

Alibaba Cloud Quick BI

Best Practices

Issue: 20181212

Legal disclaimer

Alibaba Cloud reminds you to carefully read and fully understand the terms and conditions of this legal disclaimer before you read or use this document. If you have read or used this document, it shall be deemed as your total acceptance of this legal disclaimer.

1. You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloud-authorized channels, and use this document for your own legal business activities only. The content of this document is considered confidential information of Alibaba Cloud. You shall strictly abide by the confidentiality obligations. No part of this document shall be disclosed or provided to any third party for use without the prior written consent of Alibaba Cloud.
2. No part of this document shall be excerpted, translated, reproduced, transmitted, or disseminated by any organization, company, or individual in any form or by any means without the prior written consent of Alibaba Cloud.
3. The content of this document may be changed due to product version upgrades, adjustments, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and the updated versions of this document will be occasionally released through Alibaba Cloud-authorized channels. You shall pay attention to the version changes of this document as they occur and download and obtain the most up-to-date version of this document from Alibaba Cloud-authorized channels.
4. This document serves only as a reference guide for your use of Alibaba Cloud products and services. Alibaba Cloud provides the document in the context that Alibaba Cloud products and services are provided on an "as is", "with all faults" and "as available" basis. Alibaba Cloud makes every effort to provide relevant operational guidance based on existing technologies. However, Alibaba Cloud hereby makes a clear statement that it in no way guarantees the accuracy, integrity, applicability, and reliability of the content of this document, either explicitly or implicitly. Alibaba Cloud shall not bear any liability for any errors or financial losses incurred by any organizations, companies, or individuals arising from their download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, bear responsibility for any indirect, consequential, exemplary, incidental, special, or punitive damages, including lost profits arising from the use or trust in this document, even if Alibaba Cloud has been notified of the possibility of such a loss.
5. By law, all the content of the Alibaba Cloud website, including but not limited to works, products, images, archives, information, materials, website architecture, website graphic layout, and webpage design, are intellectual property of Alibaba Cloud and/or its affiliates. This intellectual property includes, but is not limited to, trademark rights, patent rights, copyrights, and trade

secrets. No part of the Alibaba Cloud website, product programs, or content shall be used, modified, reproduced, publicly transmitted, changed, disseminated, distributed, or published without the prior written consent of Alibaba Cloud and/or its affiliates. The names owned by Alibaba Cloud shall not be used, published, or reproduced for marketing, advertising, promotion, or other purposes without the prior written consent of Alibaba Cloud. The names owned by Alibaba Cloud include, but are not limited to, "Alibaba Cloud", "Aliyun", "HiChina", and other brands of Alibaba Cloud and/or its affiliates, which appear separately or in combination, as well as the auxiliary signs and patterns of the preceding brands, or anything similar to the company names, trade names, trademarks, product or service names, domain names, patterns, logos, marks, signs, or special descriptions that third parties identify as Alibaba Cloud and/or its affiliates).

6. Please contact Alibaba Cloud directly if you discover any errors in this document.

Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information 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.
	This warning information 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 restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 Note: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	It is used for commands.	Run the <code>cd /d C:/windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is a optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand / slave}</code>

Contents

Legal disclaimer.....	I
Generic conventions.....	I
1 Common practices.....	1
1.1 Create a dashboard with a cross-chart reference.....	1
1.2 Use the filter bar to search for data by date.....	6
Create a data set.....	6
Create a dashboard.....	7
Search for data by date.....	7
1.3 Allow different users to view different data in a same report.....	9
1.4 Implement multi-dataset association.....	13
Create a dataset.....	13
Create a dashboard.....	14
Implement multi-dataset association.....	16
1.5 Use the Filter Bar to search for data.....	19
Create a dataset.....	19
Create a dashboard.....	20
Search for data.....	20

1 Common practices

1.1 Create a dashboard with a cross-chart reference

When you create a dashboard, you may have a requirement like that. For example, when you click an area of a chart, you want the corresponding fields of other correlated charts to change along with this area.

This section describes how to create a dashboard with a cross-chart reference. Take a sample dataset provided in our data model as an example. This dashboard consists of two charts, divided into two parts the upper half and lower half respectively. In the upper half, a pie chart contains the profit data for each region. In the lower half, a table contains the sales and profit data of cities in each region.

Prepare sample datasets

Create a dataset by using a CSV file. For more information, see [Upload local files](#).

Rename this dataset **demo sales dataset**.

