

Alibaba Cloud

DataV
Manage Widgets

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Document conventions

Style	Description	Example
 Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
 Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
 Note	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings > Network > Set network type .
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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1.Widget overview

Widgets supported by DataV include:

- Charts
- Maps
- Media
- Text
- Networks
- Material
- Interact
- More widgets

Charts

Click **Charts** to display all basic charts, including Bar, Line, Pie, Scatter, and more.

□

Maps

Click **Maps** to display all map types, including 3D Globe (2018), Basic Flat Map, Flat Map with 3D Effects, and Globe.

Media

Click **Media** to display all media widgets, including images and videos.

□

Text

Click **Text** to display all text widgets, including Carousel List II, Table, Title, Marquee, Text Box, and more.

□

Networks

Click **Networks** to display Network widgets.

□

Material

Click **Material** to display Boarder, Customized Background, Decoration, and Logo Wall.

□

Interact

Click **Interact** to display all widgets, including Full Screen Switch, iframe, Timeline, and Tab.

□

More widgets

You can subscribe to third party widgets by clicking **More Widgets** in the toolbar.

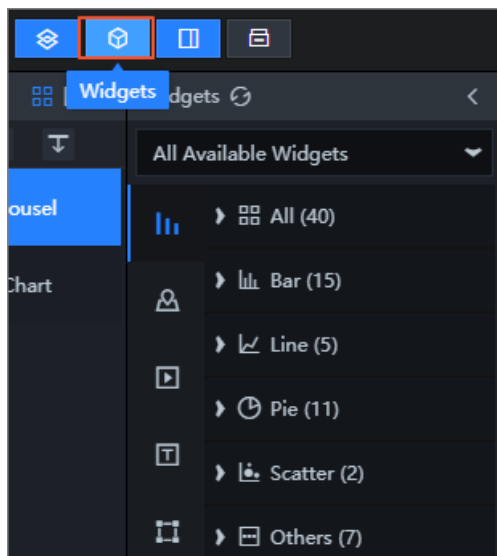
□

2. Search for a widget

This topic describes how to search for a widget in DataV. You can quickly find the required widget to improve efficiency of project development.

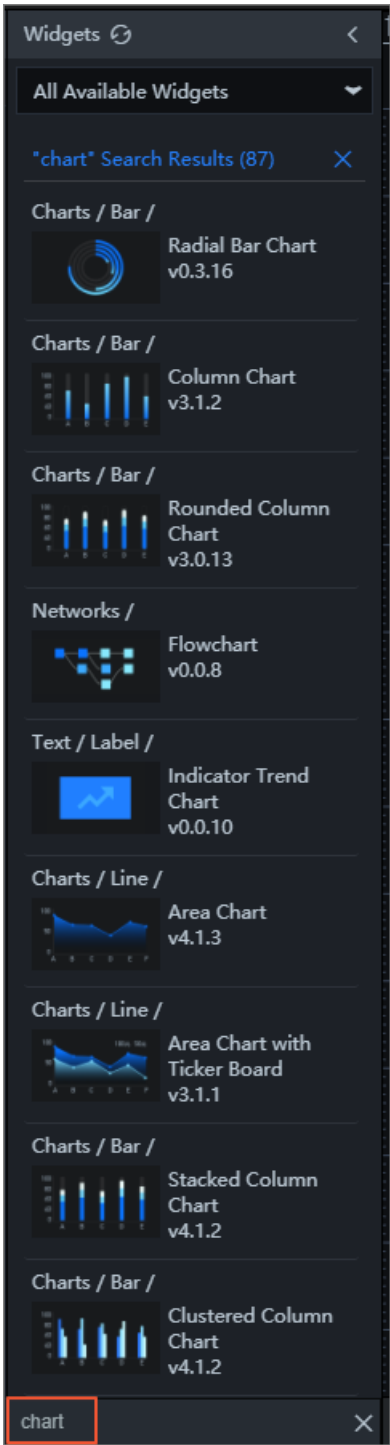
Procedure

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click the **Widgets** icon to show the **Widgets** pane.



4. In the lower-part of the **Widgets** pane, enter a widget name keyword in the **Search for widgets** box.

Widgets that match the keyword automatically appear. Fuzzy match is supported.

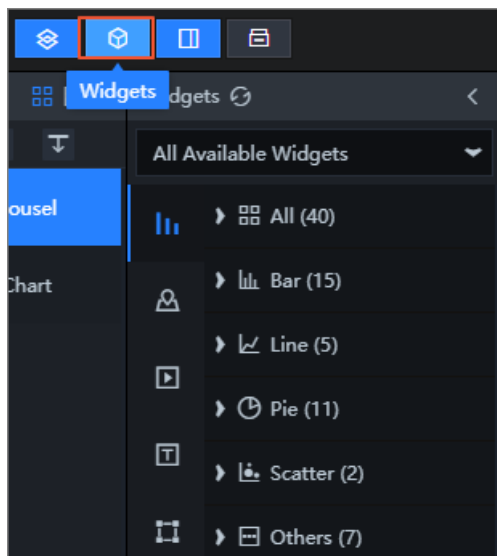


3.Add a widget

This topic describes how to add a widget to the canvas editor. After you add the widget, you can configure its style in your DataV project.

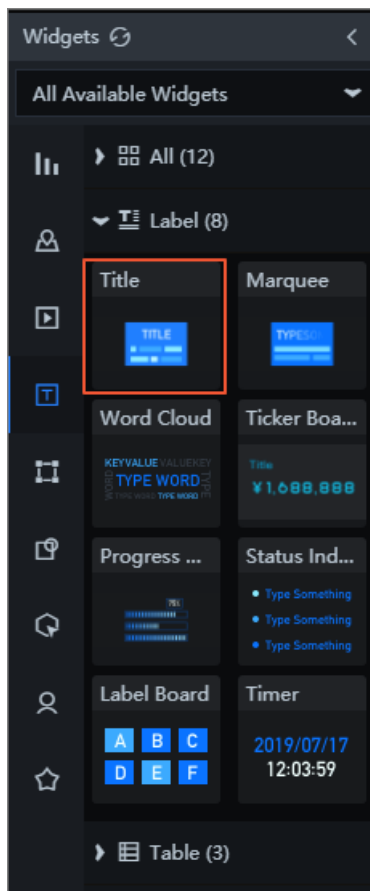
Procedure

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click the **Widgets** icon to show the **Widgets** pane.



4. On the left of the **Widgets** pane, click the icon of a widget type and click a widget to add it to the canvas editor.

For example, add a Title widget.




After the widget is added, it automatically appears on the canvas. You can drag and drop a widget border to change the widget size. You can also click the widget and drag and drop the widget to move it.

4. Add widgets to the favorite list

You can add widgets to the favorite list so that you can find them with ease. DataV of the **Basic** edition does not support the favorite list.

Prerequisites

Your DataV instance is of the **Enterprise** or higher edition.


 **Notice** The **Basic** edition does not support the favorite list. The **Enterprise** edition allows you to add up to 20 widgets to the favorite list. The **Professional** edition allows you to add up to 40 widgets to the favorite list..

Add a single widget to the favorite list

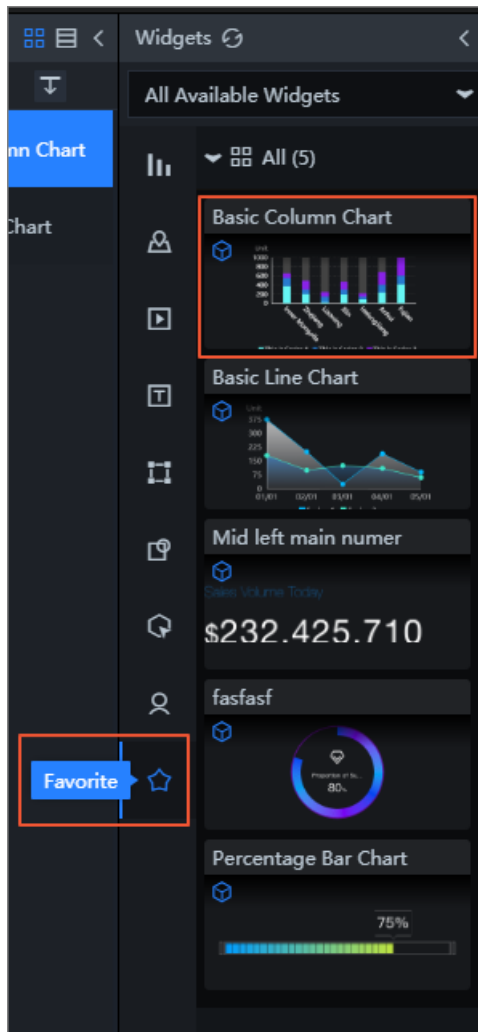
- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. Perform the following steps to add a widget to the favorite list:

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).

- i. In the **Layer** pane or on the canvas, select a widget.
- ii. Right-click the widget and select **Favorite**.

 **Note** If the data source of a favorite widget is changed, the widget may become unavailable. We recommend that you add widgets with static data sources to the favorite list.

- iii. In the **Favorite** dialog box, enter a name for the widget. The default widget name is provided, and you can change it as required.
 - iv. Click **OK**.
4. In the **Widgets** pane, click the **Favorite** icon to view widgets in your favorite list.



5. Click a widget in the favorite list to add it to the project.


Add multiple widgets to the favorite list

You can group widgets and add them to the favorite list as a group. This enables you to sort out widgets to find them with ease.

DataV limits the number of widgets that you can add to the favorite list. You can add widget groups instead to save the quota of favorite widgets.

Notice Only the Professional edition allows you to add widget groups to the favorite list. Before you proceed with the following steps, upgrade your DataV instance to the Professional edition.

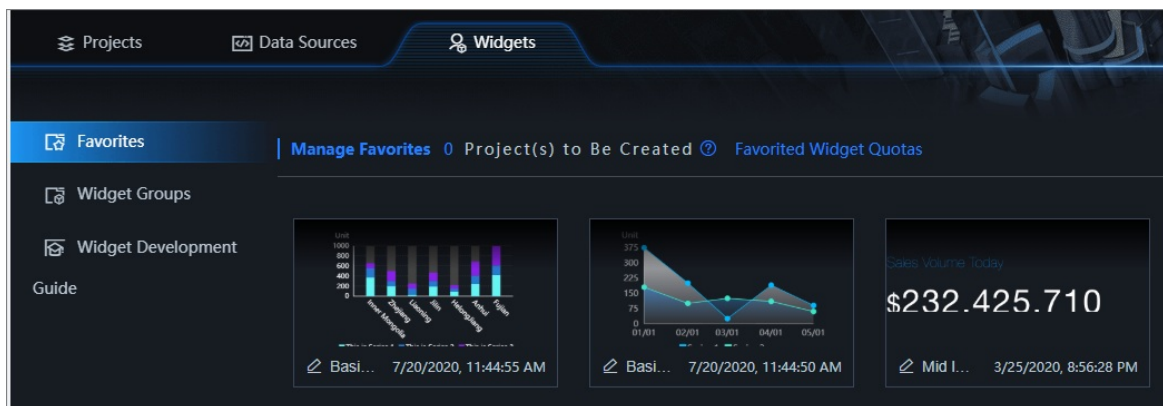
1. In the **Layer** panel or on the canvas, press and hold **Ctrl** and select multiple widgets.
2. Right-click these widgets and select **Group**.
3. Select the widget group.
4. Right-click the widget group and select **Favorite** to add it to the favorite list.

 **Notice** If the data sources of a favorite widget is changed, the widget may become unavailable. We recommend that you add widgets with static data sources to the favorite list.

View favorite widgets

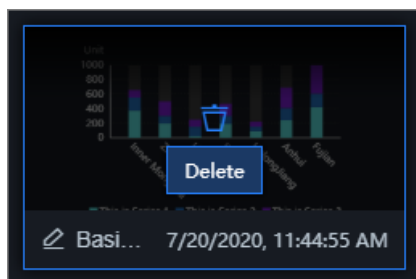
To view widgets in the favorite list, perform the following steps:

1. Go to the homepage of the DataV console.
2. Click **Widgets**. The **Favorites** page appears.
3. On the **Favorites** page, view the widgets in the favorite list and the remaining quota of favorite widgets.



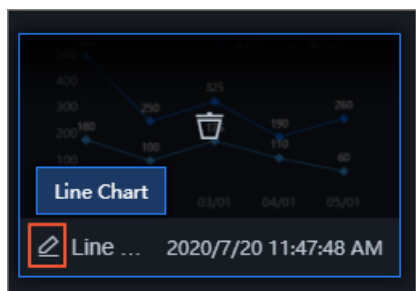
Remove a widget from the favorite list


Move the pointer over the widget and click the **Delete** icon.



Rename a favorite widget

Click the **Rename** icon to change the widget name.



 **Note** You can also change the name of a widget when you add it to the favorite list.

5. Group multiple widgets




You can group multiple widgets to adjust their size, position, opacity, and 3D transformation as a whole and implement widget carousel in the group.

