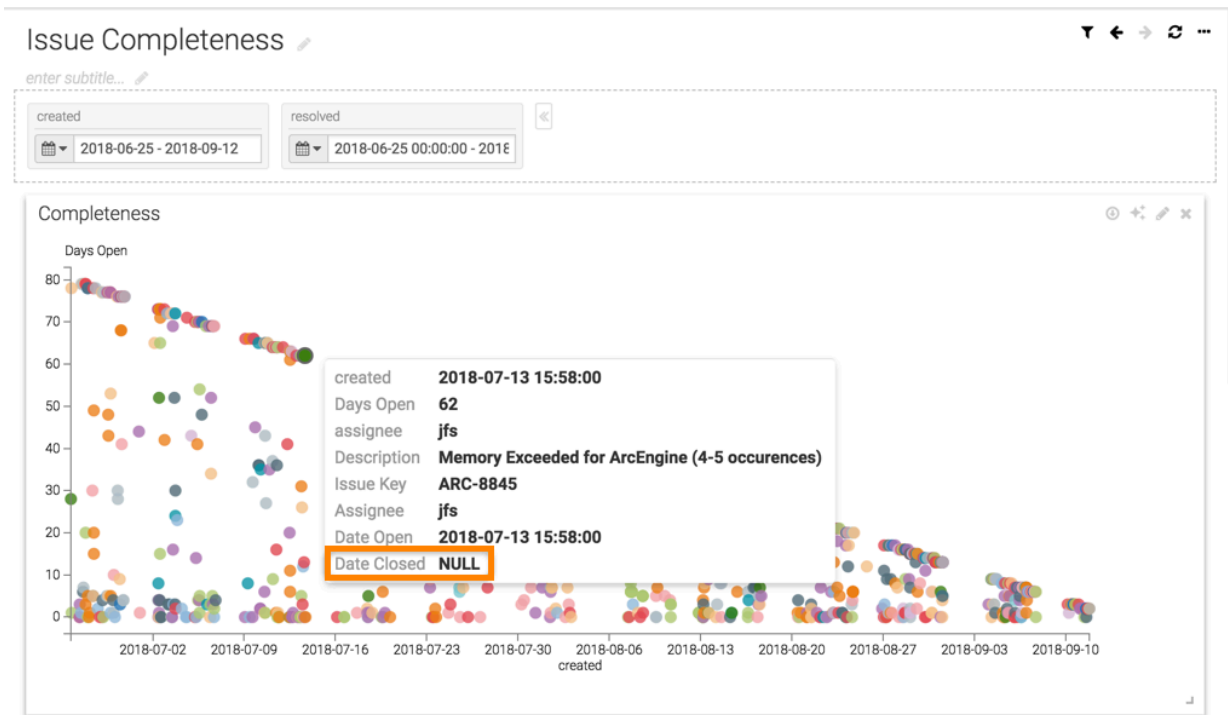
6. Click the Calendar icon on the resolved filter and select the Include NULLs option.

The following image shows that the Current Parameters modal in the top right corner shows `resolved.include_nulls: true`, indicating that the Include NULLs option was selected in the filter. The visual now includes the null values in the dataset.



7. To verify that the visual includes null values, hover over one of the selections to view the tooltip.

The following image shows that Date Closed has a 'NULL' value.



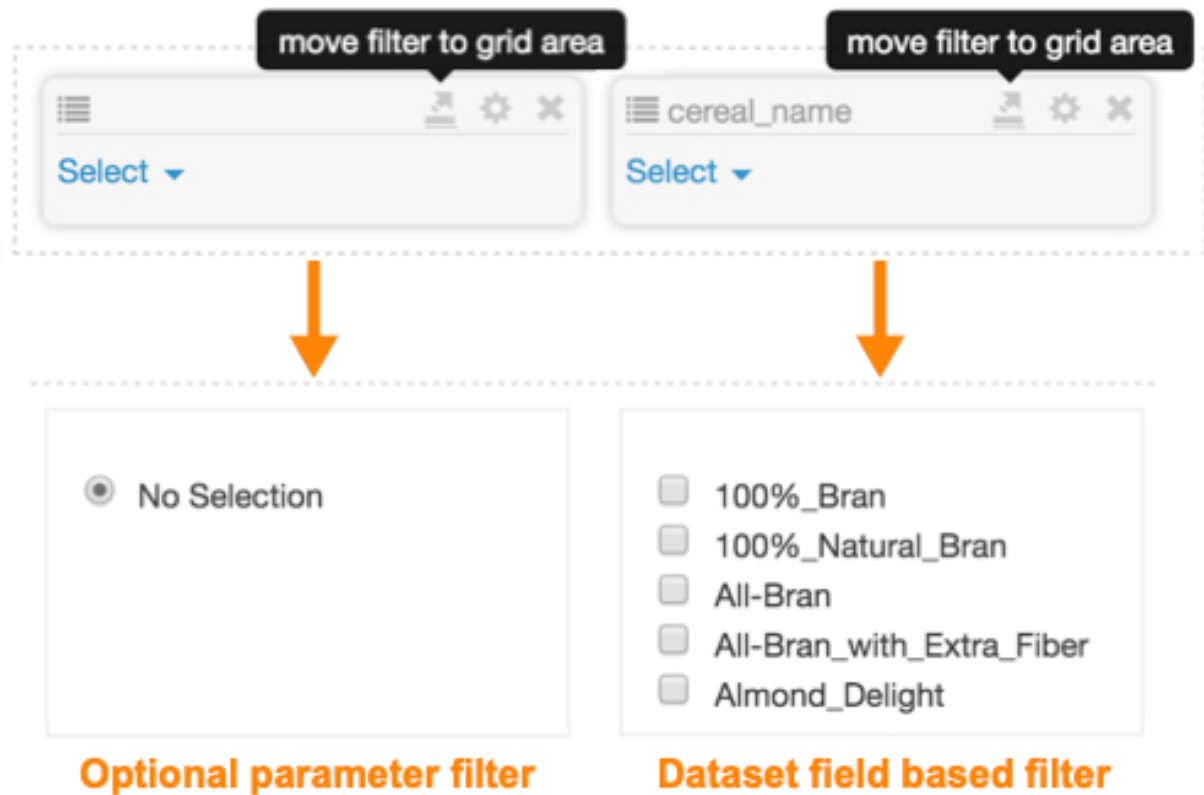
Moving filter widgets in dashboards

Cloudera Data Visualization displays dashboard filters across the top of the dashboard by default, but you can move them around as needed.