Create a pie chart that contains profit data of each region

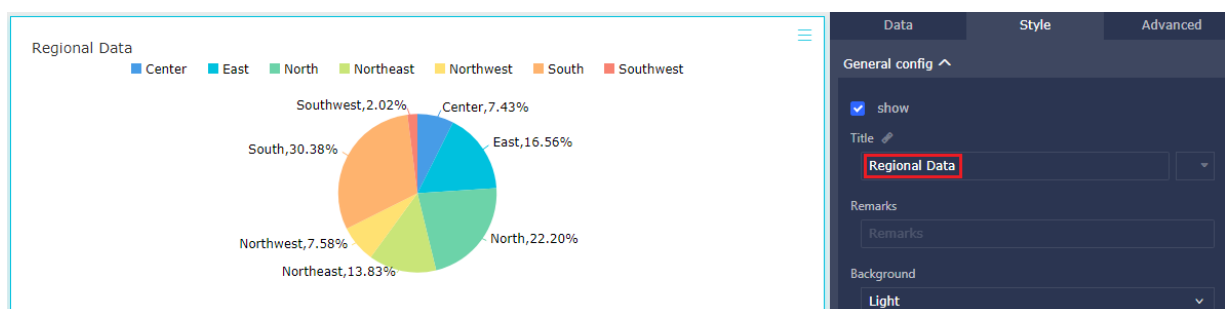
Create a dashboard and then click the pie chart icon in the configuration area of this dashboard.

You can configure the dataset of this pie chart as follows.

- Select **Sales data demo dataset** as the dataset of this pie chart.
- Select the **area** field as a dataset dimension.
- Select the **profit_amt** field as a metric.

Click the **Update** button.

On the **Style** tab, set the title of the pie chart to Regional Data. The result is shown in the following figure.



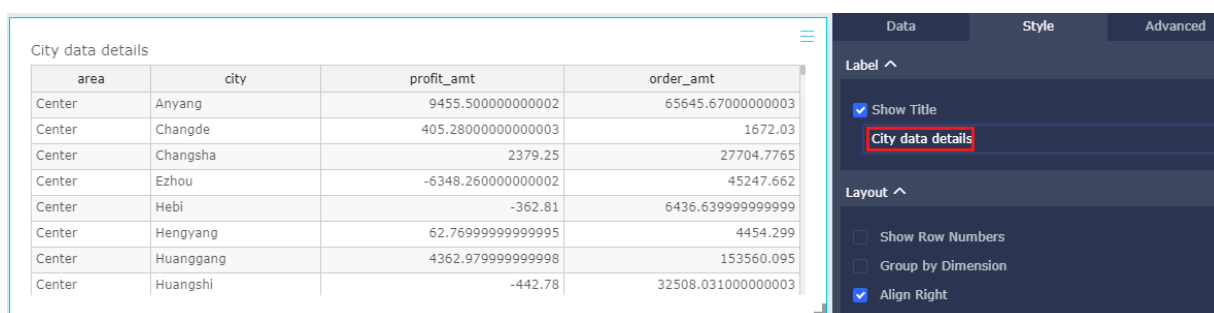
Create a table that contains sales and profit details of cities in each region

In the configuration area of this dashboard, click the table icon and then drag it to the lower half of the dashboard. You can configure data attributes of this table as follows.

- Select **Sales data demo dataset** as a dataset of this table.
- Select the **area** field and the **city** field as data dimensions.
- Select the **profit_amt** field and the **order_amt** field as metrics.

On the **Style** tab of the table, set the title of this table to **City data details**.

Click the **Update** button. The result is shown as follows.



area	city	profit_amt	order_amt
Center	Anyang	9455.500000000002	65645.670000000003
Center	Changde	405.28000000000003	1672.03
Center	Changsha	2379.25	27704.7765
Center	Ezhou	-6348.260000000002	45247.662
Center	Hebi	-362.81	6436.639999999999
Center	Hengyang	62.76999999999995	4454.299
Center	Huanggang	4362.979999999998	153560.095
Center	Huangshi	-442.78	32508.031000000003