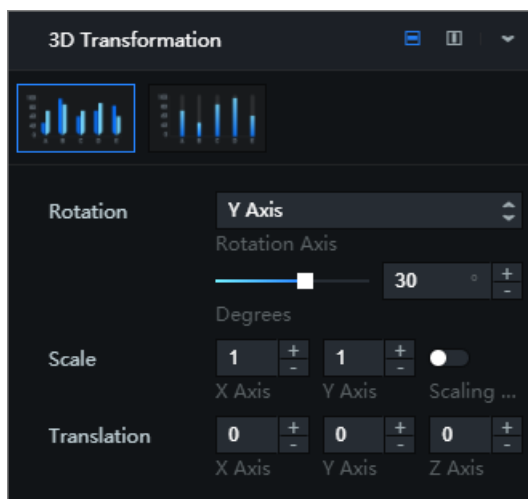
Procedure

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the **Layer** pane or on the canvas, select multiple widgets that you want to group.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).

Press and hold the **Ctrl** key in Windows or the **command** key in macOS and click the widgets to select them. You can also drag the pointer on the canvas to select multiple widgets.

4. Right-click the widgets and select **Group**, or click the  icon in the lower part of the **Layer** pane.
5. After you group the widgets, you can adjust their size, position and opacity as a whole.
6. On the Settings tab of the widget group, turn on **Apply 3D Transformation** and configure **3D Transformation** settings in **Perspective Distance** and **Perspective Origin**. This allows you to present the widgets from different perspectives.
 - **3D Transformation**: Click the  or  icon to horizontally or vertically arrange the widgets in the group.




Click the thumbnail of a widget in the group and configure 3D transformation settings of the widget.

Parameter	Description
Rotation	The rotation axis of the widget. Valid values: X Axis, Y Axis, and Z Axis.

Parameter	Description
Scale	The scale values of the widget in the x axis and y axis. Turn on Scaling Lock to lock the ratio of the x axis and y axis. When you change the scale value on one axis, the scale value of the other axis changes in the same ratio. If you turn off the switch, changes to one axis do not affect the other.
Translation	The distances to move the widget along the x, y, and z axes.

- **Perspective Distance:** the perspective distance of the widget when you view the widget from the z axis.

 **Note** The perspective distance cannot be smaller than 0. Otherwise, the widget disappears from the canvas. Unit: pixels.

- **Perspective Origin:** the vanishing point where you look at the widget from a three-dimension space. You can set the position of the vanishing point in the x and y axes. Valid values: 0 to 100%.

6.Lock a widget

You can lock one or more widgets that you have finished configuring in your DataV project so that their configurations are not changed.

Context

Locking a widget allows you to achieve the following results:

- Operations you perform in the project do not take effect on this widget.
- You cannot perform operations on this widget on the canvas unless you unlock the widget.
- You can avoid misoperations on this widget when the project contains too many widgets.

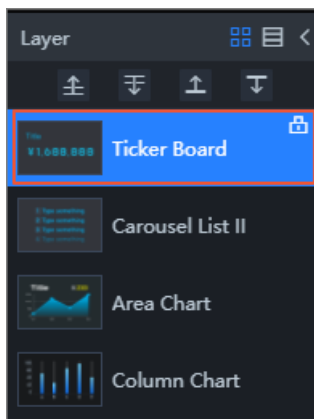
Procedure


- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).



4. Right-click the widget and select **Lock** or click the  icon in the lower part of the Layer pane.

The locked widget is listed in the Layer panel on the left with a Lock icon and is dimmed.



 **Notice** After a widget is locked, you cannot perform any operations on it on the canvas. If you want to modify the configuration of a locked widget, perform Step 5 to unlock a widget.

5. In the **Layer** pane on the left, select the locked widget. Right-click it and select **Unlock** to unlock the widget.

 **Note** You can also click the  icon on the widget or at the lower part of the Layer panel to unlock the widget.

7.Hide a widget

You can hide one or more widgets that are configured to clear up the screen. This allows you to improve the efficiency to develop your project.

Context

Hiding a widget allows you to achieve the following results:

- A map widget occupies too many CPU and memory resources, so the editor responds slowly. To resolve this issue, you can hide the widget to reduce workloads on computing resources and facilitate the deployment of other widgets.
- You can hide a configured widget to clear up the screen and improve efficiency.

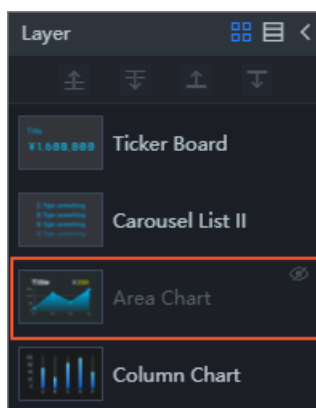
Procedure


- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).



4. Right-click the widget and select **Hide** or click the  icon in the lower part of the Layer pane.

The hidden widget is listed in the **Layer** panel on the left with a Hide icon and is dimmed.



 **Note** After a widget is hidden, you cannot perform operations on it on the canvas. If you want to modify the configuration of a hidden widget, perform Step 5 to show the widget.

5. In the **Layer** pane on the left, select the hidden widget. Right-click it and select **Show** to show the widget.

 **Notice** You can also click the  icon on the widget or at the lower part of the **Layer** panel to show the widget.

8. Copy a widget

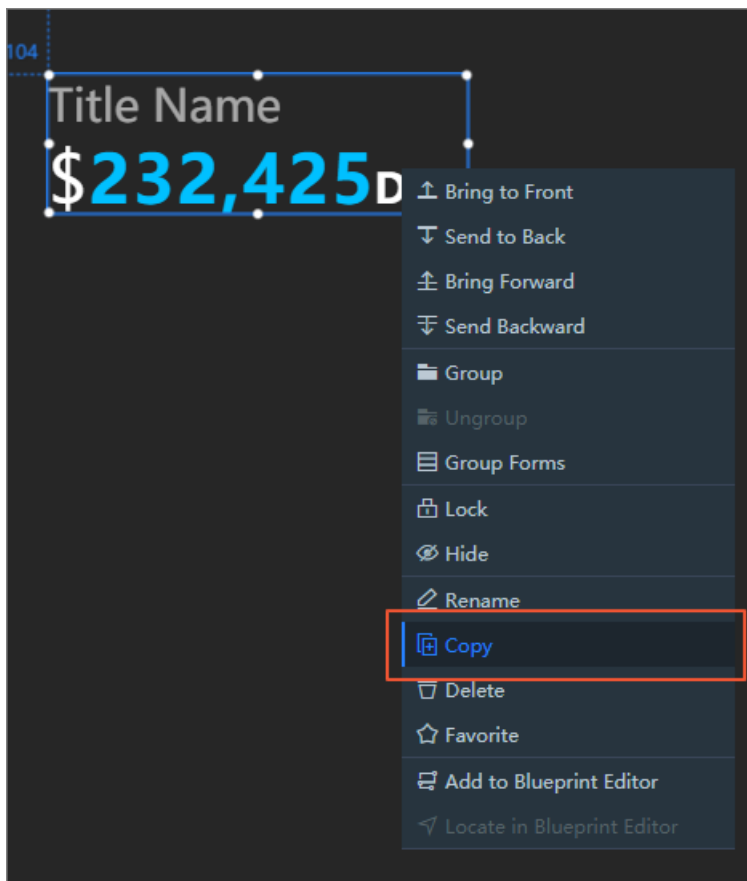
If you want to add a widget that is similar to an existing one, you can copy the existing widget and tailor it to the needs of your DataV project.

Procedure

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).

4. Right-click the widget and select **Copy**.




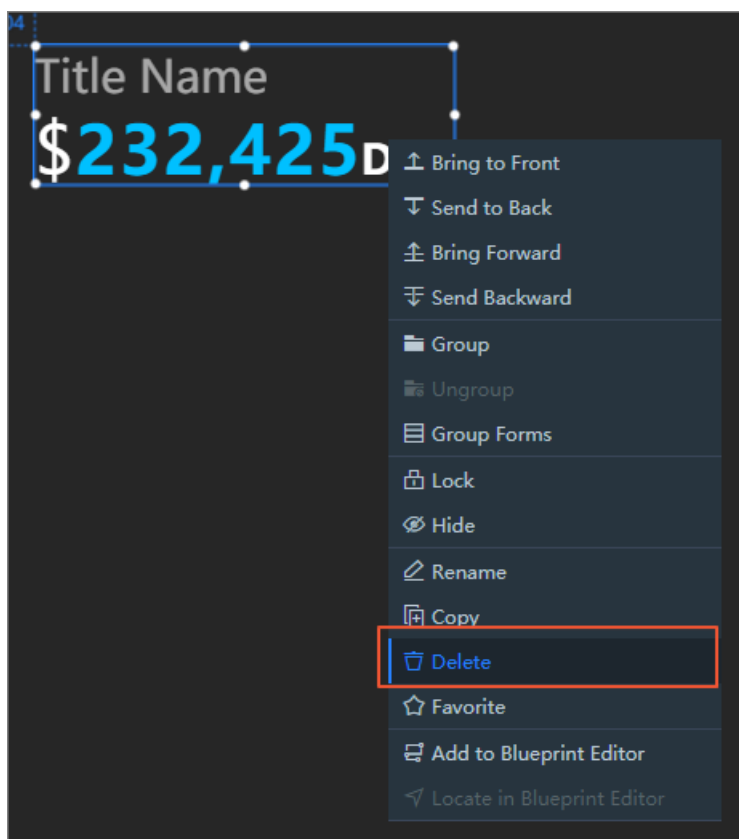
The new widget overlaps the original one on the canvas. You can move them to appropriate positions.

9.Delete a widget

You can delete one or more widgets that are no longer needed from the canvas editor.

Procedure

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.
4. Right-click the widget and select **Delete** or click the  icon in the lower part of the Layer pane.



10. Manage map components

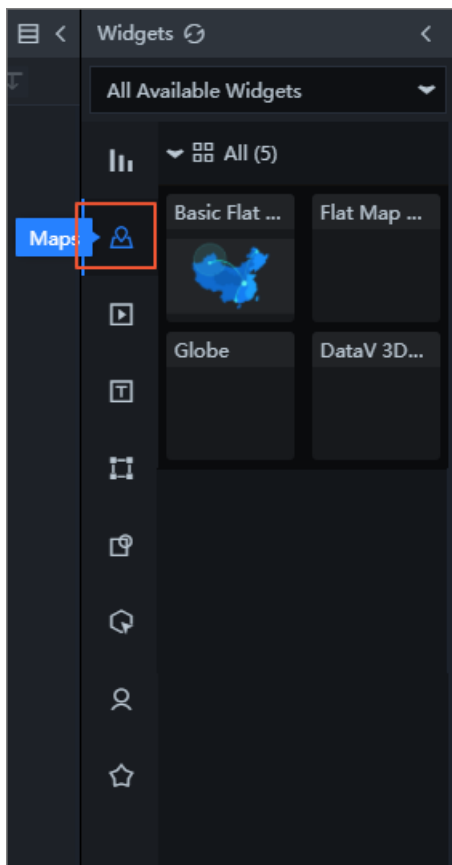
This topic describes the functions of map components and how to manage these components.

Procedure

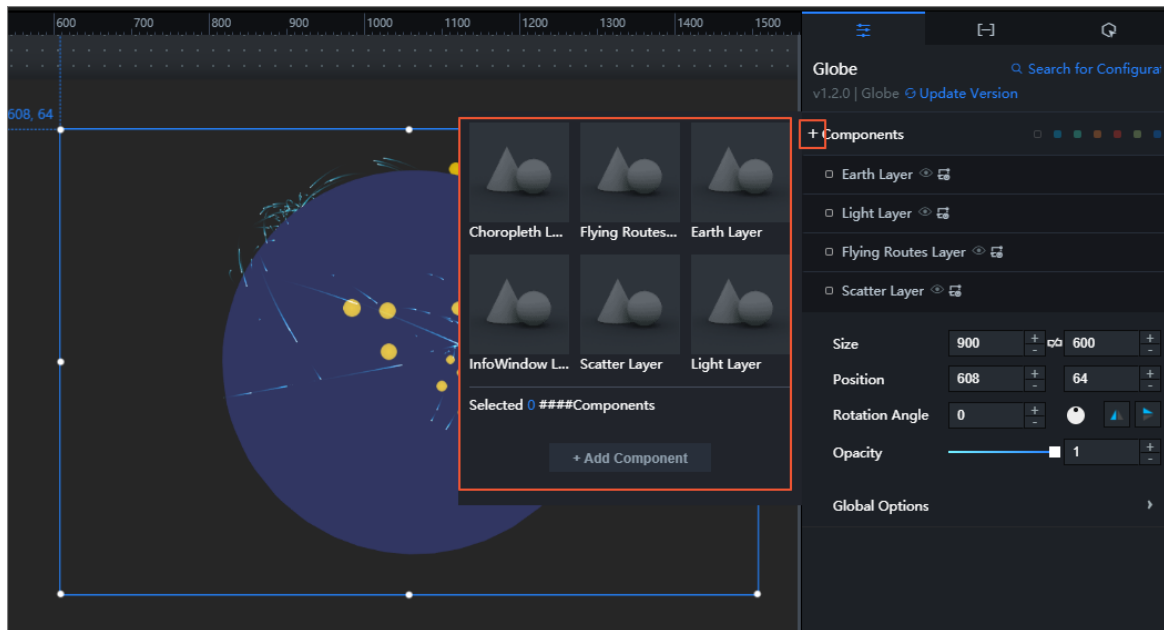
- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click the **Widgets** icon to show the **Widgets** pane.



4. In the **Widgets** pane on the left, click the **Maps** icon and add a map widget to the canvas.
In the example, a **Globe** widget is added.