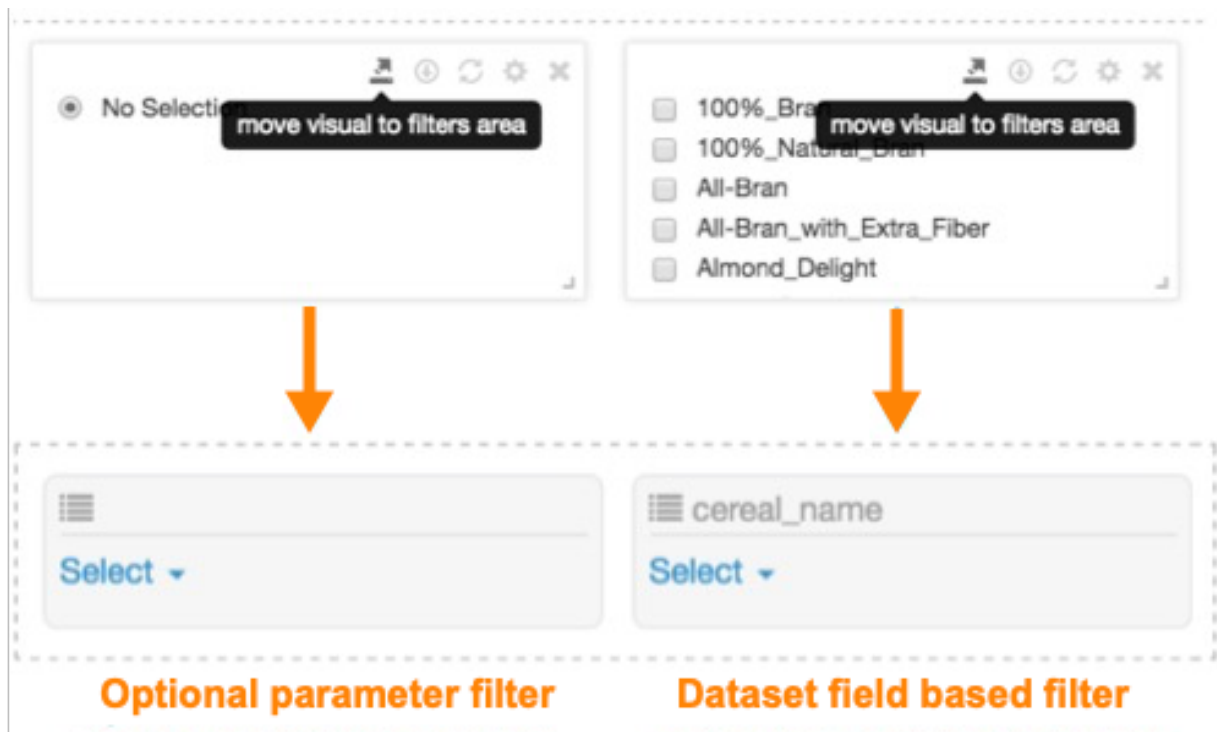
Moving dashboard filters from filter area into main grid area and back

1. Hover over the filter. When the configuration options appear, click the Move icon to move the filter to the grid area of the dashboard.

The filter is now available among the other visuals of the dashboard. The appearance of the filter has changed significantly. It is represented as a simple white rectangle without search options.



2. To return the filter to the filter area, hover over the filter. When the configuration options appear, click the Move icon to move the filter onto the filter area of the application.



Moving dashboard filters from the top to the left of the dashboard

1. On the right side of the Dashboard Designer, click Style Filters .

2. Select Align filters on the left.

Dashboard Designer

> STYLE

> Dashboard Basics

> Dashboard Title

> Dashboard Subtitle

< Filters

☒ Align filters on the left ⓘ

☐ Display labels inline ⓘ

☒ Display line separator ⓘ

☒ Display borders around filters


Font Family

default ▾


Font Size

- +


Text Color

 ▾


Selected Text Color

 ▾

Background Color

 ▾

Container Color

 ▾

> Visual Basics

> Visual Borders


> Visual Title


> Visual Subtitle


> Visual Axes and Labels


> Tooltip

DASH.


Visuals


Filters

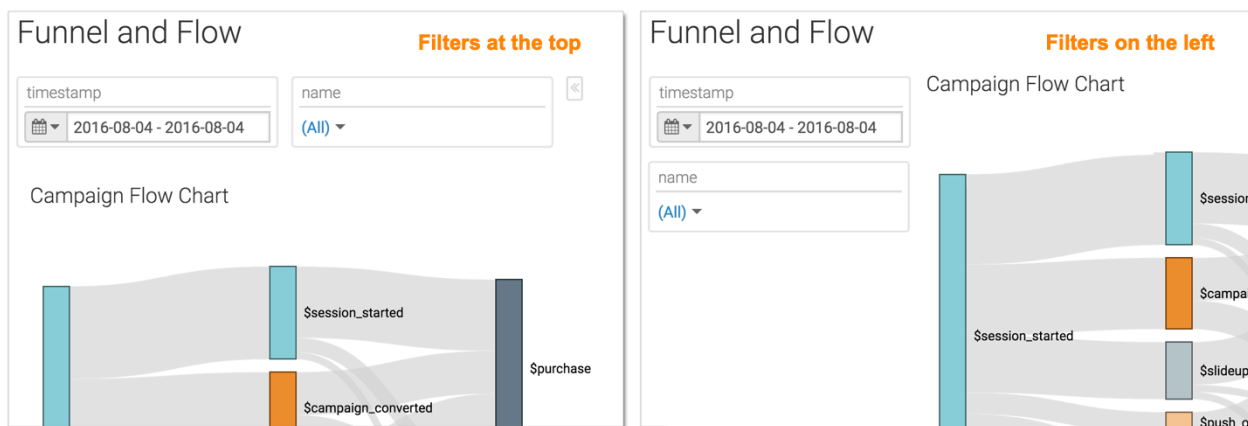

Settings


Style

To return the filters to the top, deselect this option.

Results

The visual on the left has filters across the top, and the visual on the right has filters on the left side.



Configuring ranges on dashboard filters

In Cloudera Data Visualization, you can easily configure real-time filters that enable you to navigate across visuals built on time series. Both historical data and ongoing data feeds are supported.