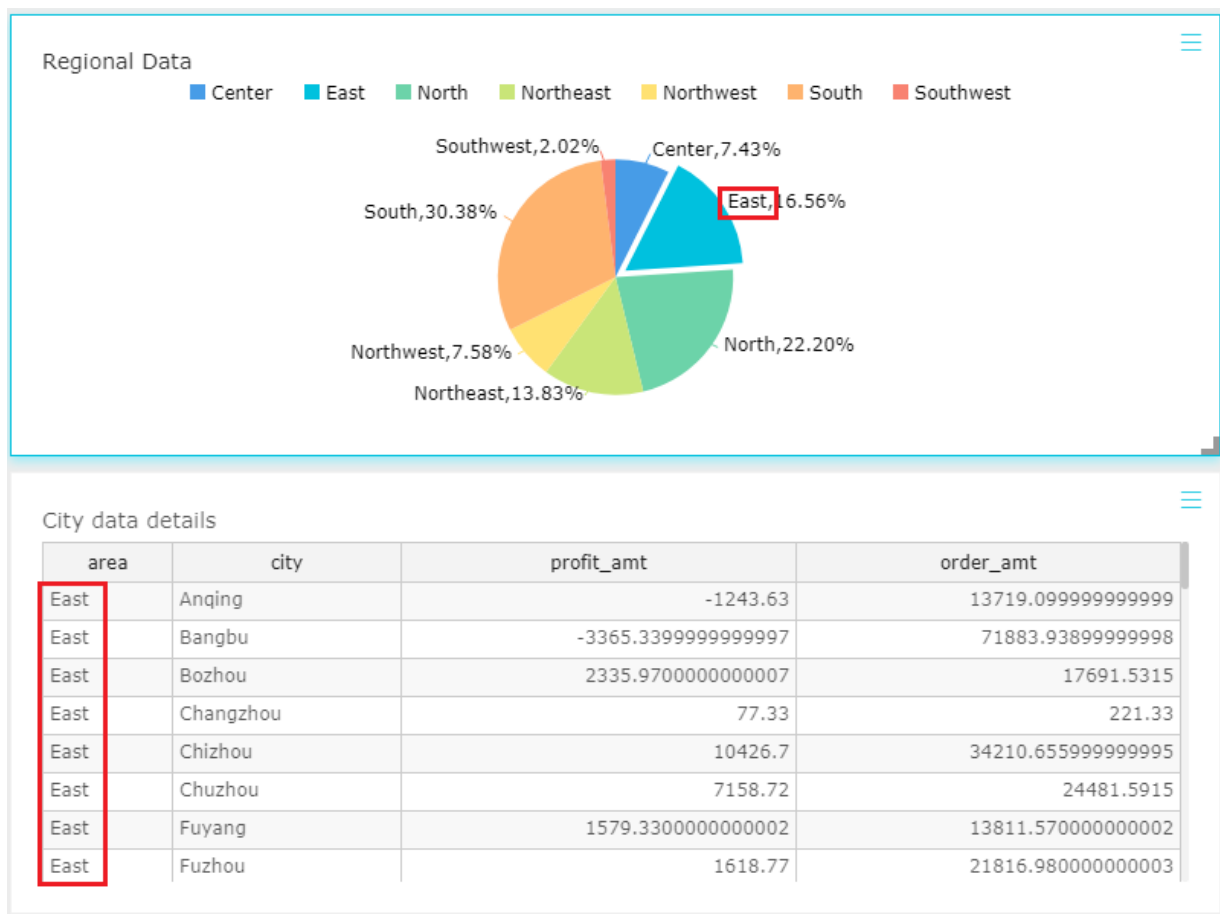
Configure a cross-chart reference on the pie chart

Click **Advanced** tab on pie chart. Join the pie chart with the table.