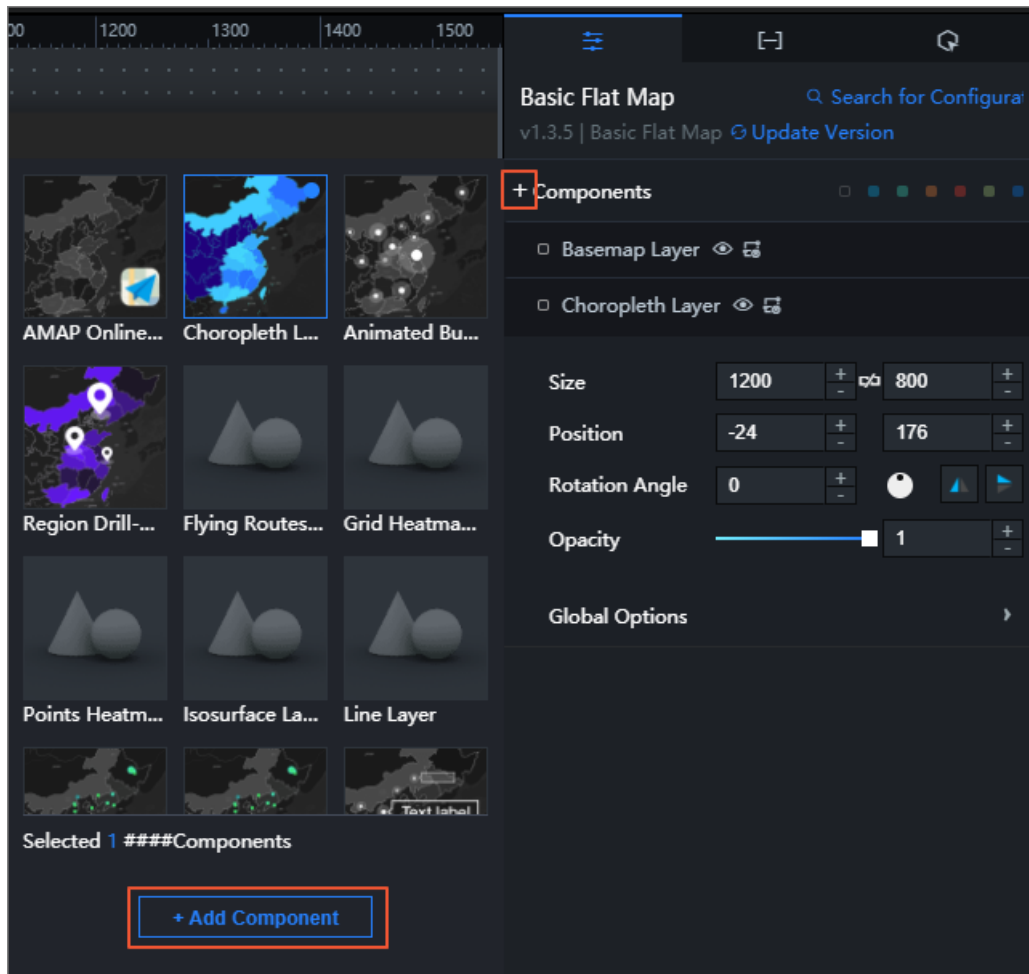
5. On the canvas, click the **Globe** widget. In the Config pane on the right, manage the components in the **Components** section.



You can add, show or hide, copy, and delete a component and categorize components by color. For more information, see [Add a component](#), [Categorize components by color](#), [Show or hide a component](#), [Copy a component](#), [Rename a component](#), and [Delete a component](#).

Add a component

1. Click the plus sign (+) on the left of **Components**.
2. In the box that appears on the left, click the thumbnails to select one or more components.
3. Click **Add Component**.

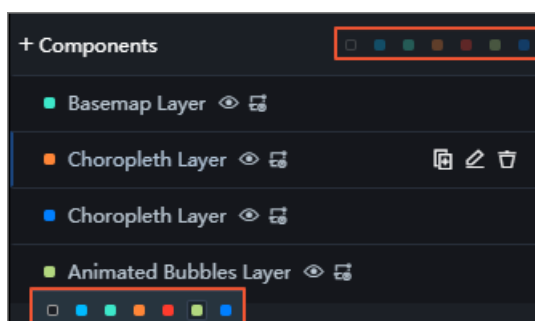


Categorize components by color


1. Click the square on the left of a component in the **map** widget.
2. In the displayed color block list, select a color to mark the component.

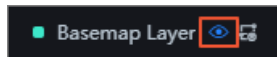
Note A color in the label bar on the right of Components represents a category. You can mark the components with different colors to classify them into different categories.

3. On the right of **Components**, click a color to filter the widgets that are marked with this color.



Show or hide a component

In the **Components** section, click the  icon on the right of a component to show or hide the component on the map.



Copy a component

Move the point over a component in the **Components** section and click the **Copy** icon on the right of the component.




Rename a component

Move the pointer over a component in the **Components** section and click the **Rename** icon on the right of the component. Then, edit the component name.



Delete a component

 **Warning** Deleted components cannot be recovered. Proceed with caution.

Move the pointer over a component in the **Components** section and click the **Delete** icon on the right of the component.



11. Manage widget groups

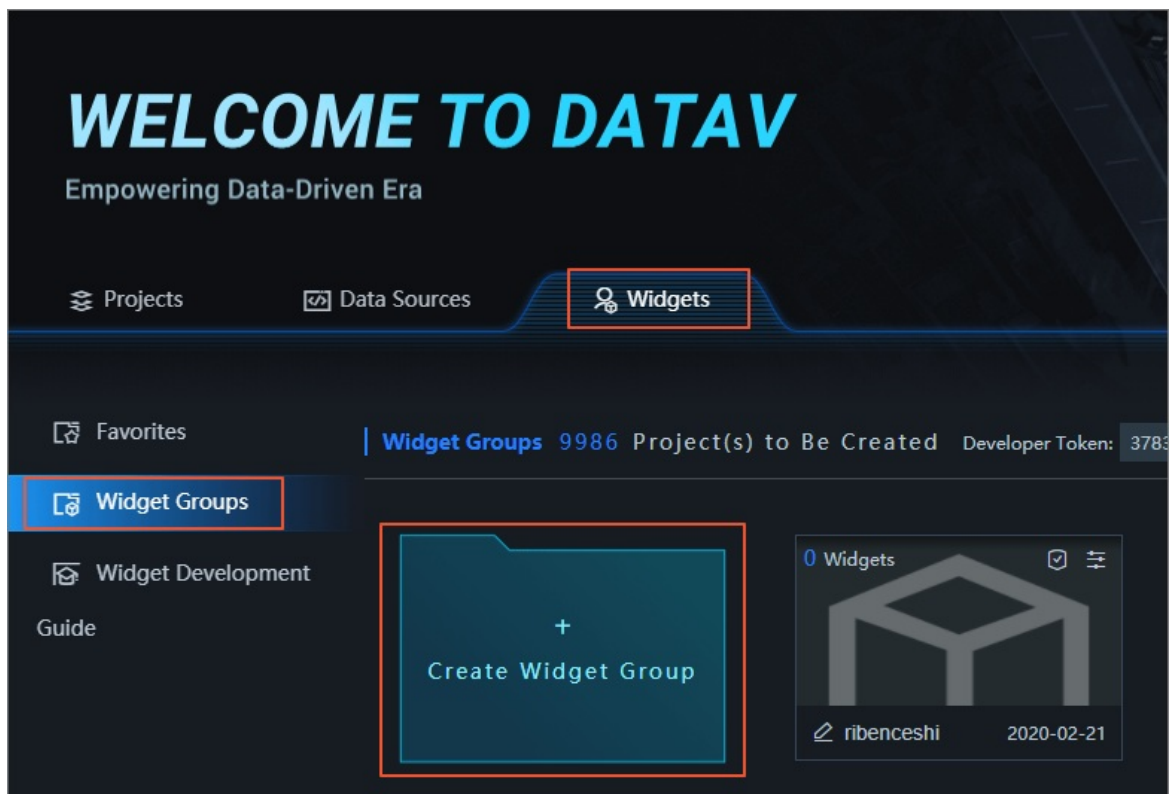
If you use the **Enterprise** edition or a higher edition of DataV, you can develop your own widgets and upload them to a widget group. You can also authorize other users to access your widget groups. This allows you to share widgets with other users.

Prerequisites

Custom widgets are supported in the **Enterprise** edition or higher. You must upgrade your DataV instance as required.

Create a widget group

- 1.
2. On the left of the **Widgets** page, select **Widget Groups**.
3. On the **Widget Groups** page, click **Create Widget Group**.



4. In the **Create Widget Group** dialog box, enter the required information and click **Create**.

Create Widget Group

★ Group ID

It must be 1 to 20 characters in length and can contain only English letters, digits, periods (.), and hyphens (-). It must not contain spaces and cannot start with a digit. The required format is xxx.xxx or xxx-xxx. We recommend that you specify an ID in the format of **Company name.Group name** or **Company name-Group name**. The group ID cannot be modified after you create the widget group. Example: **alibaba-interaction**.

★ Display Name

1 to 20 characters in length and changeable at any time

Group Cover


Click here or drag and drop a replacement image to upload it. Max size: 200 KB

Description

Enter description about this widget group. The description must be 1 to 100 characters in length. You can change it at any time.

Create

Parameter	Description
Group ID	The ID of the widget group. The ID must be 1 to 20 characters in length and can only contain letters, digits, periods (.), and hyphens (-). It must not contain spaces and cannot start with a digit. The required format is xxx.xxx or xxx-xxx. We recommend that you specify an ID in the format of Company name.Group name or Company name-Group name . The group ID cannot be modified after you create the widget group. Example: alibaba-interaction .
Display Name	The display name of the widget group. The display name must be 1 to 20 characters in length and can be modified after you create the widget group.
Group Cover	Click the Group Cover image box to change the cover image of the group, or drag and drop an image to the Group Cover image box. The image size cannot be larger than 200 KB.
Description	The description of the widget group. The description cannot be more than 100 characters in length and can be modified after you create the widget group.

- Wait for the created widget group to be reviewed. The review is complete within one or two days.

Note If you want your widget group to be quickly reviewed, join the DingTalk group provided in the announcement on the top of the DataV console and contact DataV technical support engineers.

- If the review is successful, choose **Widgets > Widget Group > View** to view the reviewed widget group and upload widgets to the group.

Notice After you create a widget group, DataV generates a **developer token** for you. It is the credential to log on to the DataV developer console. For more information, see [Develop DataV widgets](#).

- If the review fails, check whether the widget group information contains the following errors:
 - The group ID contains characters that are not allowed or reserved keywords.
 - The display name contains reserved keywords.
 - The group cover image is invalid.

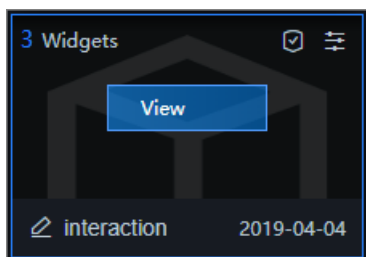
After you check for the errors, click the **Refresh** icon. In the **Edit** dialog box, modify the invalid information and click **Edit** to submit the widget group for review again. You can also click the **Delete** icon to delete the failed widget group and create a new group for review.

Note If you fix the preceding errors but the review fails again, contact DataV technical engineers.

Upload a widget

After a widget group is created, you can upload widgets to the group.

1. On the **Widget Groups** page, move the pointer over the reviewed widget group and click **View**.



2. On the **Widgets** page, click **Upload**.
3. In the **Upload** dialog box, click the **Upload Widget** box or drag and drop the widget package to the box to upload a widget.


Notice The widget package cannot exceed 20 MB in size and must be a **.tar.gz** file.


4. After the widget package is uploaded, click **Save** to save the widget to the DataV widget group.

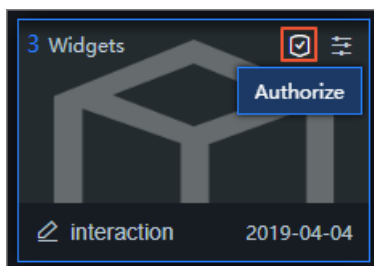
Notice If you use the Enterprise edition of DataV, you can upload up to three widgets to a group. If you use the Professional edition, the number of widgets that you can upload is not limited.

Authorize a widget group to another user

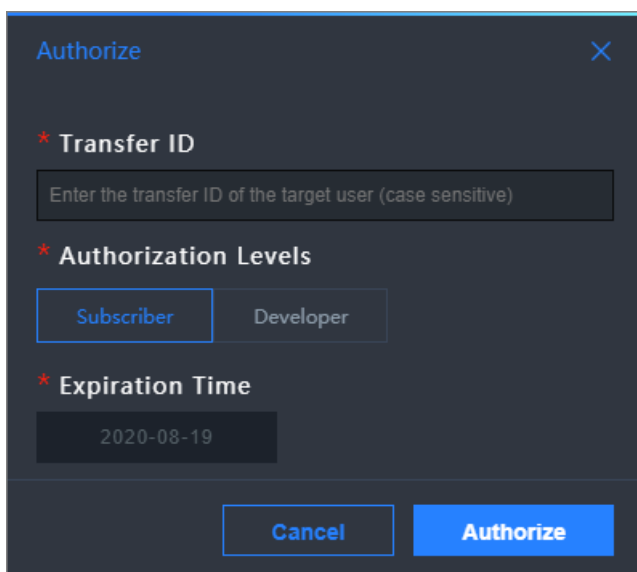
You can authorize your widget group to another user. This allows you to share the widgets in the group.