About this task

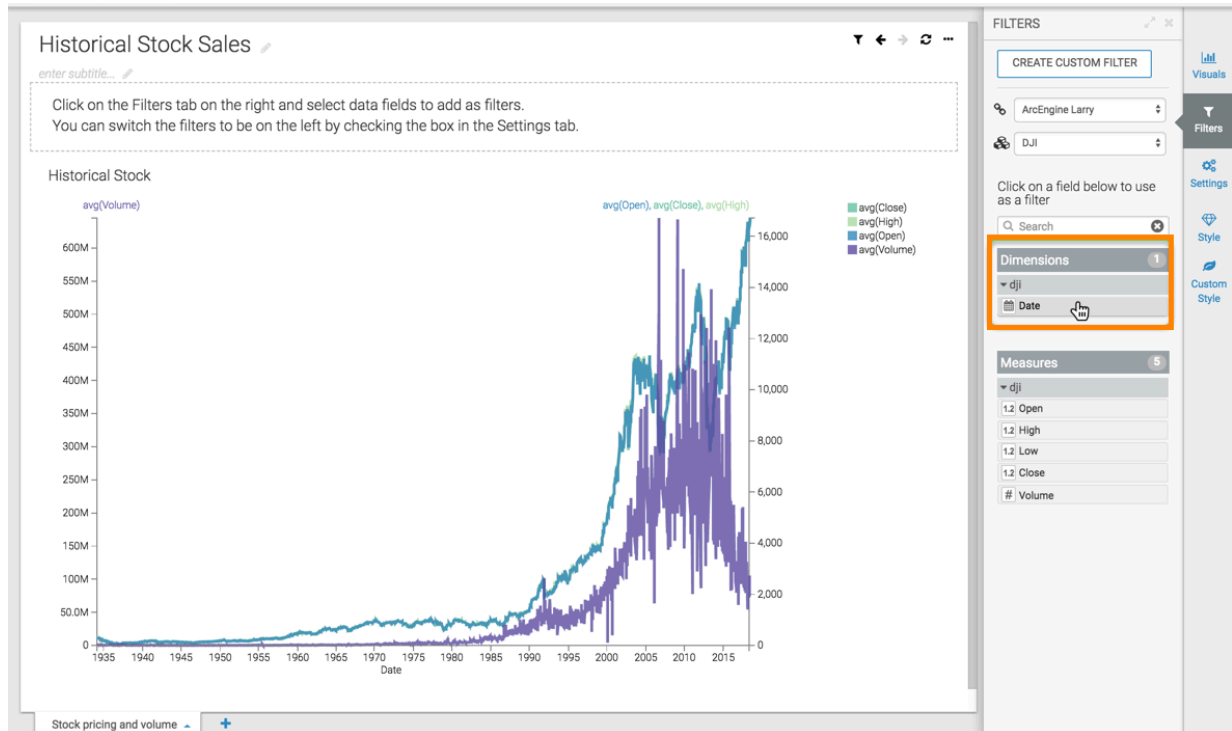
This example uses a dashboard with a line visual that plots stock prices and volume of sales. The filter added uses a set of previously defined dateranges, as described in *Managing custom dates*.

Follow these steps to add and configure a real-time filter on a dashboard:

Procedure

1. Open the dashboard in Edit mode.
2. Switch to the Filters tab on the Dashboard Designer side menu bar.

3. In the Filters menu, under Dimensions, click the Date field.



Data Visualization adds the filter Date to the filters section of the dashboard.

4. Hover over the upper right corner of the filter, and click the Gear icon to configure the filter.

The Settings modal window opens on the Basic tab.

Settings

Basic Style Ranges Scope Custom Style

Dataset: Global Information Security Threats

☐ Permit selection of time range

☐ Permit selection of NULL values

☐ Default to the latest available timestamp

☐ Save date range selections made in edit mode

Time Zone

UTC

Select "Permit selection of time zone" above to enable

Base Field

date

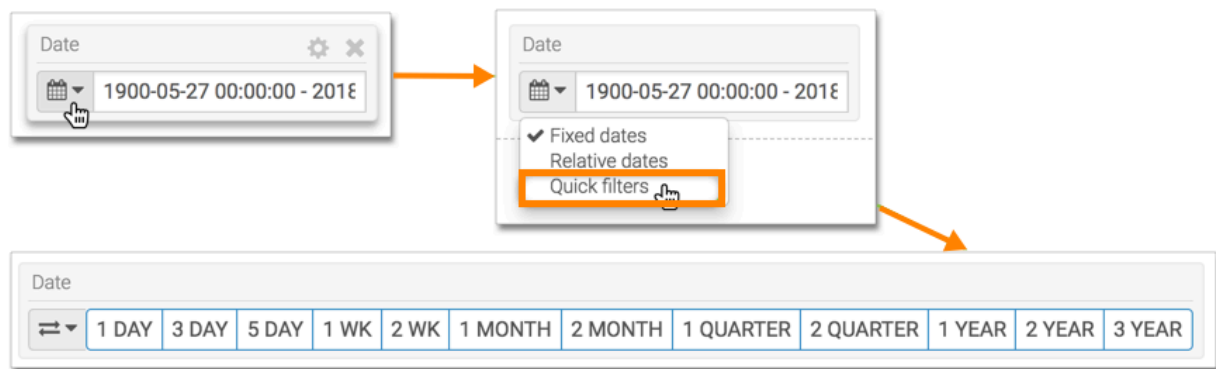
Title

CANCEL APPLY

5. Select the option Permit selection of time range.

6. Click the Ranges tab of the Settings modal window and select the appropriate range.
7. Click APPLY.
8. On the filter, click the Calendar icon and select the Quick filters option from the menu.

The appearance of the filter changes to show the set of custom date ranges.



For instructions on how to use the quick filter, see *Using quick filters*.

Related Information

[Managing custom dates](#)

[Using quick filters](#)

Configuring values of dashboard filters

In Cloudera Data Visualization, you must specify the values of a newly created dataset filter or a custom filter after adding it to a sheet in a dashboard.

About this task

Follow these steps to configure values of the filter:

Procedure

1. Click the Gear icon on the filter widget.
The Settings modal window opens on the Values tab.

- 2. Check the available options and update the settings as you need.

Figure 1: Dataset filter

Settings

Values

Data

Display Settings

Scope

Custom Style

Dataset: Cereals

☒ Save selections made in edit mode

☒ Permit selection of NULL values

From Base Field

Title

Output Parameter

Filter Fields

CANCEL

APPLY

Figure 2: Custom filter

Settings

Values

Data

Display Settings

Scope

Custom Style

☒ Save selections made in edit mode

☒ Permit selection of NULL values

Title

New Filter

Output Parameter

Specified values

| Value | Label | |
|-------------|-------|--|
| Add new row | | |

CANCEL

APPLY

- Dataset

This is available only in dataset-based filters. It shows the name of the dataset in which the filter exists. If you click the (dataset) icon, you can change the dataset in the Select a dataset to switch to modal.

- *Save selections made in edit mode*

You can use this setting to save text, numeric, or date range selections made in Edit mode. When unselected, filter values selected while editing the dashboard will not be the default in Edit mode.

- *Permit selection of NULL values*

You can use this setting to exclude null values for all filter types.

- *From Base Field*

This is available only in dataset-based filters. It specifies the filter-controlling field. You can change the base field to another field of the dataset.

- *Title*

This is the name of the filter as it appears in the application at run-time. Keep it short and descriptive providing information on the filter's function.

- *Output Parameter*

This is the parameter sent to the target visual to determine which field to display.

In cases of optional or variable parameters, output parameter is used on the shelves of the target visual, such as <<[dim], or <<[agg], or in an expression that contains the variable.

When used in filters that are based on existing fields, the output parameter ensures field name match across datasets. For example, a filter that is based on the state field in the US State Populations Over Time dataset must have the output parameter stname to control visuals in the US County Population dataset.