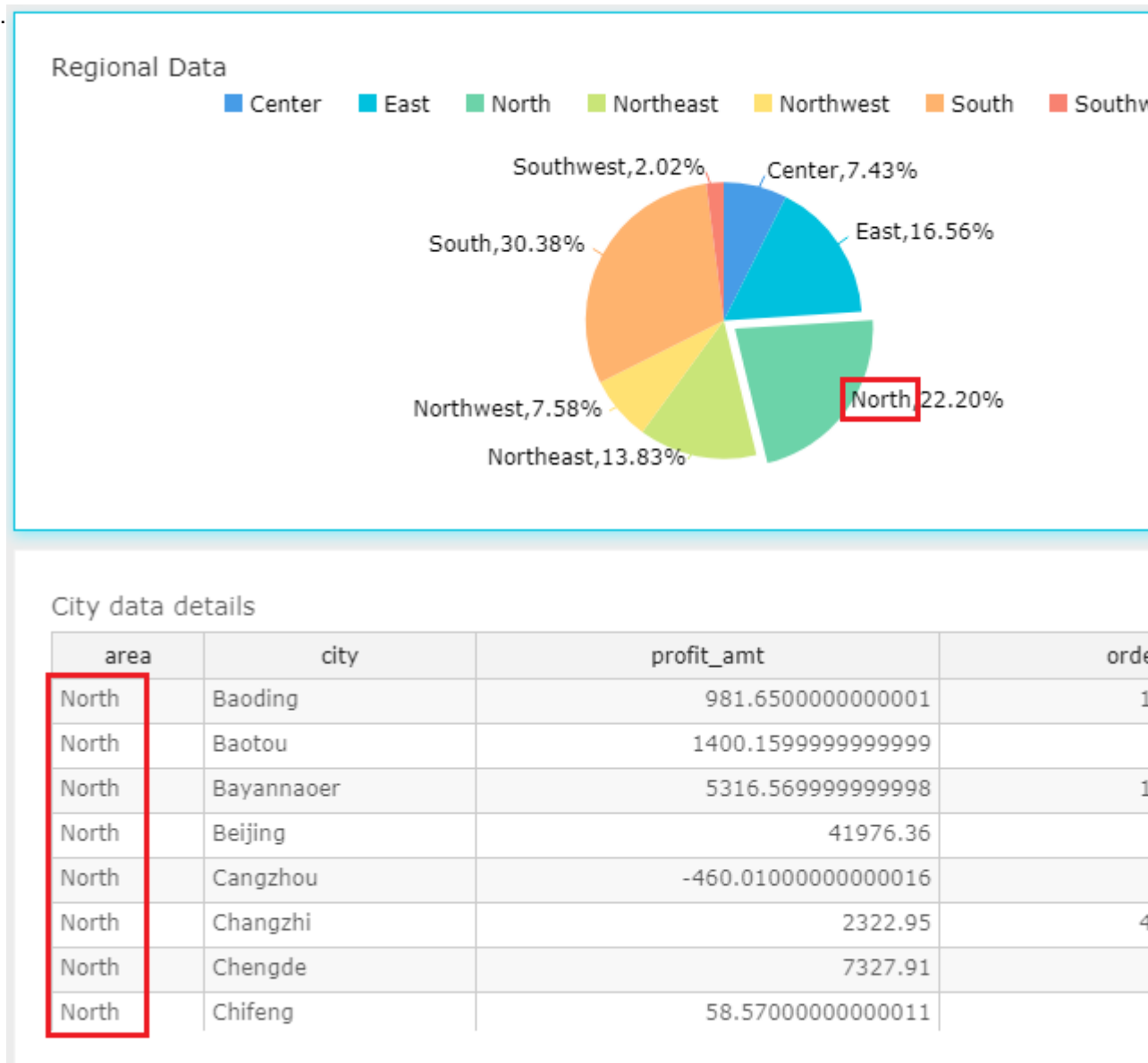
Preview correlations

Click the **Preview** button to view how the correlation works.

Click the **East** region on the pie chart, the data is shown as follows.

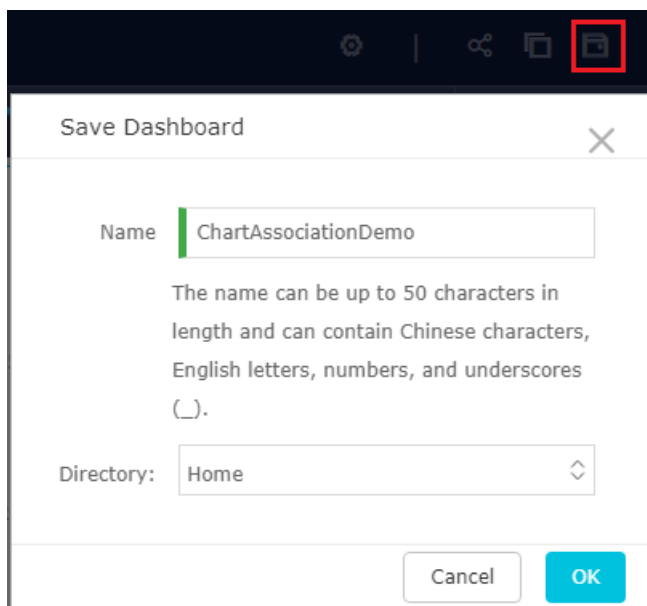


Click the **North** region on the pie chart, the data is shown as follows.



Save the dashboard

Save this dashboard after you complete the previous steps.



Publish the dashboard


If no sensitive data exists in a dashboard, you can publish this dashboard on the Internet.

You can publish the dashboard as shown in the following figure.

Make Public

Security Level: Public


Owner: aliyun

* Expires: 2018-08-31 

Regenerate URL: ☒

URL: <https://bi-ap-southeast-1-data.aliyun.com/instance/instance/view?ps.html?psid=572bd75-1704-4834-b54b-454944174608&accessToken=JTM2587L2995b4ee173404787b4e48>

[Copy to Clipboard](#)

 **Warning**
When you make a work publicly available, any user can use this URL to access your dashboard. Please take proper precautions.