 **Notice** If you want to authorize your widget group to another user, you must upgrade your DataV instance to the Professional edition.

- 1.
2. On the left of the **Widgets** page, select **Widget Groups**.
3. On the **Widget Groups** page, click the  icon on the upper-right corner of the widget group.




4. In the **Authorize** dialog box, specify the required information.



Parameter	Description
Transfer ID	<p>Enter the transfer ID of the user whom you want to authorize. You can move the pointer over the username in the upper-right corner of the DataV console to obtain the transfer ID.</p> <p> Notice Transfer IDs are case-sensitive.</p>

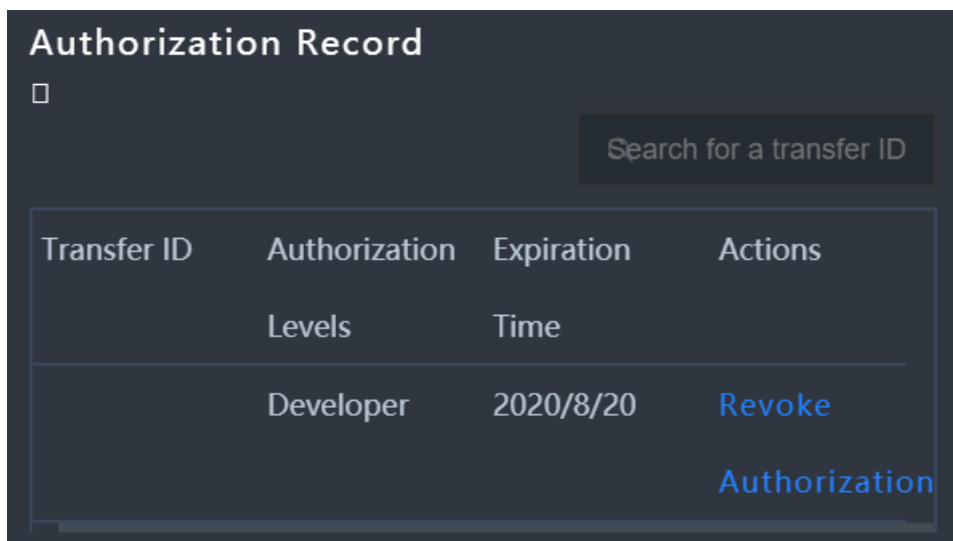
Parameter	Description
Authorization Levels	<p>Specify an authorization level. Valid values: Subscriber and Developer.</p> <ul style="list-style-type: none">◦ Subscriber: The authorized user can only view widgets that are brought online on the Widgets page.◦ Developer: The authorized user can develop and upload widgets, and view widgets that are under review and that are brought online on the Widgets page.
Expiration Time	<p>Click the time picker to select the expiration time of the authorization.</p>

5. Click the  icon on the upper-right corner of the widget group to authorize more users and view authorized records.

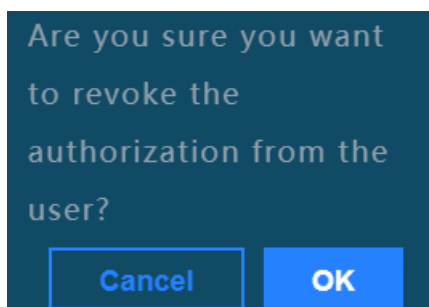
Search for an authorized user and revoke the authorization


In the **Authorization Records** section, search for an authorized user or revoke the authorization.

- In the upper-right corner of the **Authorization Records** section, enter the transfer ID of a user in the **search box** to search for the authorized user.




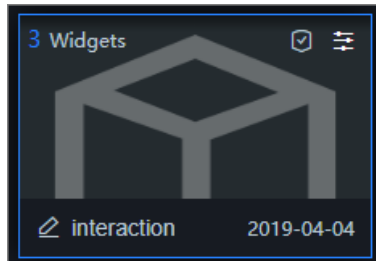
- Find an authorized user and click **Revoke Authorization** in the **Actions** column to revoke the authorization.



 **Notice** The authorization cannot be restored after it is revoked. Proceed with caution.

Edit a widget group

In the upper-right corner of a widget group, click the  icon to modify **Display Name**, **Group Cover**, and **Description**. You cannot modify **Group ID**.



12. Search for widget configuration items

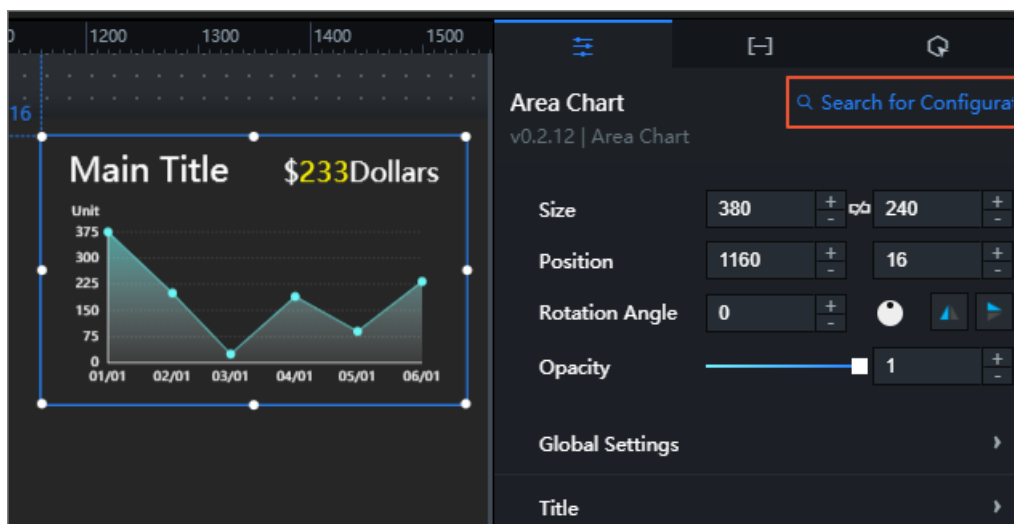
You can search for configuration items of a widget, modify the style of a configuration item, or copy the style of one configuration item to another in the **Search for Configurations** pane.

Procedure

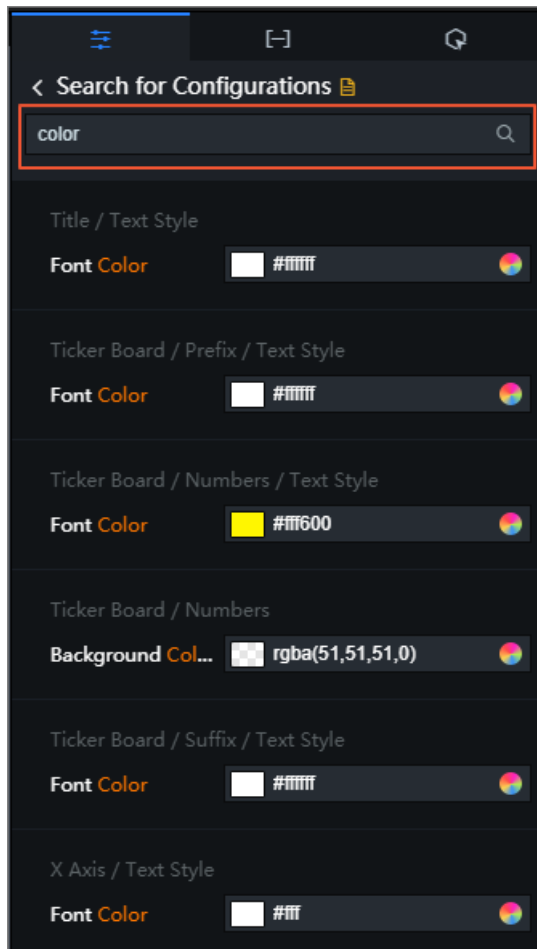
- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).

4. In the upper-right corner of the **Settings** tab, click **Search for Configurations**.

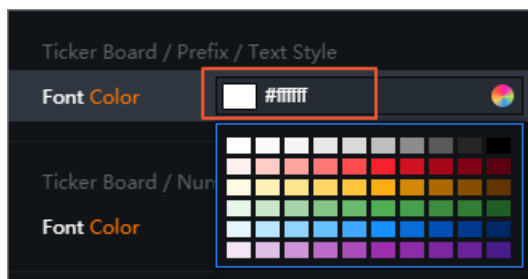


5. In the **Search for Configurations** pane, enter a keyword of the configuration item name in the search box.
After you enter the keyword, the system automatically searches for and displays the configuration items that match the keyword. Fuzzy match is supported.



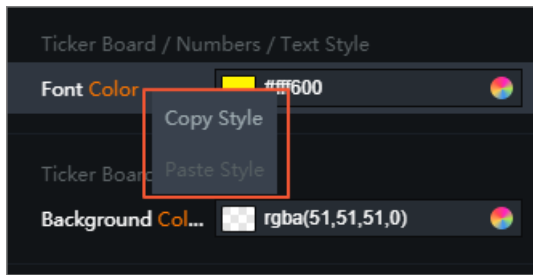
6. In the **Search for Configurations** pane, you can modify or copy the style of a configuration item and find the configuration item on the Settings tab.

- Select a configuration item and modify the configuration style.

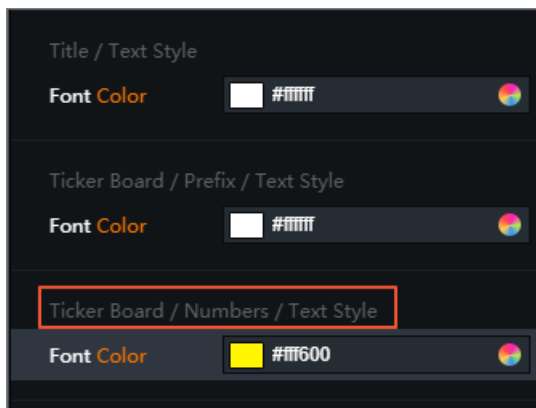


The modified configuration style immediately takes effect on the widget in your project.

- Right-click a configuration item and select **Copy Style** to copy the configuration style. Right-click another configuration item of the same type and select **Paste Style** to apply the copied configuration style.



- o Click the directory of a configuration item to find this configuration item on the Settings tab.




The configuration item that you find is displayed in blue on the Settings tab.

13. Configure widget data

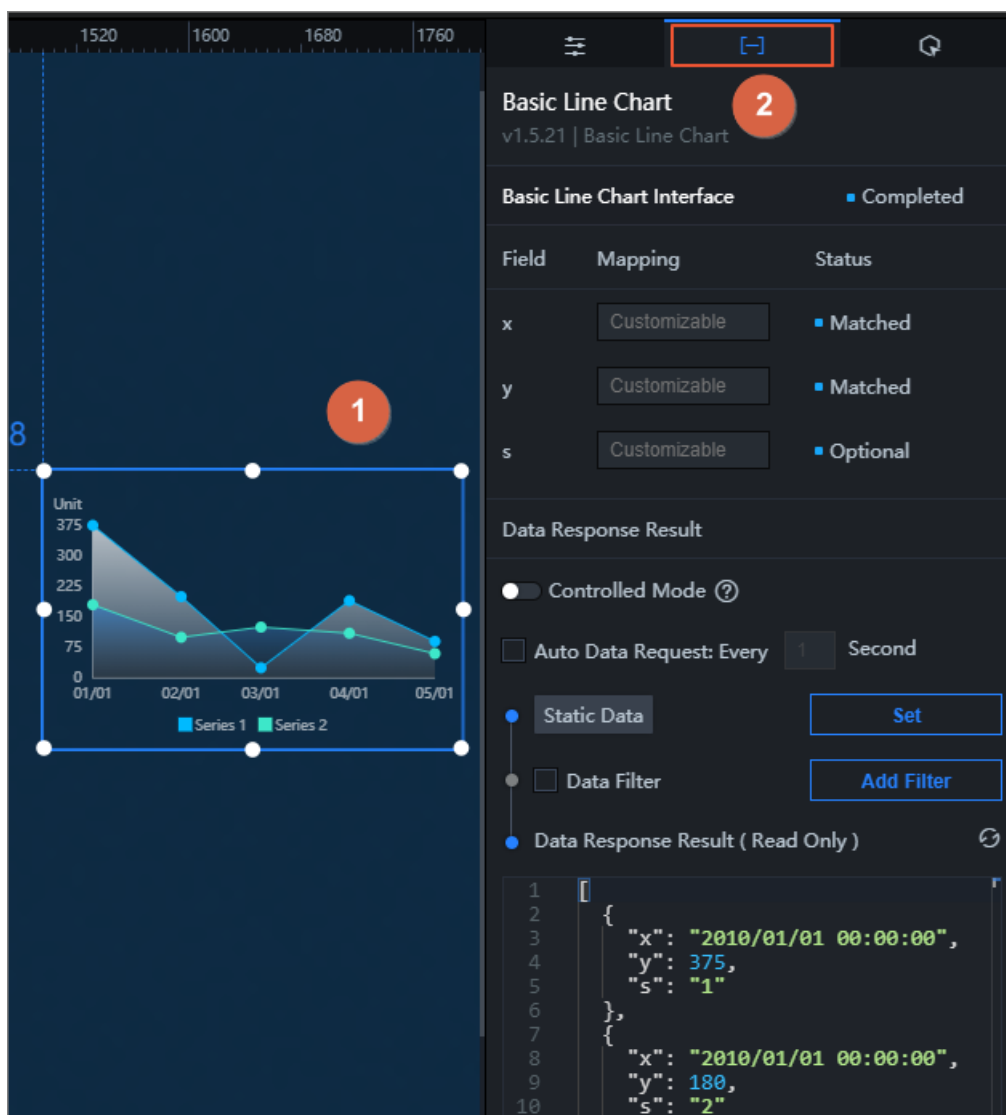
This topic describes how to configure widget data and introduces content on the Data tab, including the data interface, data source, data filters, and frequency of data requests.