- *Filter Fields*

This is available only in dataset-based filters. It specifies the base fields of another field, based on which options of the current filter can be filtered. You can enter multiple base fields separated by a comma.

- *Specified values*

This is available only in custom filter widgets. It specifies the distinct values of the output parameter on which the filter acts, and labels them.

For example, a <<mes>> output parameter can have the following specified values:

- Value: gdp_per_capita, Label: GDP per Capita
- Value: life_expectancy, Label: Life Expectancy

3. Click APPLY to save the configuration settings.

Customizing output parameters

In Cloudera Data Visualization, application controls can use custom output parameters. You can apply a filter defined in one dataset to control visual presentation based on information in another dataset.

About this task

In most cases, there is a mismatch between the field names of the driver and target datasets. You can correctly specify this mapping by setting the value of the filter to the appropriate field in the target dataset.

The following steps show you how to configure a filter based on the US Populations Over Time dataset to control the display in a visual based on the US County Population dataset.

Procedure

1. Open an existing or new application in Edit mode.
2. Ensure that it has appropriate visuals from both datasets. If not, click the Visuals tab on the left navigation and add the visuals to the application.

3. Click the Filters tab, and select the US State Populations Over Time dataset.
4. Under Dimensions, click the field state to add the filter to the application.
5. Hover over a filter that is already added to the application until the controls appear on the top right and click the Gear icon.



The Settings modal window appears open on the Values tab.

6. Set the following values:
 - Set Title to States.
 - Set Output Parameter to sname.

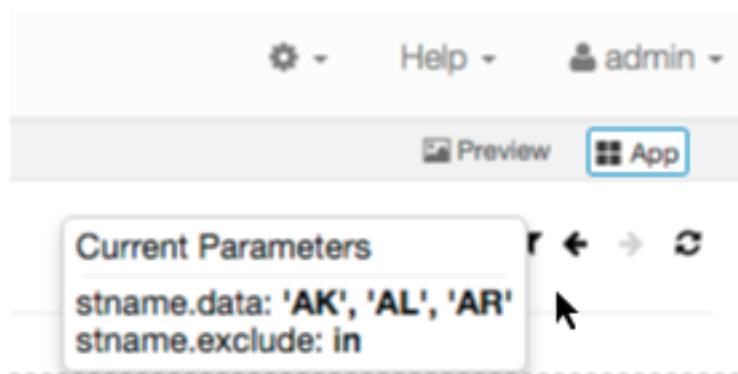


Note: From Base Field has the value state and it cannot be changed.

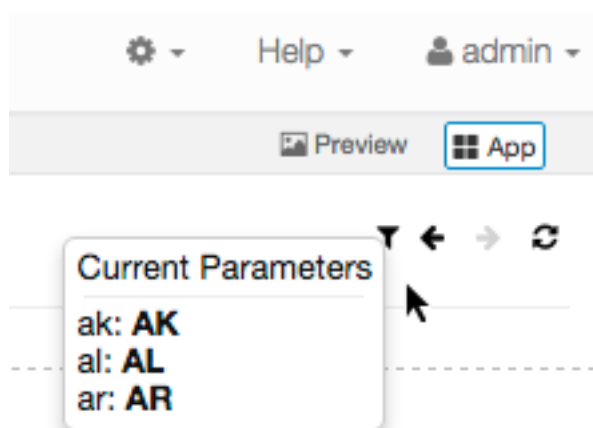
7. Click APPLY.
8. In the state filter, click Select and chose the following:
 - AK
 - AL
 - AR

9. In the top right corner of the application, hover over the Filter icon control element.

This reports the current filtering parameters, correctly naming the output parameter field `sname`, and correctly identifying the filtering conditions set earlier.



If the option to Emit distinct parameters for each item selected is selected (under Display Settings tab), the filter reports the items as distinct key/value pairs. By default, the label for each key is derived from its value. If the labels are specified, such as in the case of optional parameters, they appear instead.



Setting parameters through URL

In Cloudera Data Visualization, when you set parameters through the URL, you can dynamically add selection options without changing the saved values of the app. It is also easy to share these settings by including them in emails, documents, and so on.

About this task



Important: URL strings must use single quotes (be a valid JSON array), and usual character limitations on URL addresses apply.

The basic syntax for URL formatting:

```
http://baseurl/arc/apps/app/id?config.output={setting: value}
```

baseurl

The IP address of the site, such as 27.0.0.1:8000, or sf.mycompany.org.

id

Unique number of the dashboard or the visual.

output

The output of the parameter or the picklist.

setting

The available option is VALUE.

value

An array of value-label pairs in the format `[["value1","label1"],["value2","label2"],["value3","label3"], ...]`.

The following steps demonstrate how to use parameters through URLs:

Procedure

- 1. On the Values tab of the Settings modal window, specify the Title and Output Parameter.
In this example, test and result are used, respectively.
- 2. You can specify one or more Value:Label pairs.
In this example, result1:1 is used.

Settings ✕

ValuesDataDisplay SettingsScopeCustom Style

☒ Save selections made in edit mode

☒ Permit selection of NULL values

Title

test

Output Parameter

result

Specified values

| Value | Label | |
|-----------------------------|-------|--|
| result1 | 1 | |
| Add new row | | |

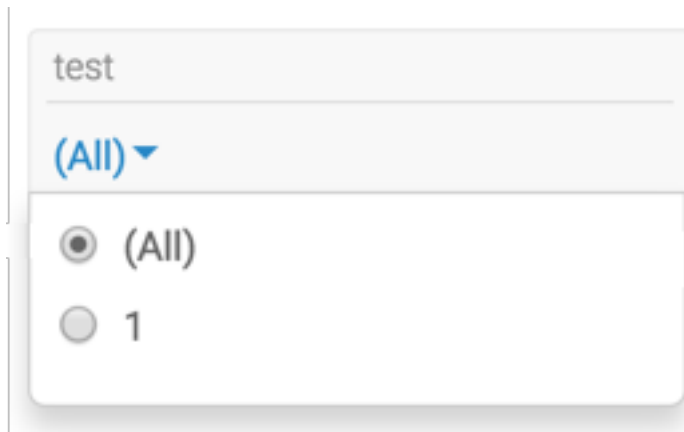
CANCEL

APPLY

- 3. Click APPLY.
- 4. In the dashboard, check the possible options for the parameter.

5. In the test parameter, click the Down Arrow icon.

There are two options: (All) and 1.



6. Select 1 and hover the pointer over the Filter icon at the top right of the dashboard.

The Current Parameters are set to result: result1 and result.alias: 1.



7. Save the dashboard.
8. Switch to View mode.
9. Copy the URL.

In this example, it is `http://127.0.0.1:8000/arc/apps/app/38`.

10. In another browser window, paste the value saved in the previous step, add the code specific to setting parameters through URL, and click enter.

In this example, two more pairs: `result2:2`, and `result3:3` are added. The new code is in bold font, starting with '?'.
 In this example, two more pairs: `result2:2`, and `result3:3` are added. The new code is in bold font, starting with '?'.