[Close](#) [Make Public](#) [Make Private](#)

1.2 Use the filter bar to search for data by date

The filter bar allows you to search for data by date. You can set the date range to search for required data.

Context

The following example uses `company_sales_record` as its dataset.

Create a data set

Procedure

1. Log on to the Quick BI console.
2. Click **Workspace > Data sources** on the left side pane to go to the data source management page.
3. Click **Create Data Sources**, and select a data source.

For more information about how to create a data source, see [Create a cloud data source](#), [Create a data source under self-built databases](#), and [Upload local files](#).

4. Click the **Create Dataset** icon. For information about how to create a dataset, see [Create a dataset](#).

Create a dashboard

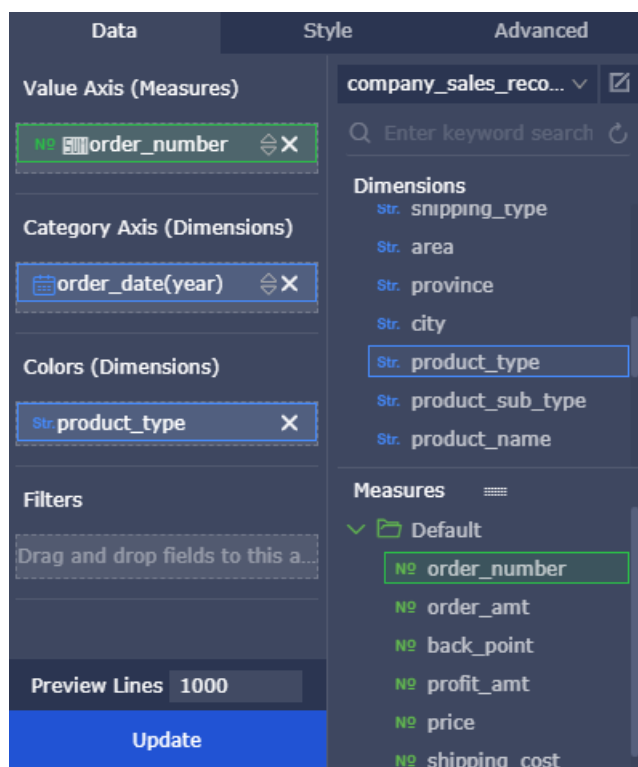
Procedure

1. Click **Dashboard** to go to the dashboard management page.
2. Click the dataset to switch to **company_sales_record** dataset.
3. Select a chart type, such as a bar chart.
4. Select a field, as shown in the following figure.



Note:

Data must contain date fields in order to be searched by date.