Procedure

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).

4. On the right of the canvas editor, click the **Data** icon.
5. On the **Data** tab, view and modify data of the selected widget.



Data configuration item	Description
Data Interface	<p>The Data Interface section displays data fields, mappings, and data match statuses of the selected widget.</p> <ul style="list-style-type: none">◦ Field: the default fields of the widget.◦ Mapping: the mappings between the default fields of the widget and the fields in the configured data source. If the fields in the data source are inconsistent with the default fields, enter the fields in the data source in the Mapping column. This allows you to match data without modifying the fields in the data source.◦ Status: the real-time match result of the fields. If a match is successful, the result is Matched.
Controlled Mode	<p>If you turn on the switch, data is not requested when the widget is initialized, and data requests are triggered only based on callback IDs or the settings in the blueprint editor. If you turn off the switch, data requests are automatically triggered.</p>
Automatic Data Request	<p>You can select Automatic Data Request and configure the frequency to automatically request data. If you do not select this option, data is not automatically requested. You must manually refresh the page to request data or use the blueprint editor or callback IDs to trigger data requests.</p>
Data Source	<p>By default, DataV widgets use static data sources. Click Set. In the Set Data Source pane, modify the data source type and script. For more information, see Configure the data source for a widget.</p>
Data Filter	<p>Select the Data Filter check box to enable the data filter function. Click Add Filter. In the Set Data Source pane, configure the script of a data filter. Data filters allow you to convert the data structure, filter data, and perform simple calculations. For more information, see Description of data filters.</p>
Data Response Result	<p>The Data Response Result section displays widget data in real time. If the data source of the widget changes, this section displays the latest data. If the widget data is not loaded in time, you can click the  icon to obtain the latest data.</p>

14. Configure the data source for a widget

This topic describes how to configure the data source for a widget in DataV and introduces sections in the **Set Data Source** pane, including Data Source, Data Filter, and Data Response Result.

Configure a data source

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).

4. On the right of the canvas editor, click the **Data** icon.
5. On the **Data** tab, click **Set**.



6. In the **Set Data Source** pane, modify the data source type and script, configure a data filter, and preview the data response.



Modify the data source type and script

1. In the **Set Data Source** pane, select a data source type from the **Data Source Type** list.

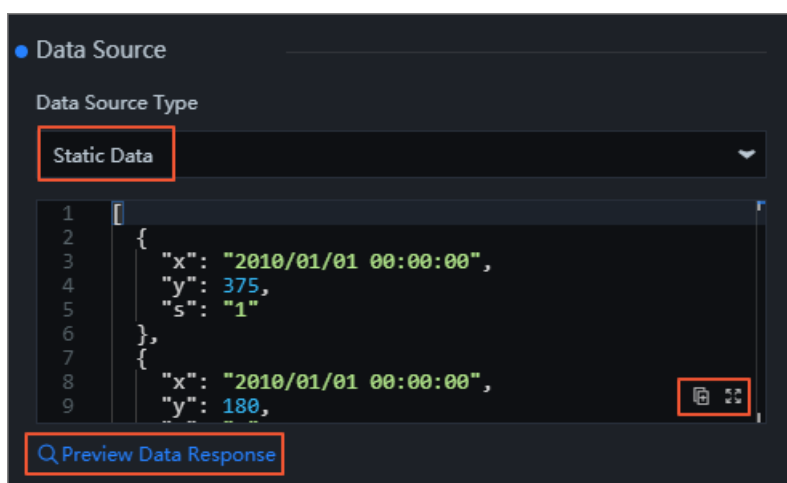
For more information about the supported data source types and configurations, see [Manage data sources](#).

Note If you use an API data source, you can configure cross-origin access and obtain cookies of user clients. For more information, see [Cross-origin data configuration](#) and [Use cookies to isolate data of a DataV project](#).

2. In the editing box, modify the data source script.

In the lower-right corner of the editing box, click the  icon to edit the data source script in full screen. Click the  icon to copy the data source script.

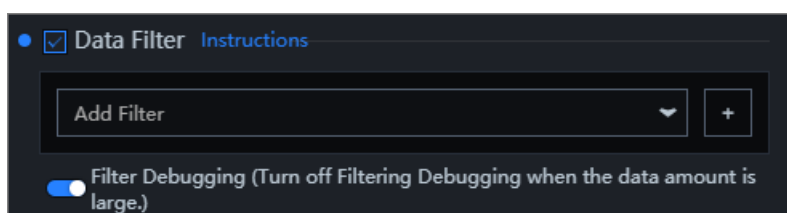
3. After you configure the script, click **Preview Data Response** to preview the response result.



Configure a data filter

Data filters allow you to convert the data structure, filter data, and perform simple calculations.

1. In the **Set Data Source** pane, select **Data Filter** to enable the data filter function.



2. Click the plus sign (+) on the right to add a data filter.
3. In the filter editing box, enter code to filter widget data.
4. Click **Test** to view the filter result.

For more information about data filters, see [Description of data filter](#).

View fields in the data response result


The fields, mappings, and descriptions of the widget data are listed in the data response result. You can only view the data response result and cannot modify it.



The data response is an array that contains the following fields.

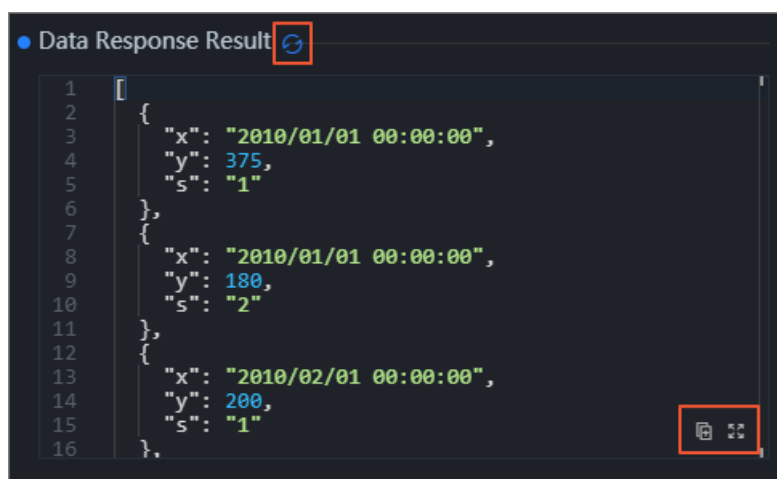
Field	Mapping	Description
x	-	Category Field
y	-	Value Field
s	-	Series Field (Optional)

View the data response result

In the **Set Data Source** pane, view the data response result in the **Data Response Result** section.

The **Data Response Result** section displays data used by the widget in real time. If the data source of the widget changes, this section displays the latest data. If the widget data is not loaded in time, you can click the  icon to obtain the latest data.

In the lower-right corner of the data editing box, click the  icon to view the data response result in full screen. Click the  icon to copy the data response result.



15.Widget data filter

15.1. Use the data filter

This topic describes how to use the updated data filter in DataV widgets. You can write code in the data filter to convert data structures, filter data, and perform simple calculations.

Context

Compared with the previous data filter, the updated data filter removes global filters that can be shared across DataV projects. Filters can only be used within one project. If you want to use them across projects, you must save the filters as code snippets.

Before you use the upgraded data filter, note the following information:

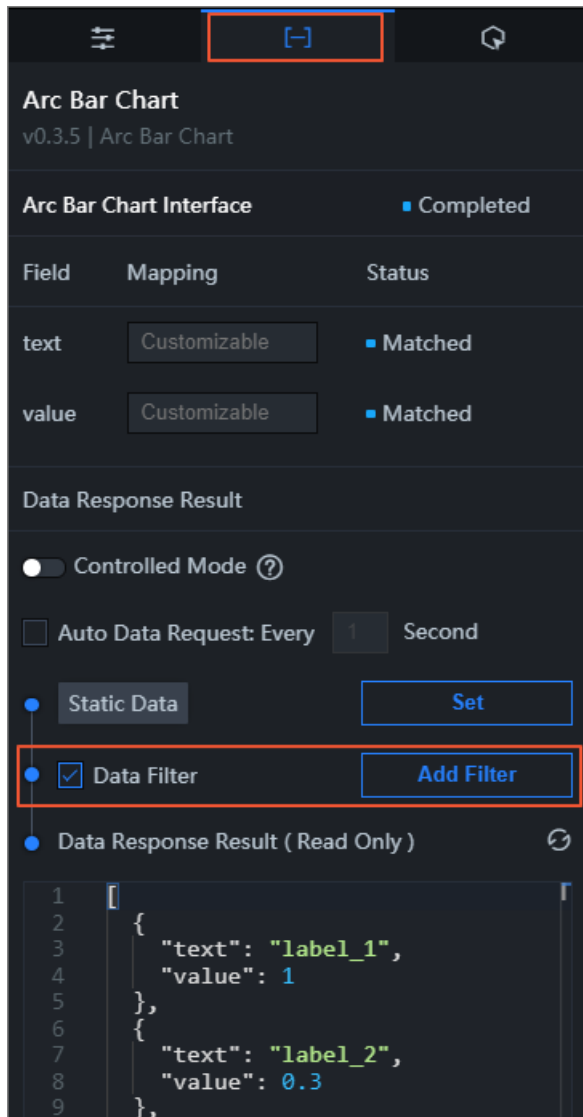
- If you have used global filters in your project, the project editor saves them as code snippets on the Code Snippets page.
- When you edit or create filters in an existing project, the system prompts you to update the data filter. The data filter is automatically updated for new projects.
- After you update the data filter, the page refreshes, and the data filter is updated only for the current project. The update does not affect other existing projects.

Procedure

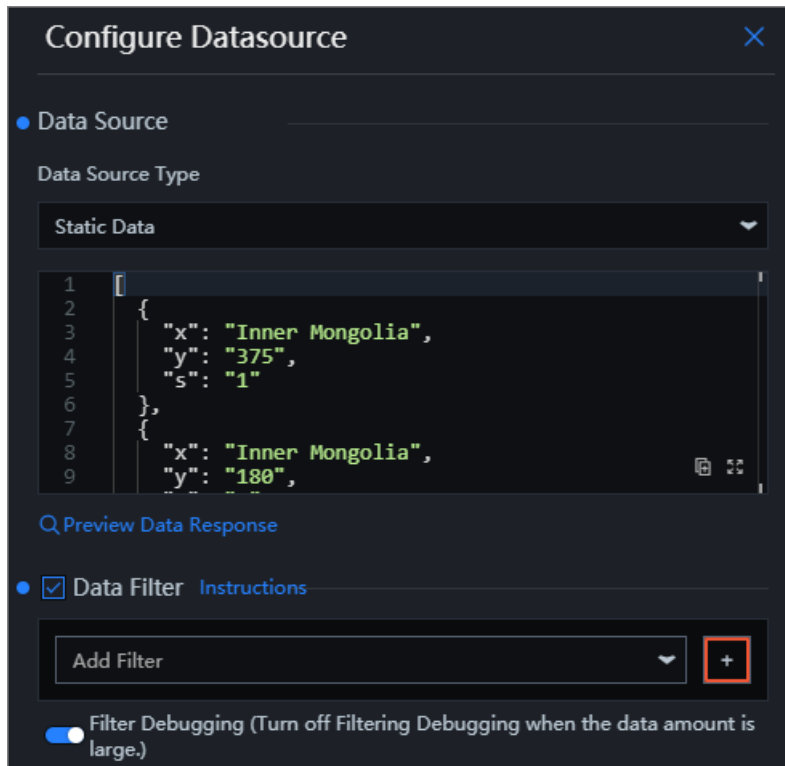
- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.

 **Notice** If you have not added widgets to the canvas, see [Add a widget](#).

4. On the right of the canvas editor, click the **Data** icon.
5. On the **Data** tab, select **Data Filter** and click **Add Filter**.