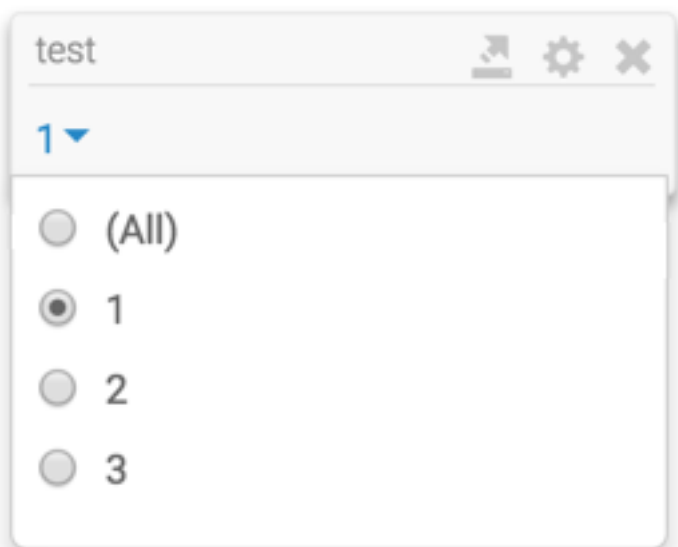
```
http://127.0.0.1:8000/arc/apps/app/38?config.result={values:
[["result2","2"],["result3","3"]]}
```

11. In the dashboard, check the possible options for the parameter.

Options 2 and 3 appear in the selection list.

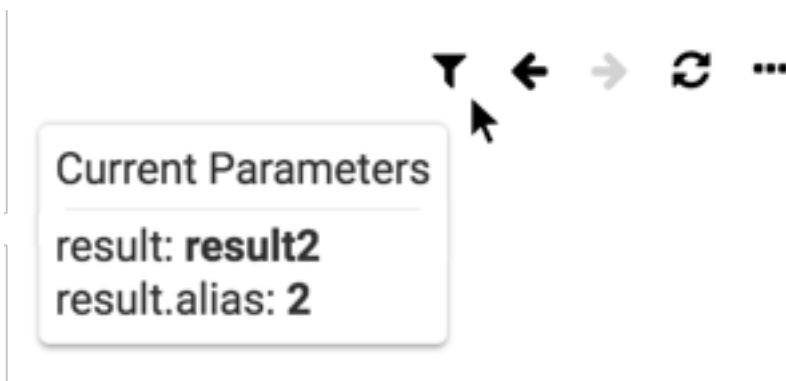
12. In the test parameter, click Select .

There are two additional options: 2 and 3.



13. Select 2 and hover the pointer over the Filter icon at the top right of the dashboard.

Current Parameters are set to result: result2 and result.alias: 2.



Configuring data options for dashboard filters

Cloudera Data Visualization allows you to configure data options of a newly created field-based or custom filter in a dashboard.

About this task

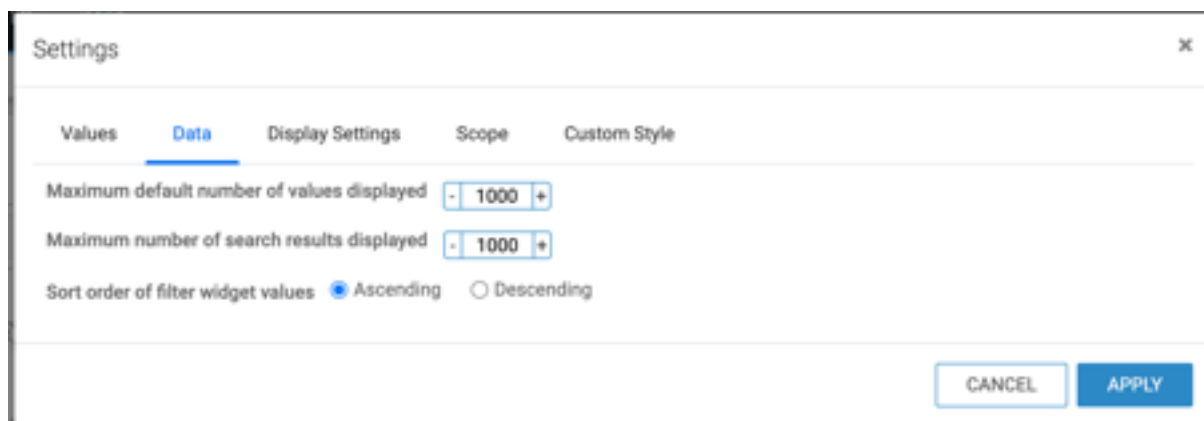
Follow these steps to configure data options of a filter:

Procedure

1. Click the Gear icon on the filter widget.

2. In the Settings modal window that appears, click the Data tab.

Notice that Filter Options Sort Order has two options for field-based filters and three options for custom filters.

The screenshot shows a 'Settings' modal window with a close button (X) in the top right corner. It has five tabs: 'Values', 'Data' (which is selected and highlighted with a blue underline), 'Display Settings', 'Scope', and 'Custom Style'. Under the 'Data' tab, there are three settings: 'Maximum default number of values displayed' with a spinner set to 1000, 'Maximum number of search results displayed' with a spinner set to 1000, and 'Sort order of filter widget values' with two radio buttons, 'Ascending' (which is selected) and 'Descending'. At the bottom right of the modal are two buttons: 'CANCEL' and 'APPLY'.

3. Select one of the following options:

Changing number of initial options in dashboard filters

In a dashboard filter, you can control the number of initial options that appear in the dashboard filter at loading time. This limits the display of options for datasets with a very large variability.

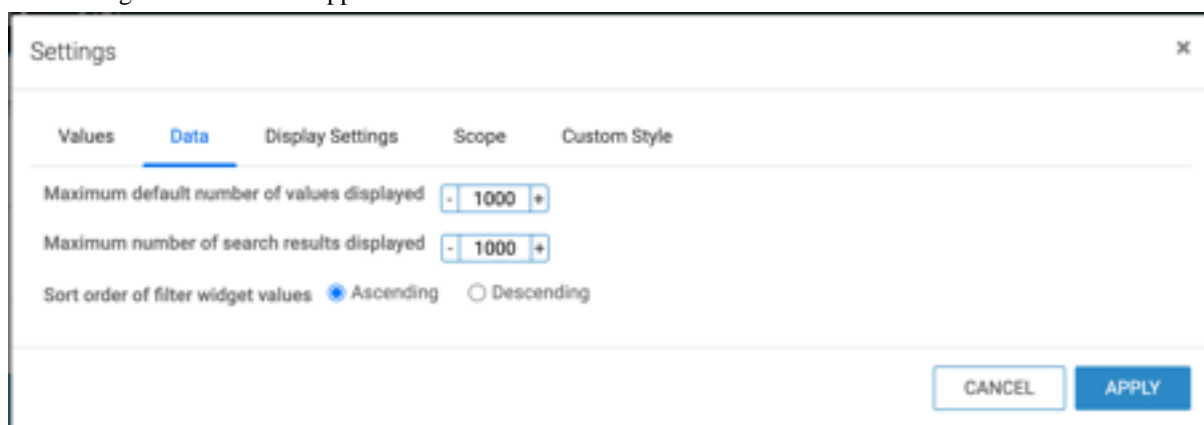
About this task

To change the number of options that appear in the dashboard filter at loading time, and before you enter a search criteria, follow these steps:

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.