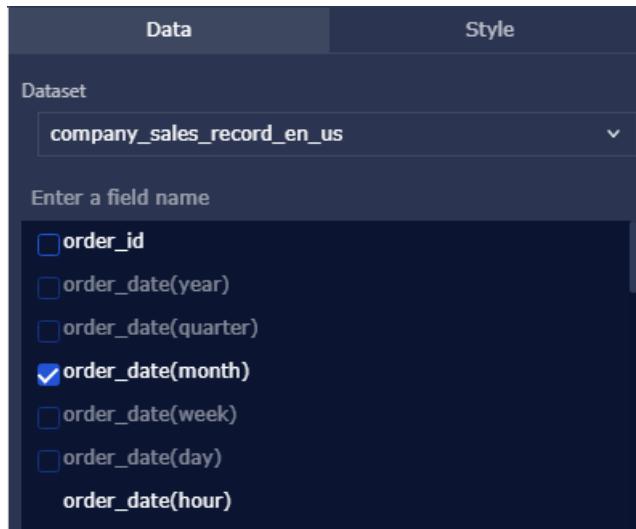


5. Click **Update**. The system automatically draws the chart.

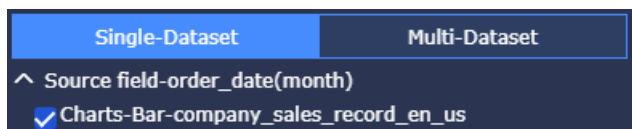
Search for data by date

Procedure

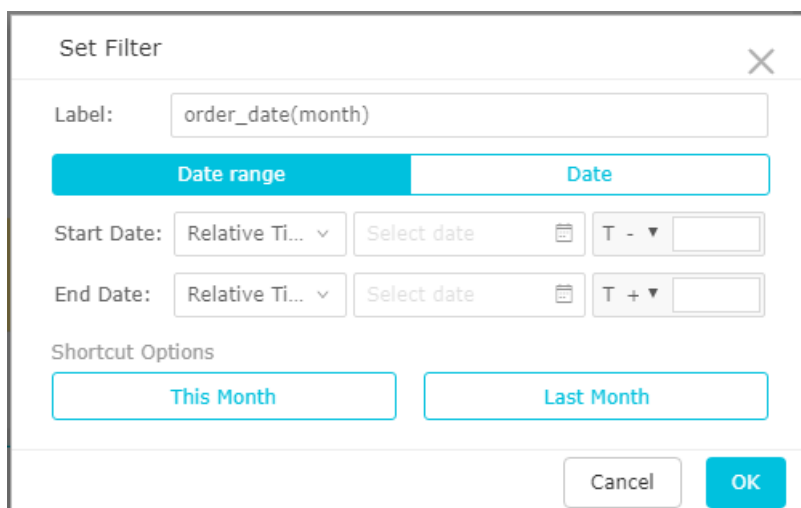
1. Double-click the **Filter bar** icon.
2. Select **company_sales_record** as the source dataset.
3. Select **report_date(month)** as the field to be searched for.



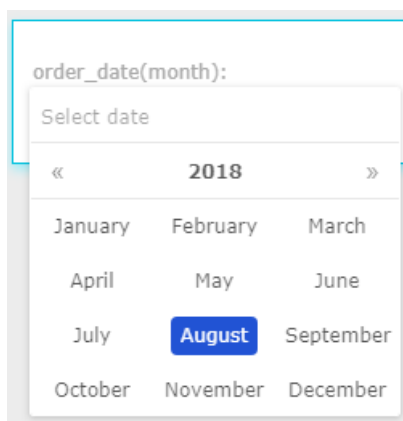
4. Click **Single-Dataset**, and select **Bar** as the associated chart, as shown in the following figure.



5. In the search box, click the field name to open the field filter menu, as shown in the following figure.



6. Select **Date range** and set the start and end dates in the search box, as shown in the following figure.



7. Click **Search**. The system updates the chart based on the specified conditions.

1.3 Allow different users to view different data in a same report

The row-level permissions of Quick BI allow different users to view different data in the same report.

Currently, row-level permissions are only usable in the advanced edition. For details about how to apply for an advanced edition, see [Quick BI purchases, upgrades, and renewal](#).

This example uses a sales team that serves all regions in China as an example. The team must track the sales in over 30 provinces, as well as cities and counties of each province in real-time. As the business continuously grows and expands, the team must view an increasing amount of sales data.

In the complex and massive data, it is expected that the person in charge of each region views only data that the person is responsible for to increase the person's working efficiency and prevent sensitive business data from leakage.

The following scenario uses the company_sales_record dataset as an example. For details about how to create a dataset, see [Create a dataset](#).

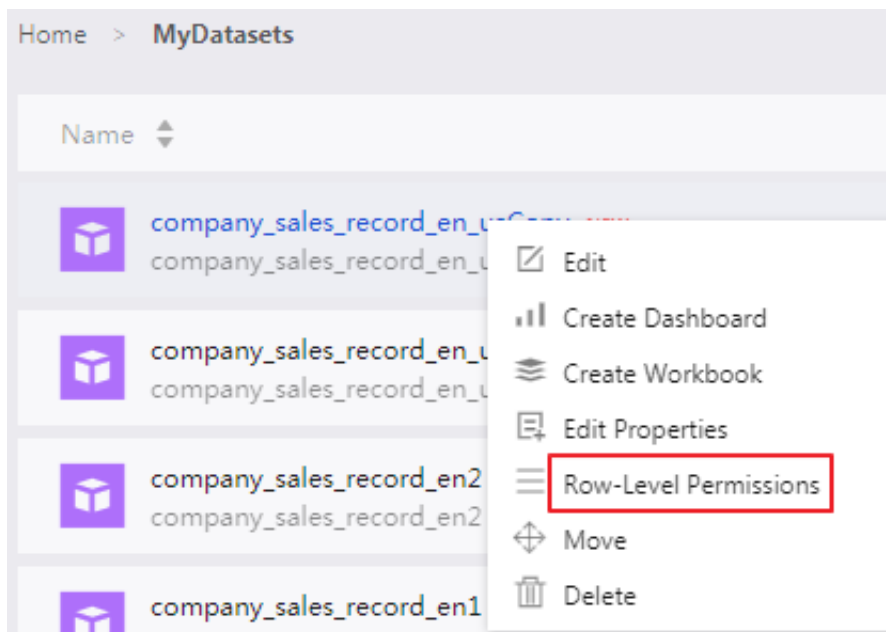
Set row-level permissions

You must manage row-level permissions on a dataset in the workspace.