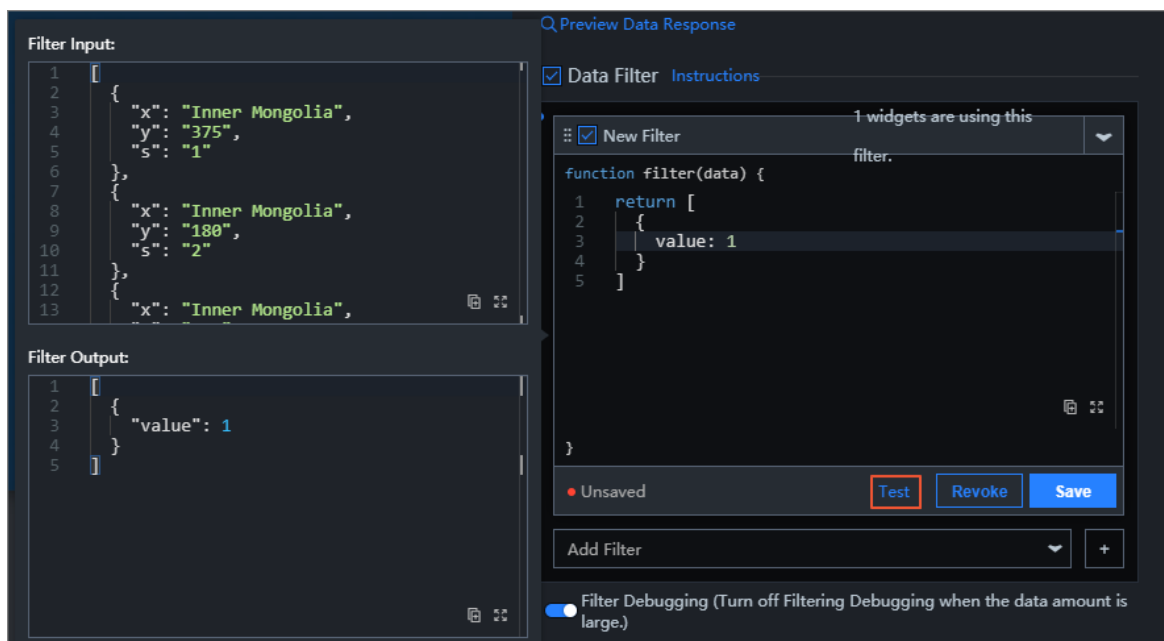
6. In the **Configure Data source** pane, click + on the right of **Add Filter**.



7. In the filter edit box, enter code to filter the widget data.

For more information, see [Example](#).

8. Click **Test** to view the filter result.



Notice To test the filter code, you must turn on the **Filter Debugging** switch. However, we recommend that you turn off this switch when the volume of widget data is large.

9. After you test the code, click the **Refresh** icon on the right of **Data Response Result** to view the data filter result on the widget.

For more information, see [Detailed functions](#).

15.2. Example

This topic uses the data filter in a **carousel list of column chart** widget to filter videos recommended each day on Bilibili.

Prerequisites

You must add a **carousel list of column chart** widget in the project editor. For more information, see [Add a widget](#).

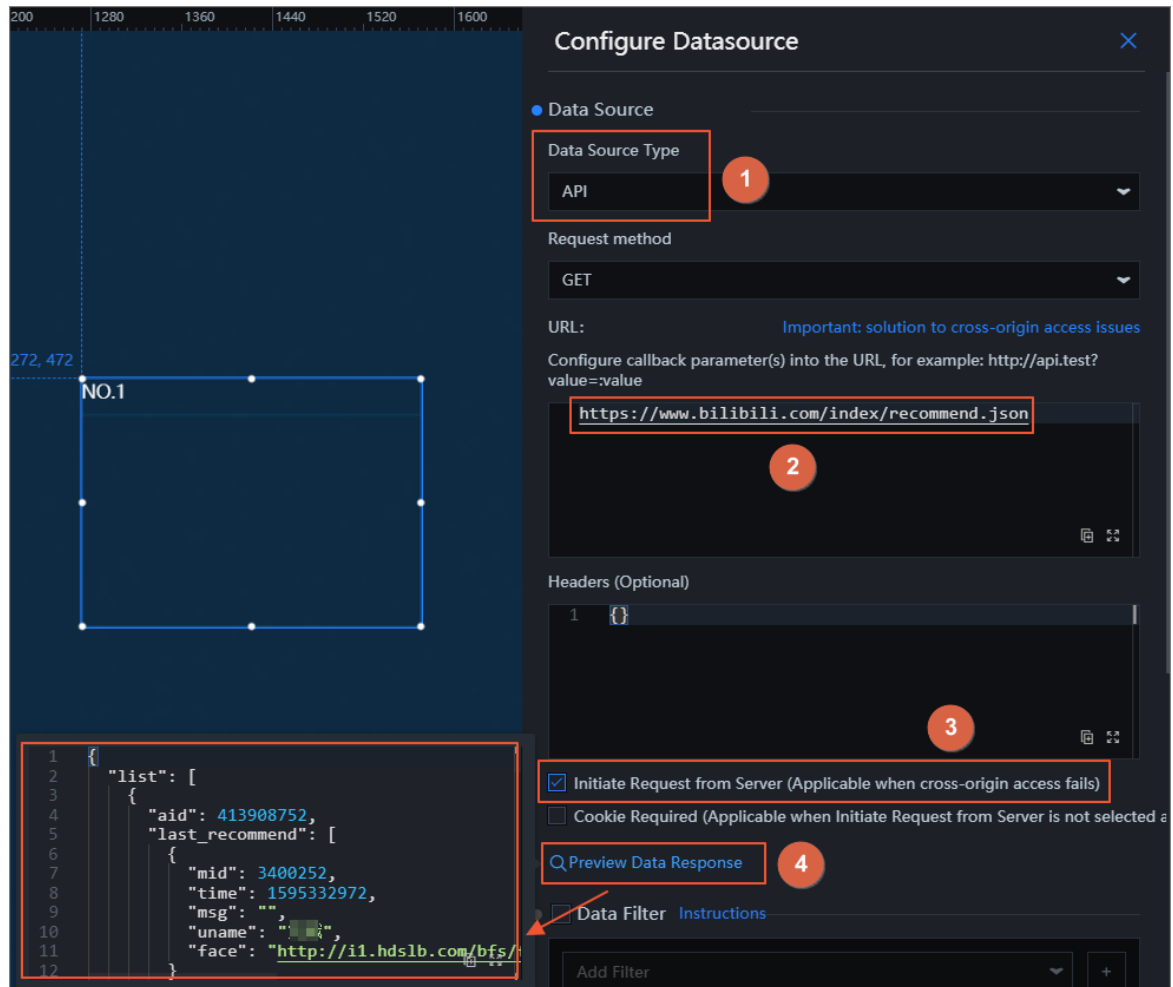
Procedure

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. In the canvas editor, click a widget in the **Layer** pane or on the canvas.



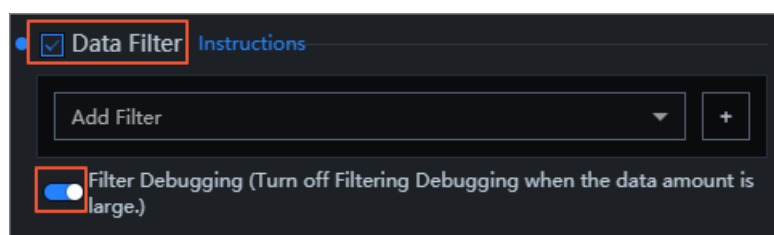
Notice If you have not added widgets to the canvas, see [Add a widget](#).

4. On the right of the canvas editor, click the **Data** icon.
5. On the right of Data Source, click **Set**. In the **Set Data Source** pane, set **Data Source Type** to **API**. In the data source edit box, enter the URL of Bilibili `https://www.bilibili.com/index/recommend.json`.
6. Select **Initiate Request from Server** because cross-original requests are initiated.
7. Click **Preview Data Response** to view the data returned by Bilibili.

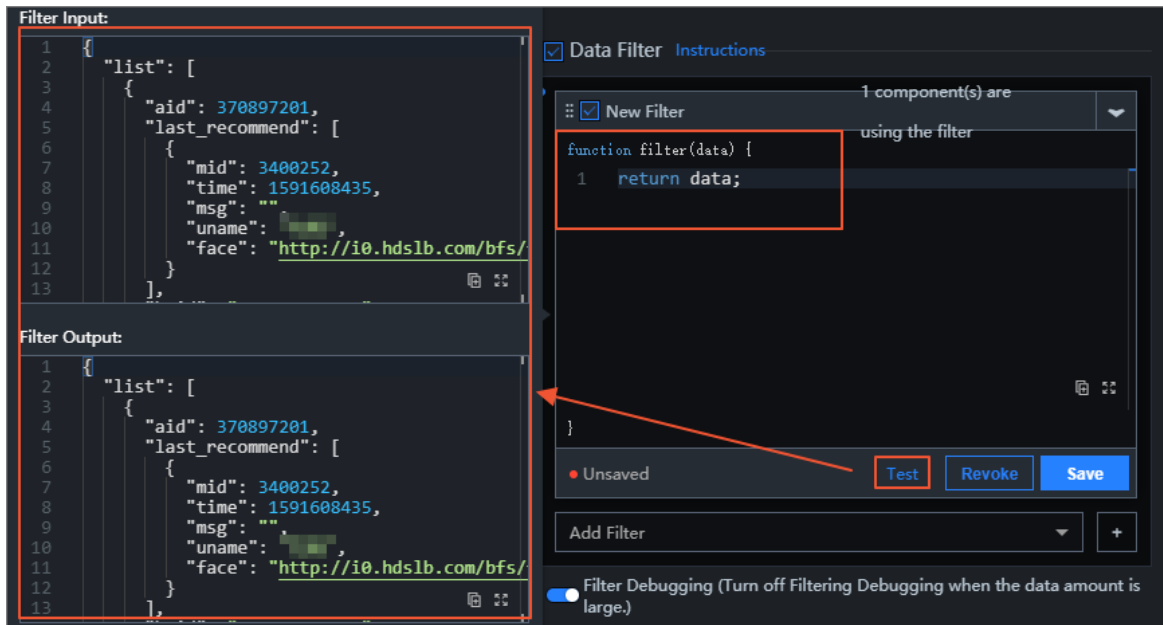


In the preview box, a JSON object is returned. However, the data in the **carousel list of column chart** is an object list. Each object must contain the content and value fields. You can proceed with the following steps to convert the data format by using a data filter.

8. Select **Data Filter** and turn on **Filter Debugging**.



9. Click **+** on the right of **Add Filter**.
10. Edit the code in the filter. Then, click **Test** to view the filter result.



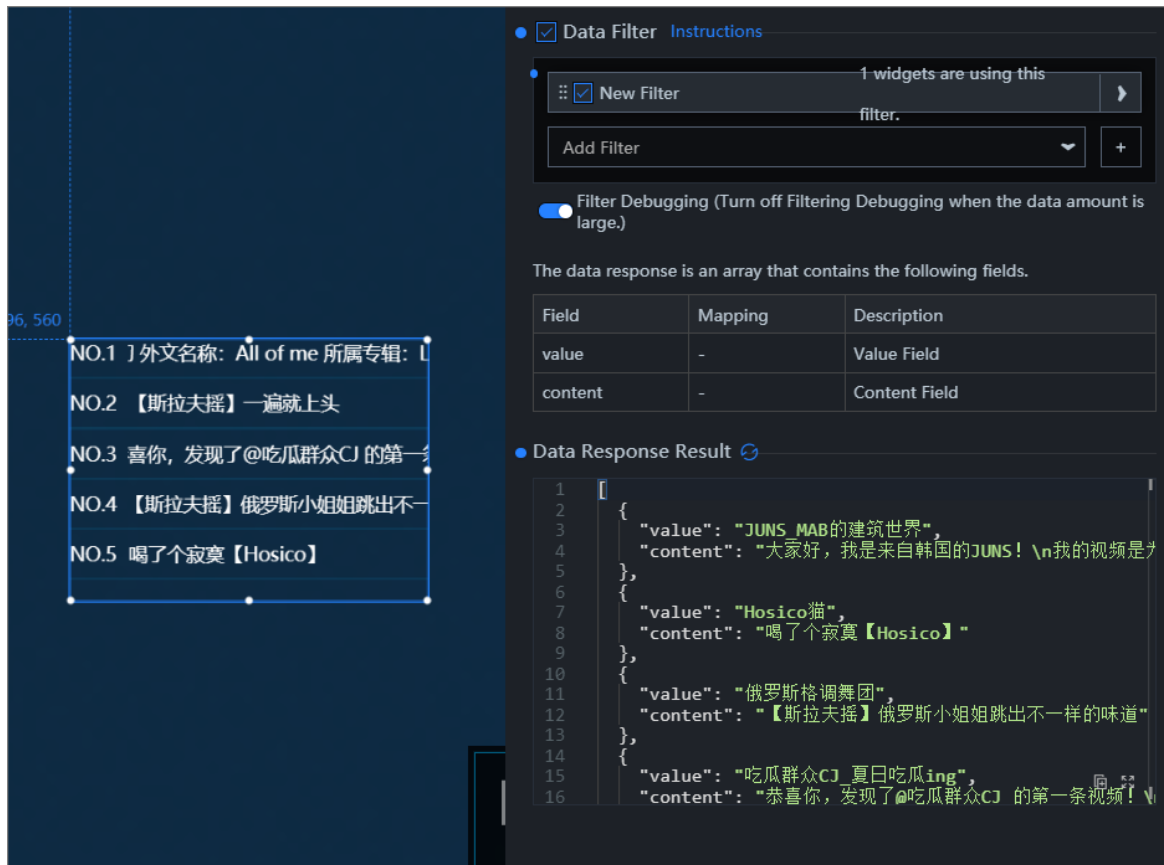
The trigger condition of the filter in the preceding figure is as follows:

```
return data.list.map(item => {
  return {
    value: item.author,
    content: item.description
  };
});
```

The following figure shows the data that is converted by the filter. The data contains the value and content fields.



- After you edit and test the filter, click **Save**. Then, click the Refresh icon next to **Data Response Result** to view videos recommended each day on Bilibili.



15.3. Detailed functions

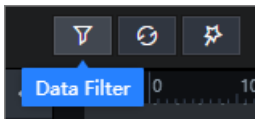
This topic describes how to use a data filter in details. You can create a filter, add a filter, sort filters, and create a code snippet.