The Settings modal window appears.

This screenshot is identical to the one above, showing the 'Settings' modal window with the 'Data' tab selected. It displays the same settings: 'Maximum default number of values displayed' at 1000, 'Maximum number of search results displayed' at 1000, and 'Sort order of filter widget values' set to 'Ascending'. The 'CANCEL' and 'APPLY' buttons are at the bottom right.

3. In the Settings modal window, click Data.
4. Enter a value in the Maximum default number of values displayed. The default is 1000.
5. Click APPLY.

In the following example, you can compare the difference in number of values displayed when we change the Maximum default number of values displayed setting from 2 to 10. Notice that the search text box is empty. The number of items displayed depends on the setting in this option, not on the search criteria.

Changing number of options in search output of dashboard filters

In a dashboard filter, you can change the maximum number of options that appear during search. This limits the display of options for datasets with a very large variability.

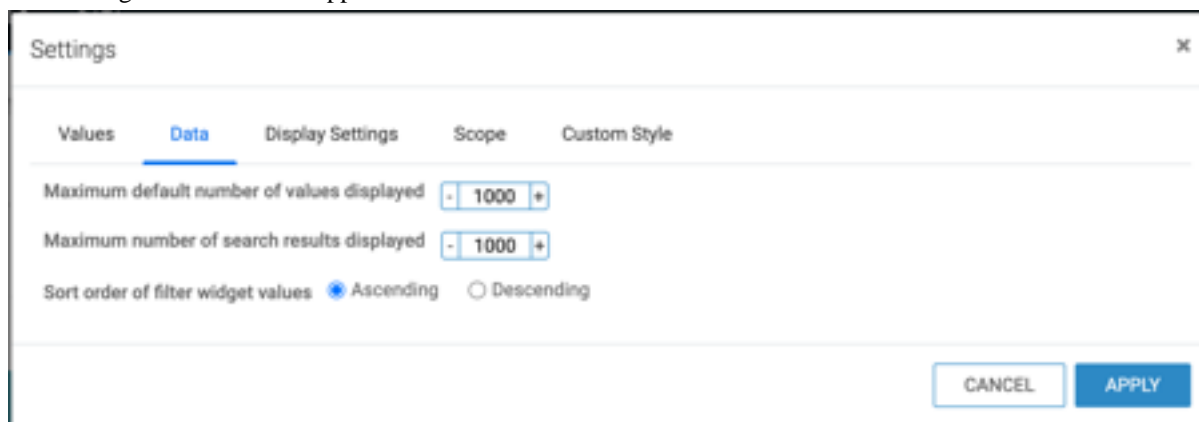
About this task

To change the number of items that are displayed when you search for options in the filter, follow these steps:

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.

The Settings modal window appears.



3. In the Settings modal window, click Data.
4. Enter a value in the Maximum number of search results displayed. The default is 1000.
5. Click APPLY.

Disabling incremental queries in filters

In the Data menu of a newly created field-based or custom filter in a dashboard, Cloudera Data Visualization enables you to disable incremental queries at the level of the dashboard filter .

About this task

Incremental queries return preliminary results quicker and paints the visuals on the dashboard, and then adjusts the level of detail as more results are incorporated into the calculations. Disabling this feature delays the painting of the visuals until all results are in.

Follow these steps to disable incremental queries:

Procedure

1. Click the Gear icon on the filter widget
2. In the Settings modal window, switch to the Data tab, and select the Disable incremental queries, overriding field-based-level setting option

☒ Disable incremental queries, overriding dataset level setting

Configuring sort order in filter values

Cloudera Data Visualization enables you to select the sort order of filter values.

About this task

There are different sort order options available on [field-based filters](#) and [custom filters](#).

Follow these steps to select the sort order of the filter values.

Procedure

1. Click the Gear icon on the filter widget.
2. In the Settings modal window, switch to the Data tab, and select the Filter Options Sort Order option.

Sort Order of Filter Widget Values on Field-based Filters

For a field-based filter, there are two sort options available under the Filter Options Sort Order setting:

- Ascending
- Descending

By default, filter widget values are displayed in ascending order (image on the left). In this example, to see the most recent population of Australia first, select the Descending option (image on the right).

Filter Options Sort Order ☒ Ascending ☐ Descending

By default, filter widget values are displayed in ascending order. In our example, to see the most recent population of Australia first, select the Descending option.

Sort Order of Filter Widget Values on Custom Filters

For a custom filter, there are three sort options available under the Filter Options Sort Order setting:

- Ascending
- Descending
- Default

Filter Options Sort Order ☐ Ascending ☐ Descending ☒ Default

The default setting of the sort order in a custom filter is Default. In the following image, notice that the default sort order in the filter widget is the same as the labels of the custom filter added in the Values tab: Country, Year, Region, and GDP.

You can select the Ascending option to change the sort order to country, GDP, Region, and Year, or select the Descending option to change the sort order to Year, Region, GDP, and Country.

Configuring display settings for dashboard filters

Cloudera Data Visualization enables you to specify display settings of a custom filter in the dashboard.

About this task

Follow these steps to configure display settings in a filter:

Procedure

1. Click the Gear icon on the filter widget
2. In the Settings modal window, click the Display Settings tab to examine the available options:

The screenshot shows the 'Settings' modal window with the 'Display Settings' tab selected. The modal has a title bar with a close button (X) and a tabbed interface with four tabs: 'Values', 'Data', 'Display Settings' (active), 'Scope', and 'Custom Style'. Under the 'Display Settings' tab, there are several configuration options:

- ☐ Display a textbox parameter ⓘ
- Width of this filter (in px):
- ☐ Allow the user to add values to the filter
- Maximum default number of values displayed: (with minus and plus buttons)
- Maximum number of search results displayed: (with minus and plus buttons)
- ☐ Allow only one item to be selected at a time
 - ☐ Select values from a dropdown menu ⓘ
 - ☒ Include an option for 'All'
- ☐ Emit distinct parameters for each selected item
- ☐ Hide filter if no input data ⓘ
- ☒ Remember previous selections
- ☐ Apply all changes to a multi-select list at the same time ⓘ

At the bottom right of the modal are two buttons: 'CANCEL' and 'APPLY'.

Displaying a textbox parameter

This option allows you to specify a parameter filter text box in a dashboard filter.