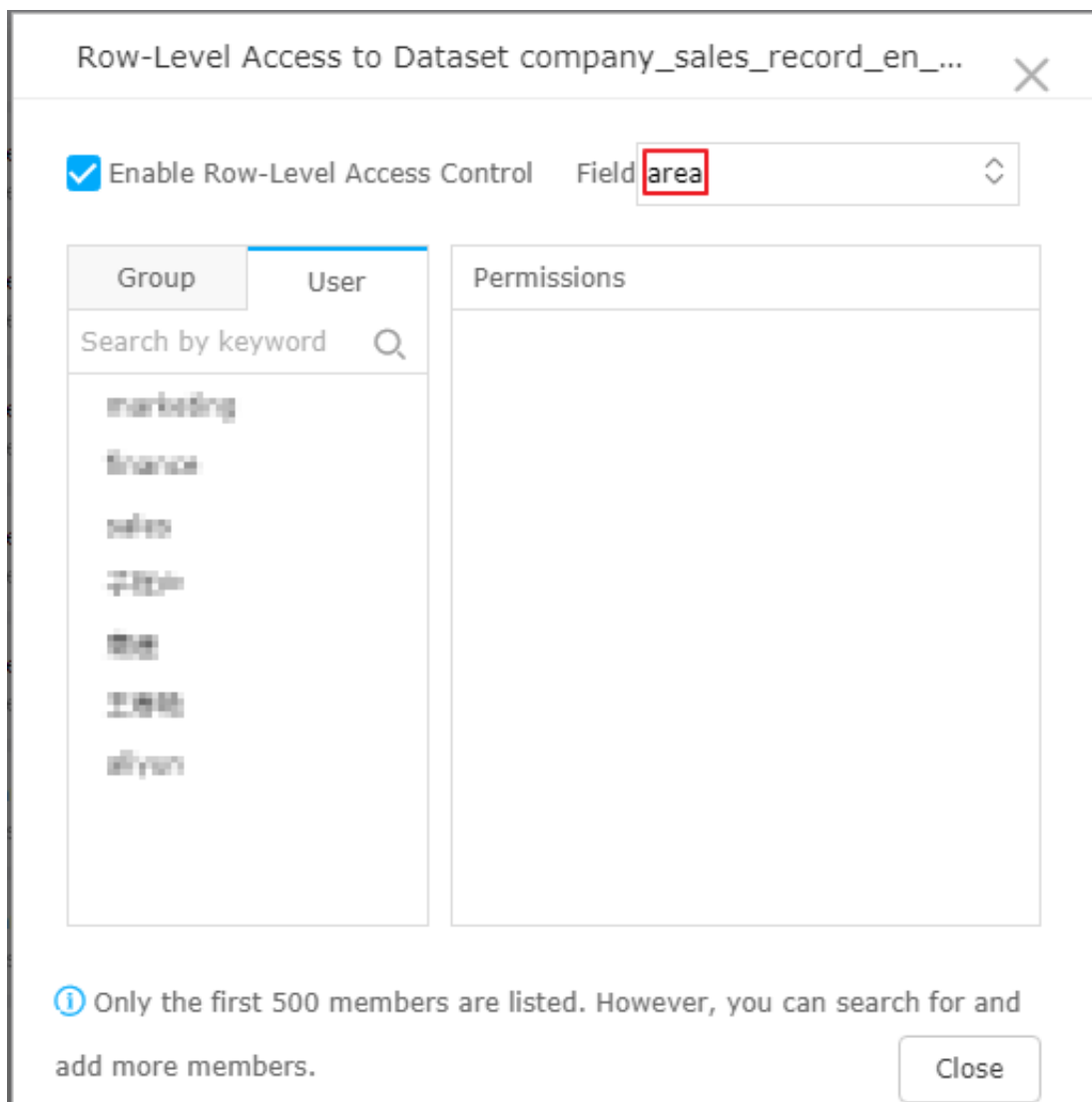
You must set row-level permissions on the dataset that you use to create a dashboard. If the dataset does not exist in the workspace, you must create it in the workspace.

1. Log on to the Quick BI console.
2. Click the **Workspace** tab, and select a workspace, as shown in the following figure.
3. Click **Datasets**. The dataset management page is displayed.