- 1.
2. On the **Projects** page, click the project that you create.
If you have not created a project, see [Use a template to create a PC端 project](#).
3. Perform the following operations in the project editor:
 - [Create a filter](#)
 - [Rename a filter](#)
 - [Delete a filter](#)
 - [Add a filter](#)
 - [Sort the filters](#)
 - [Debug a filter](#)
 - [Data source and filter errors](#)
 - [Manage the Data Filter pane](#)
 - [Create and import a code snippet](#)

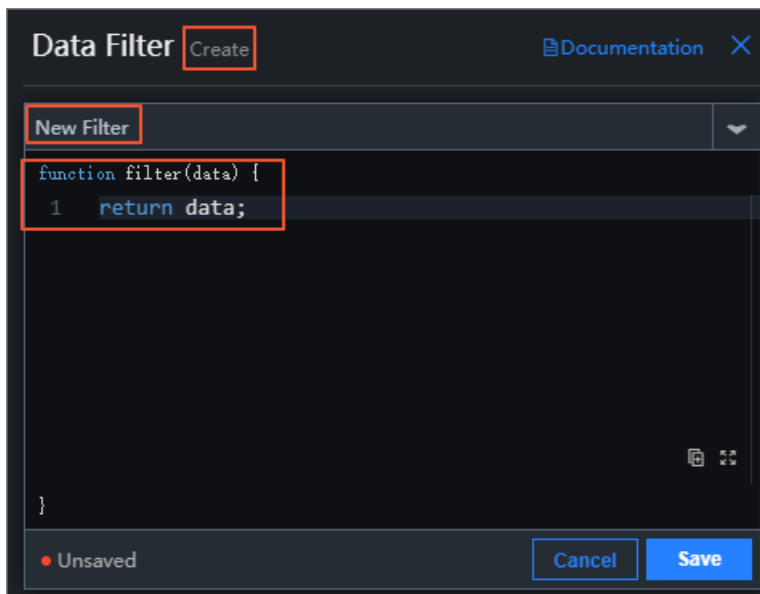
Create a filter

You can create a filter by using one of the following methods:


- Click the **Data Filter** icon.
 - On the editor toolbar, click the **Data Filter** icon.



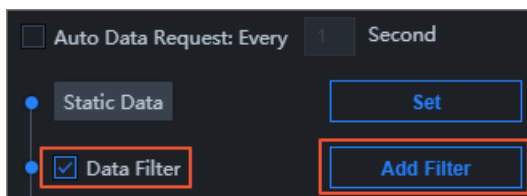
- In the **Data Filter** pane, click **New Filter**.
 - In the filter edit box, specify a name for the filter and enter the filter code. Then, click **Save**.



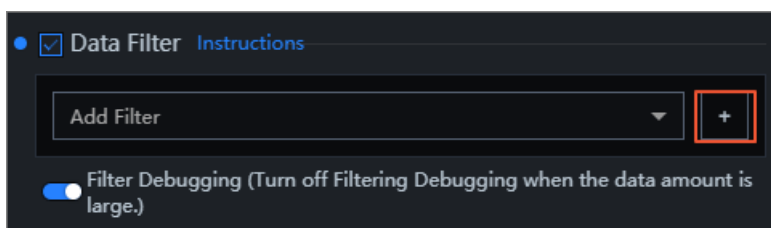
The created filter appears in the list.

 **Notice** The filter you created by using the **Data Filter** icon on the toolbar can be called by all widgets in the project. For more information, see [Use the data filter](#). When a filter is called, you can view the dependency between the widget and the filter.

- Create a filter in the **Set Data Source** pane of the widget.
 - Add a widget to the project and click the **Data** tab of the right-side panel.
 - On the **Data** tab, select **Data Filter** and click **Add Filter**.

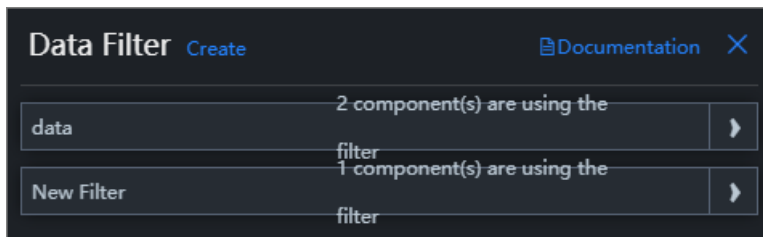


- In the **Set Data Source** pane, click **+** on the right of **Add Filter**.



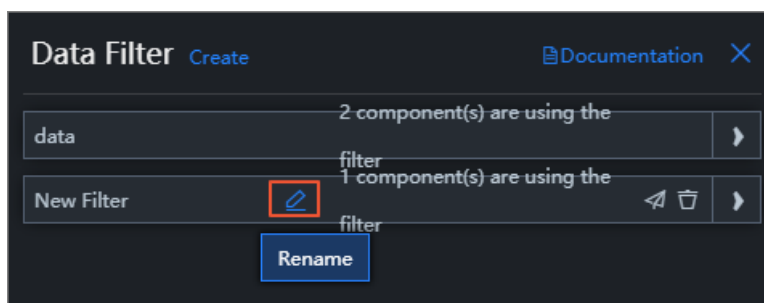
- iv. In the **filter edit box**, specify a name for the filter and enter the filter code. Then, click **Save**.

The created filter appears in the list. You can view the dependency between the widget and data filter.



Rename a filter

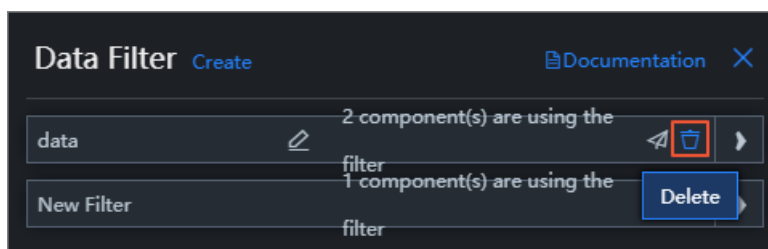
Move the pointer over a filter in the list, click the **Rename** icon, and enter a new filter name.



Delete a filter

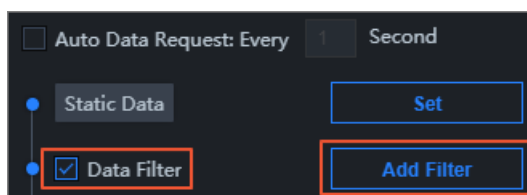
Warning After you delete a filter, the widgets that call the filter may become unavailable. Proceed with caution.

Move the pointer over a filter in the list and click the **Delete** icon.



Add a filter

1. On the **Data** tab of the right-side panel, select **Data Filter**.
2. Click **Add Filter**.



3. In the **Set Data Source** pane, select an existing filter from the list.

Sort the filters

After you add multiple filters to a widget, you can drag and drop the filters to sort them.

If multiple filters are added to a widget, they filter the widget data in sequence from the top down. The input of the first filter is the data returned by the data source, the input of the second filter is the output of the first filter, and so on.

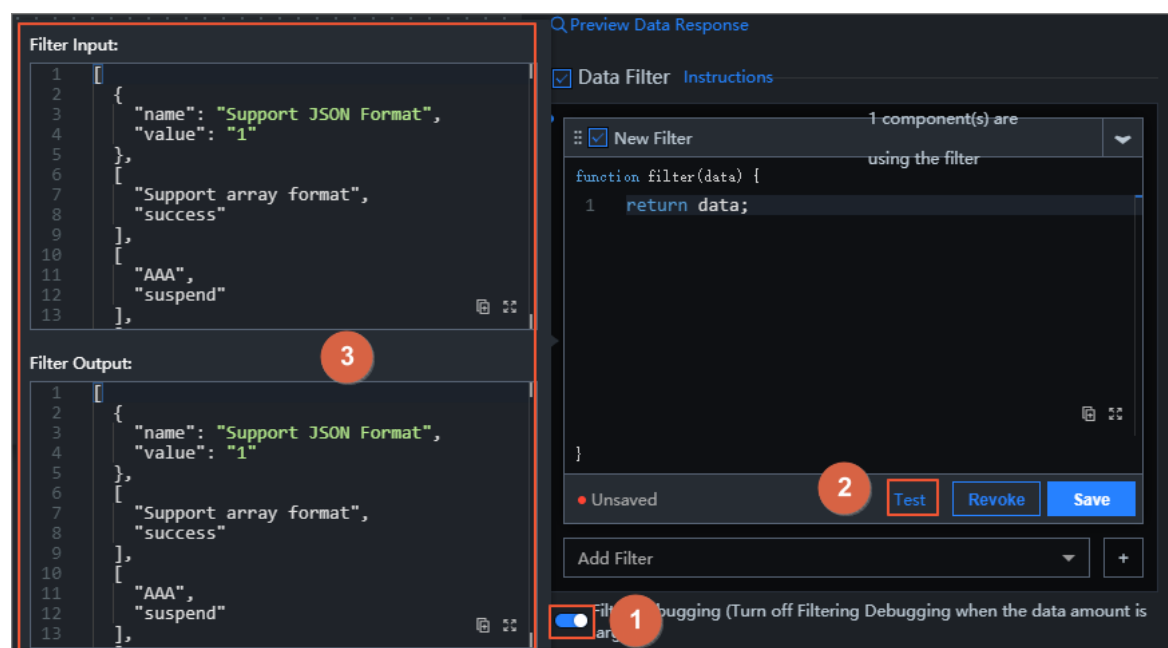
Notice

- If one of the filters returns null, this filter is ignored, and the data filtering continues. The system prompts that the output of this filter is null when you configure the filters.
- If one of the filters encounters an error, the data filtering stops, and the last correct filter result is used.

Debug a filter

1. In the **Set Data Source** pane, turn on **Filter Debugging** under **Data Filter**.
2. Edit the filter code and click **Test**.

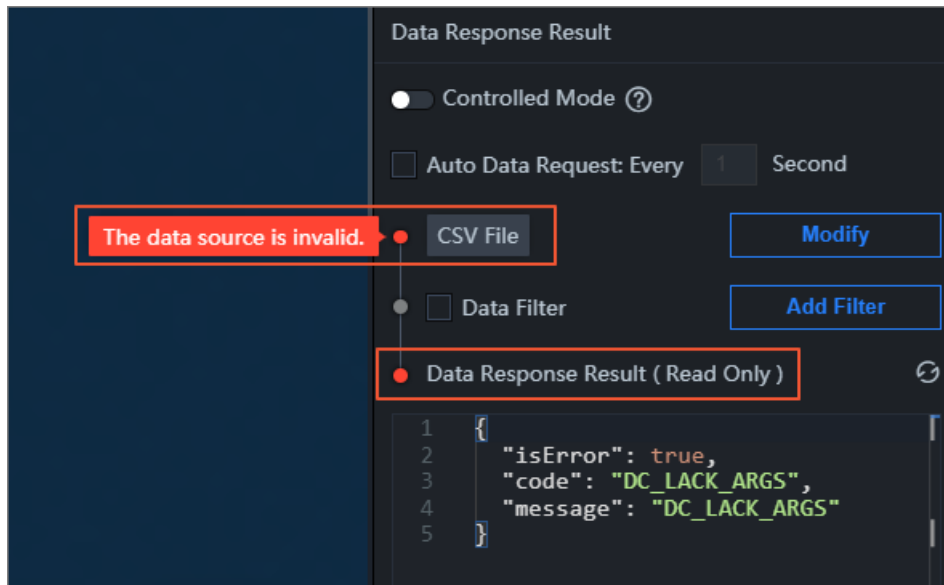
After the debugging is complete, a box appears on the left to show the filter result. The data input of the filter is presented on the upper part of the box, and the data output on the lower part.



Notice Filter debugging ensures that the filter code is correct, but it is not applicable to widgets that contain a large volume of data.

Data source and filter errors

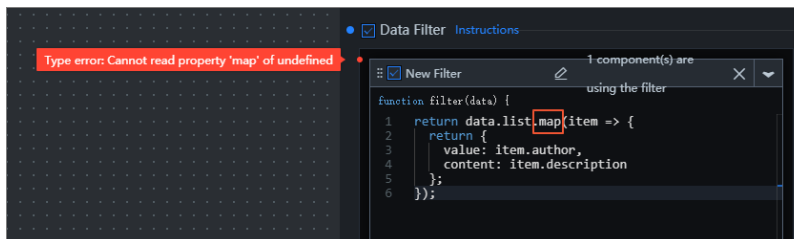
- **Data source error:** After you add a filter to a widget on the Data tab, if you change the data source type, two errors are reported, prompting that the data source is abnormal.



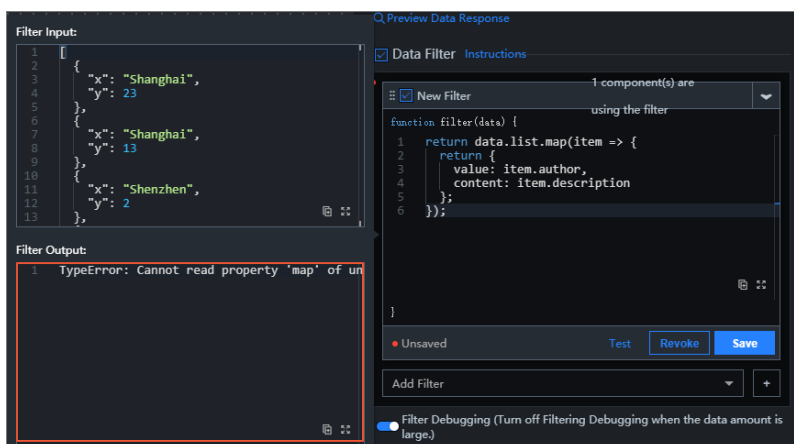
Notice When the data source is abnormal, the data it returns is incorrect. Therefore, the data filter does not filter data and is dimmed on the Data tab.