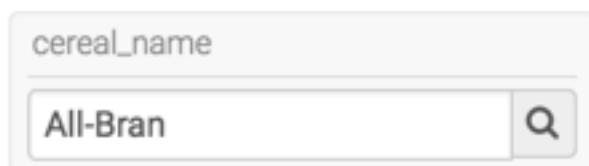
About this task

If checked, this option supersedes all other values included in the Specified values option, on the Values tab of the Settings modal window. Instead, you can enter a parameter value you want to use at runtime, or search for data that matches certain values.. It creates a simple search box filter.

Procedure

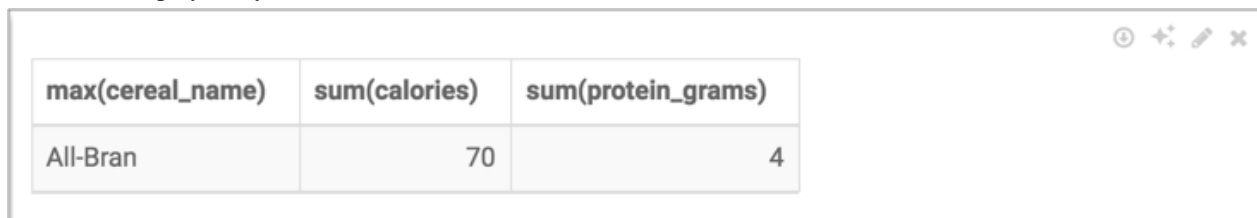
1. Open an existing or new dashboard in Edit mode and add a new filter
2. Hover over the filter you added until the controls appear on the top right.
3. Click the Gear icon.
The Settings modal window appears.
4. Check the Display a text box parameter option on the Display Settings tab.
5. Click APPLY.
A parameter filter textbox appears.

6. Enter a value in the textbox.
In this example All-Bran is added.



Results

The visual displays only All-Bran details.



| max(cereal_name) | sum(calories) | sum(protein_grams) |
|------------------|---------------|--------------------|
| All-Bran | 70 | 4 |

Changing the width of the filter text box

This option allows you to change the width of the filter text box in a dashboard filter.

Procedure

1. Open an existing or new dashboard in Edit mode and add a new filter
2. Hover over the filter you added until the controls appear on the top right.
3. Click the Gear icon.
The Settings modal window appears.
4. Click Display Settings and enter a value in the Width (in filter mode) box to change the width of the filter box.
5. Click APPLY.

Entering values manually

This option allows you to change the display settings of a custom filter in a dashboard. You can select multiple values in bulk, instead of selecting them individually from a menu. For instance, you can copy multiple values from a table and paste them in a text box.

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.
The Settings modal window appears.
3. Click the Display Settings tab and check the Allow the user to add values to the filter option.

4. Click APPLY.

The Enter values link appears.

The screenshot shows a filter configuration interface for the 'cereal_name' field. At the top, there is a text input field containing 'cereal_name' and a clear button (X). Below this, a summary bar indicates '3 Selected' with a dropdown arrow. A search bar is present with the placeholder text 'Search' and a magnifying glass icon. Below the search bar, it says '77 displayed' and 'Show Selected'. A link labeled 'Enter values' is highlighted with an orange rectangular box. Below this link, there are two checkboxes: an unchecked one and a checked one labeled 'Exclude Selected'. A list of cereal names follows, each with a checkbox. The first three are checked: '100%_Bran', '100%_Natural_Bran', and 'All-Bran'. The remaining items are unchecked: 'All-Bran_with_Extra_Fiber', 'Almond_Delight', 'Apple_Cinnamon_Cheerios', 'Apple_Jacks', 'Basic_4', 'Bran_Chex', 'Bran_Flakes', and 'Cap'n'Crunch'.

| Checkbox | Cereal Name |
|-------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> | 100%_Bran |
| <input checked="" type="checkbox"/> | 100%_Natural_Bran |
| <input checked="" type="checkbox"/> | All-Bran |
| <input type="checkbox"/> | All-Bran_with_Extra_Fiber |
| <input type="checkbox"/> | Almond_Delight |
| <input type="checkbox"/> | Apple_Cinnamon_Cheerios |
| <input type="checkbox"/> | Apple_Jacks |
| <input type="checkbox"/> | Basic_4 |
| <input type="checkbox"/> | Bran_Chex |
| <input type="checkbox"/> | Bran_Flakes |
| <input type="checkbox"/> | Cap'n'Crunch |

5. Click Enter Values.

The Set Filter Values modal appears.

Set Filter Values

Enter values below:

100%_Bran
Almond_Delight
Apple_Jacks
Basic_4|

CANCEL

SET VALUES 

6. Enter values manually in the text box.
7. Click SET VALUES.

Results

All four values that were entered manually in the text box are selected.

cereal_name

4 Selected

Search

77 displayed Show Selected
Enter values

☐ Exclude Selected

- ☒ 100%_Bran
- ☐ 100%_Natural_Bran
- ☐ All-Bran
- ☐ All-Bran_with_Extra_Fiber
- ☒ Almond_Delight
- ☐ Apple_Cinnamon_Cheerios
- ☒ Apple_Jacks
- ☒ Basic_4
- ☐ Bran_Chex
- ☐ Bran_Flakes

Using single value mode with radio buttons

This option allows you to select a single value from the menu in a dashboard filter.

About this task

This mode of dashboard controls uses radio button choices to let the user select a single value.

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.
The Settings modal window appears.
3. Click Display Settings tab and check the Allow only one item to be selected at a time option.
4. Click APPLY.

Selecting all values

This option allows you to ensure that all data may be examined at once in a dashboard filter.

About this task

For example, in single select mode on a cereal name filter, you can only look at details of one cereal. It may be interesting to look at information of all cereals at the same time.

Follow these steps to select all options at the same time:

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.
The Settings modal window appears.
3. Click the Display Settings tab, then check the Allow only one item to be selected at a time option and the Include an option for '(All)' sub-option.
4. Click APPLY.

Results

The All option appears in the filter box.

Using single value, with dropdown menu

You can use this option to select a single value from a dropdown menu in a dashboard filter.

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.
The Settings modal window appears.
3. Click the Display Settings tab, then check the Allow only one item to be selected at a time option and the Select values from a dropdown menu sub-option.
4. Click APPLY.

Displaying distinct parameters

You can use this option to ensure that parameters show a distinct 'key':'value' pair in a dashboard filter.

About this task

This option ensures that each selection is processed by the filter as a distinct 'key':'value' pair. By default, the selections are passed as a 'key':'list of values'.

This option enables a single filter to be potentially used for multiple purposes.

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.

2. Click the Gear icon.
The Settings modal window appears.
3. Click the Display Settings tab and check the Emit distinct parameters for each item selected option.
4. Click APPLY.

Hiding filters

This option allows you to hide the custom filter in a dashboard.

About this task

If no viable selection data exists, this option hides the filter in View mode.

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.
The Settings modal window appears.
3. Click the Display Settings tab and check the Hide filter if no input data option.
4. Click APPLY.

Remembering previous selections on dashboard filters when searching

This option allows you to view previous selections when searching for a new value in a dashboard filter.

About this task

This option is on by default.

The following examples show you how to enable or disable the option and how the filter behaves at run time both with and without the option.

Enabling 'Remember previous selections when searching'

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon. The Settings modal window appears.
3. Click the Display Settings tab and select the Remember previous selections option. By default, it is turned on.
4. Click APPLY.
5. Save the changes to the dashboard.

Using Filters with 'Remember previous selections when searching'

Compare this with the next section, *Using Filters Without 'Remember Previous Selection'*. For this option, a dashboard based on Cereals dataset and a dashboard filter based on the dataset field cereal_name are used.

1. Select 'All-Bran' and 'Almond-Delight' from the dropdown menu.
2. Enter Basic_4 in the search box, and click the Search icon to find the value.
3. Click Basic_4 to confirm the selection.
4. Click the Show Selected option.

Using Filters Without 'Remember previous selections when searching'

When this option is disabled, you are unable to see the previous selections. In this example the same dashboard and filter on cereal_name are used as in the *Using Filters with 'Remember Previous Selection'* section, but with the option disabled. To use the filter without the option, follow these steps:

1. Select 'All-Bran' and 'Almond-Delight' from the dropdown menu.
2. Enter Basic_4 in the search box, and click the Search icon to find the value.
3. Click Basic_4 to confirm the selection.
4. Click Show Selected.

Note that the top bar and the list at the bottom shows only the last selection, Basic_4.

Using multi-select mode

This option allows you to select multiple options in the dropdown menu in a dashboard filter.

About this task

This option allows you to select multiple options in the dropdown, then apply all changes to the filter together by clicking outside the table. This collapses the list. For multi-select list, this is a recommended option as it minimizes the query refresh time.

This is the default mode for application controls.

Procedure

1. Open a dashboard in Edit mode and hover over a filter that is already added to the dashboard until the controls appear on the top right.
2. Click the Gear icon.
The Settings modal window appears.
3. Click the Display Settings tab and select Apply all changes to a multi-select list at the same time.
4. Click APPLY.
5. You can edit the filter widget in the following ways:
 - In the state filter, click the Down Arrow icon to open the menu of available choices. The application control expands.
 - [Optional] In the Search box, enter the search term and click the Search icon.
 - [Optional] Click Show Selected, immediately under the search bar, to display the sub-list of selected values. This options toggles with Show All.
 - [Optional] Click the unlabeled check box at the top left to include all selections.
 - [Optional] Click the Exclude Selected check box at the top right to exclude the specified selections.
6. In the state filter, click Select.
The application control expands, in multi-select mode.

Configuring dashboard filter scope

In Cloudera Data Visualization, you must specify the scope of a newly created custom filter after adding it to a sheet in a dashboard.

Procedure

1. Click the Gear icon.
The Settings modal window appears.
2. Select the Scope tab.

3. Select the desired filter visibility.

Settings

Values Data Display Settings Scope Custom Style

Set Filter Visibility to: ☒ Sheet ☐ App

Scope of parameters sent by this filter:

☒ All Datasets
☐ Current Dataset
☐ Explicit

All Datasets: This filter applies to all visuals in this dashboard.
Current Dataset: This filter applies to only those visuals in this dashboard that use the same dataset.
Explicit: Automatic filtering is turned off.

CANCEL APPLY



Note:

If App scope is selected all apps that contain the dashboard and all sheets in the dashboard also inherit the selections and behavior of this filter. When you select this option in Edit mode, the filter widget on the dashboard displays a gray triangle on the top left corner of the filter. Hover over the triangle to view the tooltip.

4. Select the desired scope of the filter.

Settings

Values Data Display Settings Scope Custom Style

Set Filter Visibility to: ☒ Sheet ☐ App

Scope of parameters sent by this filter:

☒ All Datasets
☐ Current Dataset
☐ Explicit

All Datasets: This filter applies to all visuals in this dashboard.
Current Dataset: This filter applies to only those visuals in this dashboard that use the same dataset.
Explicit: Automatic filtering is turned off.

CANCEL APPLY

All Datasets

The filter applies to all visuals in this dashboard.

Current Datasets

This filter applies to only those visuals in this dashboard that use the same dataset.

Explicit

Automatic filtering is turned off.

5. Click APPLY.

Configuring custom styles for dashboard filters

Cloudera Data Visualization enables you to apply custom styles to a newly created filter in a dashboard.

About this task

When applying custom styles, there are several approaches: setting custom styles, setting custom styles at the dashboard level, setting styles for a visual, see *Adding custom styles to visuals* and *Customizing style*. Or setting styles for an application filter, described here.



Note: Prerequisite: By default, the Custom Styling option is turned off. It can be turned on by a user with administrative privileges; see *Adding custom styles to visuals*.

Follow these steps to configure custom styles for dashboard filters:

Procedure

1. Click the Gear icon on the filter widget.

2. In the Settings modal window, click the Custom Style tab, and examine the available options.

- *Configuring custom style using CSS code*
- *Adding included styles to dashboards*

Settings

Values

Data

Display Settings

Scope

Custom Style

Enter CSS classes for the filter ⓘ

Included Styles

+ ADD STYLE

Inline CSS

☒ Autocomplete on

CANCEL

APPLY

Related Information

[Adding custom styles to visuals](#)

[Configuring custom style using CSS code](#)

[Adding included styles to dashboards](#)

Configuring custom style using CSS code

About this task

To configure a custom style on a dashboard by entering a custom CSS code, follow these steps:

Procedure

1. Open an existing or new application in Edit mode.
2. Ensure that it has an application filter. Hover over a filter, until the controls appear on the top right.
3. Click the Gear icon.

The Settings modal window appears.

The screenshot shows the 'Settings' modal window with the 'Custom Style' tab selected. The window has a title bar with 'Settings' and a close button. Below the title bar are tabs: 'Values', 'Data', 'Display Settings', 'Scope', and 'Custom Style'. The 'Custom Style' tab is active. It contains a text input field for 'Enter CSS classes for the filter' with a placeholder text: 'When using multiple classes, separate them by spaces. These classes add to the existing CSS classes of the filter's container.' Below this is a section for 'Included Styles' with a '+ ADD STYLE' button. At the bottom, there is a section for 'Enter inline CSS below' with a checkbox for 'Autocomplete on' (checked) and a large text area for entering CSS rules. At the bottom right of the modal are 'CANCEL' and 'APPLY' buttons.

4. In the Settings modal window, click the Custom Styling tab.
5. Set CSS class for visual to list-larger-font.
6. Enter the following code in the Enter inline CSS rules here to text box:

```
.list-larger-font .picklist-list li {
    font-size:14px;
    padding:3px;
    border-bottom:dotted 1px #ddd;
}
```

7. Click APPLY.
8. Click SAVE to save the application.