- **Filter error:** If the filter encounters an exception when it filters data, an error is reported in both the filter and the filter output.

Error in the filter

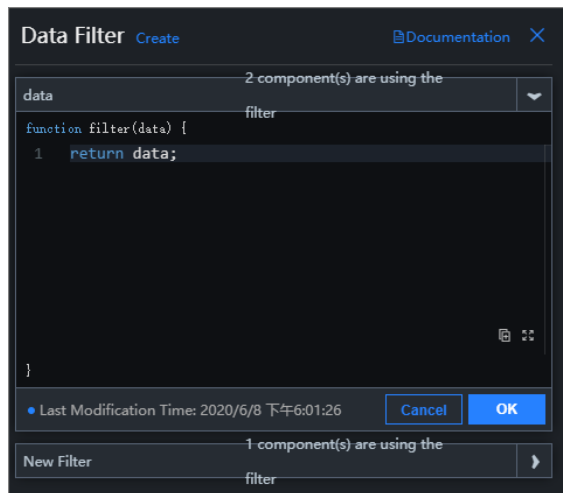



Error in the filter output



Manage the Data Filter pane

In the **Data Filter** pane on the left of the project editor, manage all filters in the project and view the dependencies between the filters and widgets. You can call the filters in all widgets in the project.

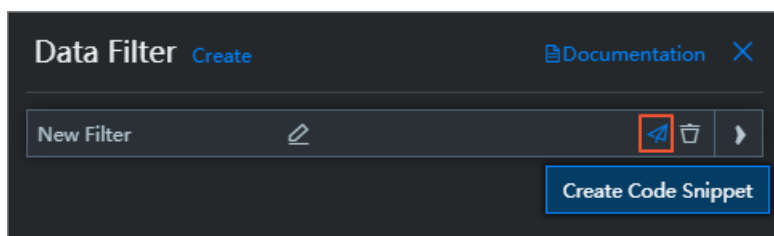


 **Warning** Modifying a filter in the Data Filter pane affects all widgets that call this filter. Proceed with caution.

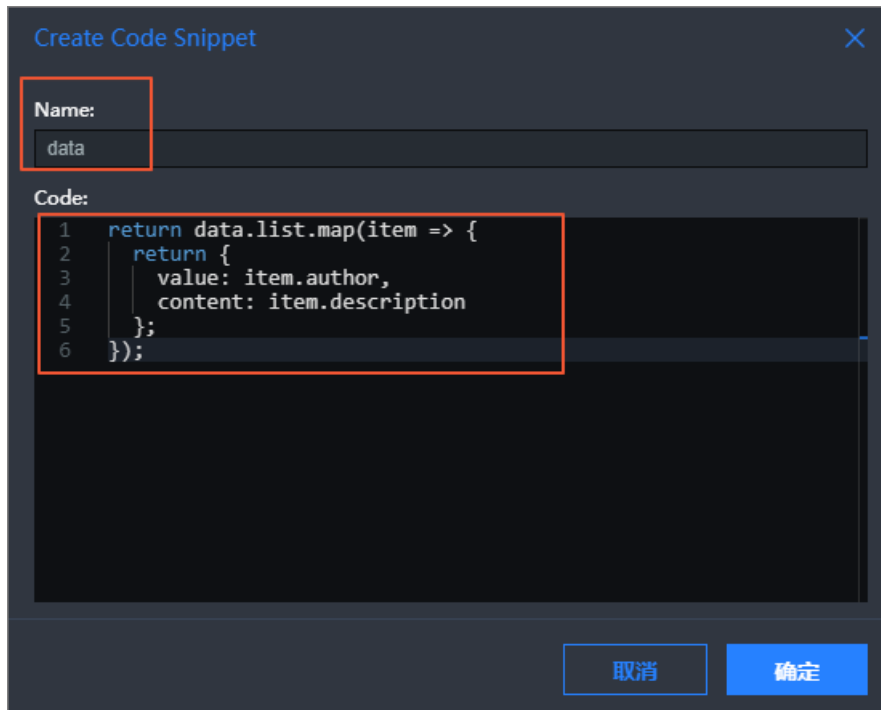
Create and import a code snippet

You can create a code snippet from a filter and import the code snippet to the filter. This allows you to call the filter across projects.

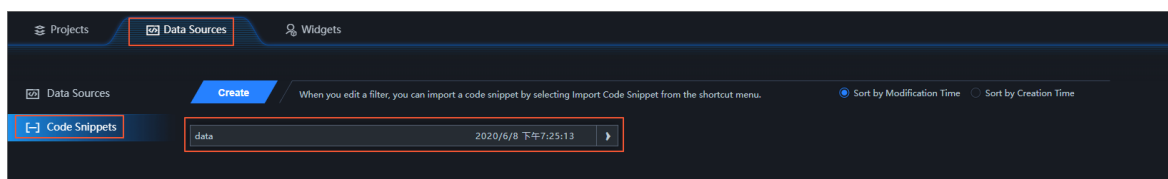
1. Move the pointer over a filter in the list and click the **Create Code Snippet** icon.



2. In the **Create Code Snippet** dialog box, view and modify the **name** and **code** of the filter. Then, click **OK**.



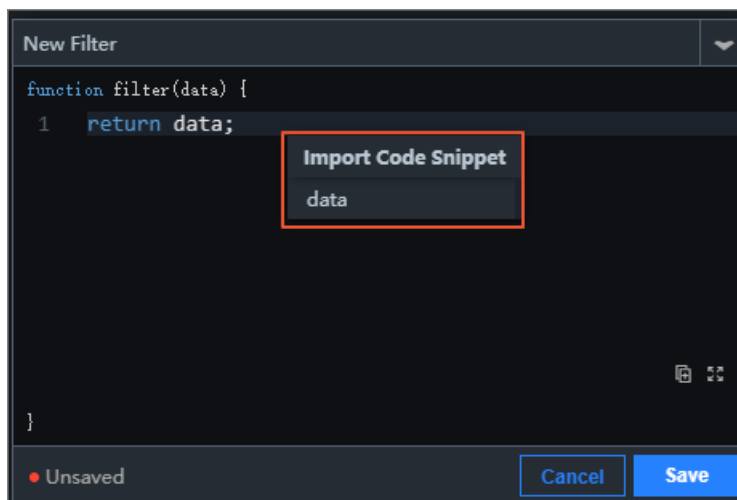
3. On the **Data Sources** tab, click **Code Snippets** to view the code snippet you created.




Note On the **Code Snippets** page, you can click **Create** to create a new code snippet that can be used in your widgets.

After the code snippet is created, you can proceed with the next step to import the code snippet to a filter.

4. Right-click the filter edit box and select a code snippet to import.



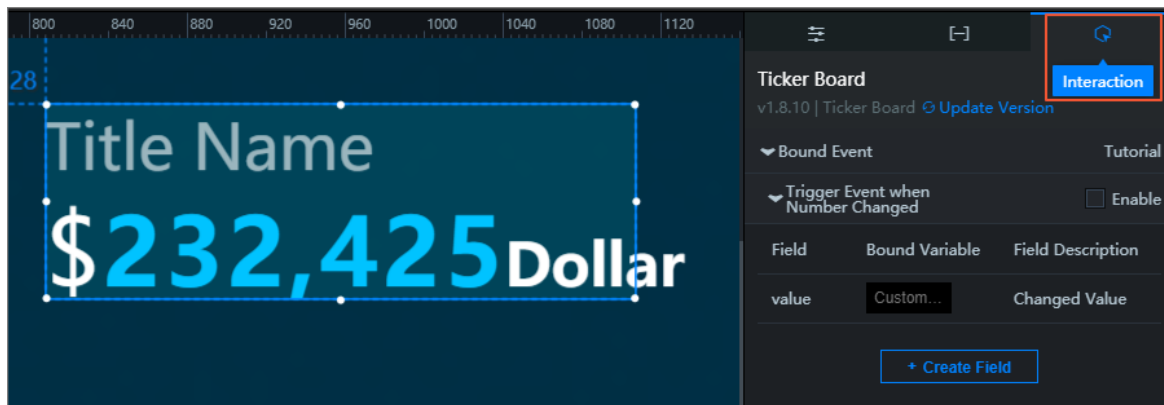
 **Note** You can create and import code snippets to share and use filters across projects.

16. Configure widget interactions

This topic uses the **ticker board** widget as an example to describe how to configure interactions between DataV widgets. In DataV, a widget passes its callback IDs as parameters when it responds to user operations or triggers automatic updates to another widget. These parameters are used in another widget as variables to query data.

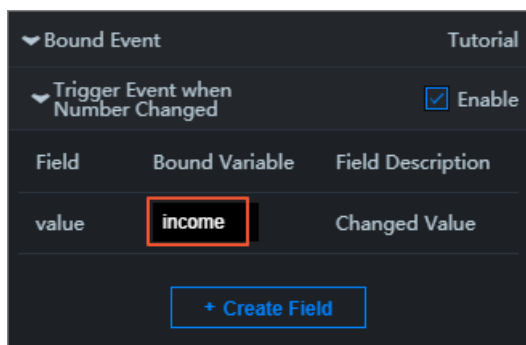
Procedure

1. Click the ticker board widget, and then click the **Interaction** tab on the right-side panel.



Note You can configure callback IDs on the **Interaction** tab on the right-side panel.

2. Select the **Enable** check box to the right of **Trigger Event when Number Changed**.
3. In the **Bound Variable** column, change the variable name from *value* to *income*.



- Note**
- After you change the variable name to *income*, you can use *income* to obtain the parameter value in another widget that calls the callback ID of this widget.
 - You can configure different variable names in different widgets to differentiate parameters.

4. Click the ticker board widget. On the **Data** tab on the right-side panel, click **Modify** next to **Data Source** and use the callback ID that you have configured in the format of `:Variable name`, for example, `:income`.

Examples:

- SQL (Use one of the following two methods.)

```
select :income as value
```

```
select A from table where count = :income
```

income is the callback ID, value is the field you specified to receive the value of the callback ID, and count and A are the fields in your database.

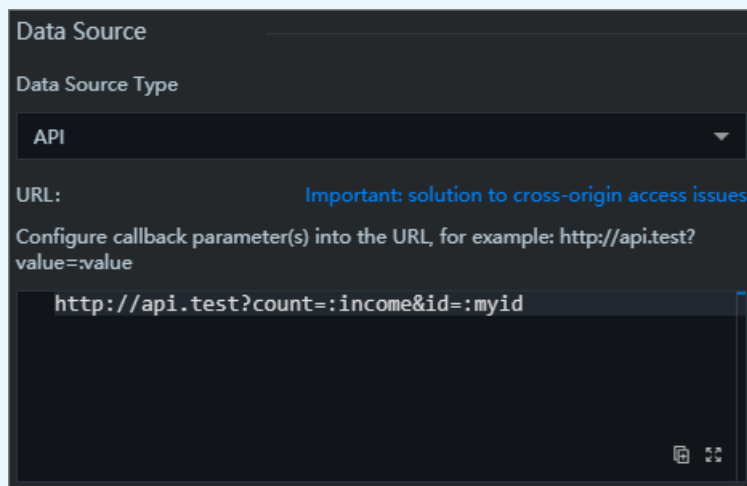
- API

```
http://api.test?count=:income&id=:myid
```

income and myid are the callback IDs, and count and id are the fields in your database.

Note

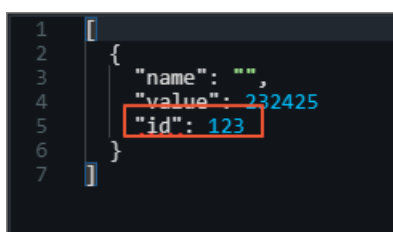
- If the **data source type** of your widget is **Static Data** or **CSV File**, callback IDs are not supported.
- DataV automatically completes the callback IDs. When you configure the data source, enter `:`, and the editor lists callback IDs configured for the widget. You can use the up and down arrow keys to select a callback ID and then press **Enter**. This helps you quickly find a callback ID when there are a lot of interactive widgets in the project.



Advanced features

Configure a custom field

1. Click the ticker board widget, and then click the **Data** tab on the right-side panel.
2. Add an id field and set its value to `123`.



3. Click the **Interaction** tab.

4. Click **Create Field**.

5. In the **Field** column, enter `id`. In the **Bound Variable** column, enter a variable name.

Field	Bound Variable	Field Description
value	income	Changed Value
id	myid	

+ Create Field

Note You must specify values in both the **Field** and **Bound Variable** columns so that the variable can take effect.

Set a default value for the callback ID

Specify a request parameter in the URL to set a default value for the callback ID. Example:

```
http://datav.aliyun.com/screen/000000?myid=123
```

000000 is the project ID.

When you access the project by using this URL, the callback ID *myid* is automatically set to 123.

Multiple callback IDs are separated with ampersands (&). The following example sets the default values for both the callback IDs *myid* and *income*:

```
http://datav.aliyun.com/screen/000000?myid=123&income=1000
```

000000 is the project ID.