4. Select a dataset. Click either the ellipsis icon or the right mouse button, and select **Row-Level Permissions**.

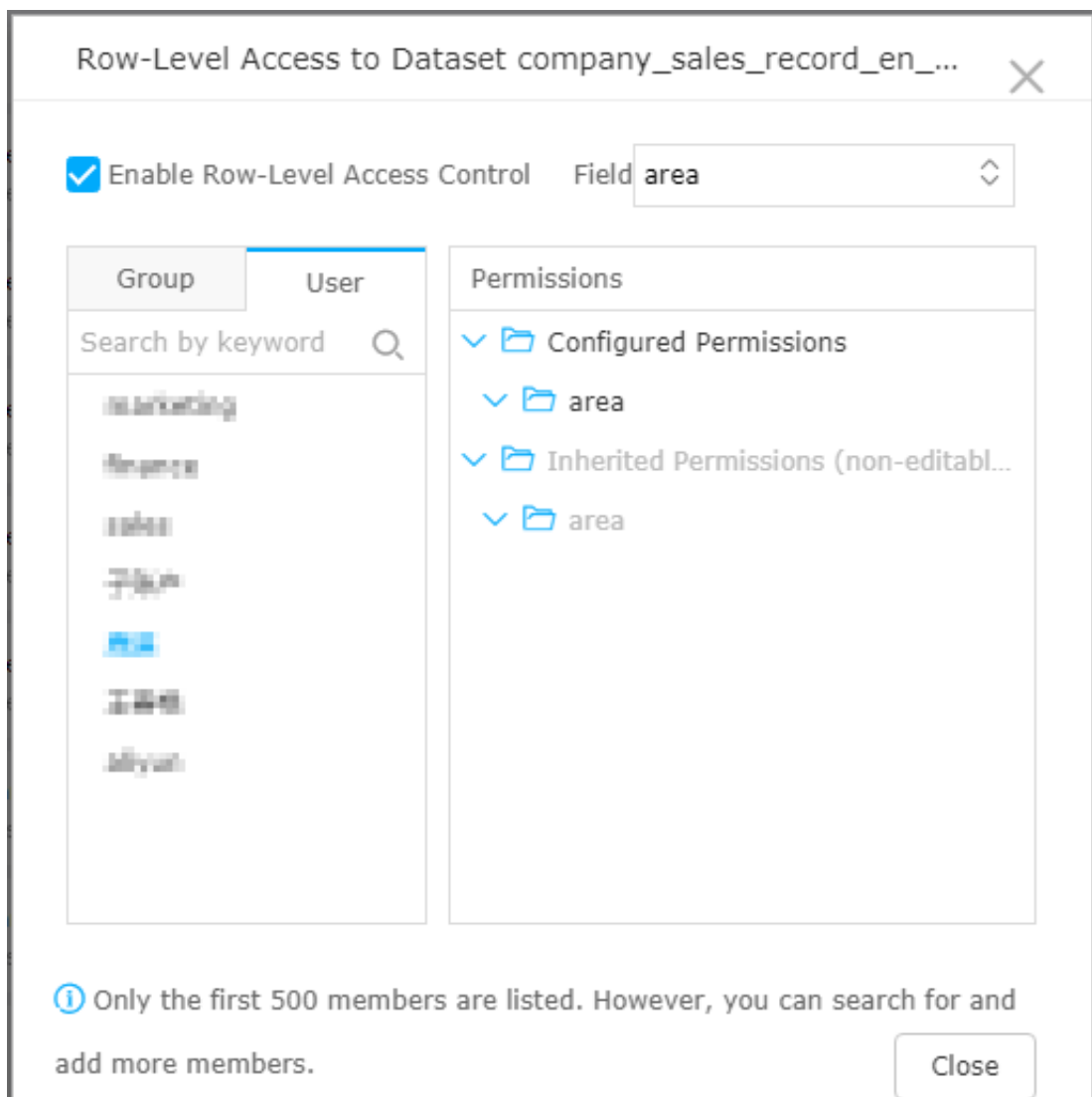


5. Select **Enable row-level access control**.
6. Click the drop-down arrow and select a field, such as area, as shown in the following figure.



7. Select an object in the list that appears after you click the drop down arrow.

When you select the object, the controlled field is automatically listed in the **Permissions** area, as shown in the following figure.



8. Click **area**. All information contained in the area field is displayed.

9. Select an area, such as "Northeast", and then click **Add**.

After the area is added, you can only view sales data of the Northeast region in the report.



Note:

As long as one field requires row-level permissions, you must specify the members in the organization who have access permissions on the controlled field in the dataset. Otherwise, no data is displayed when the members access any reports generated by the dataset.

10. Click **Close** to set the row-level permissions.

Verify row-level permissions

1. Go to **Personal workspace**.

2. Click **Dashboard** to go to the dashboard management page.

3. Find the dashboard to be shared, and click **Share** .
4. Enter the account of the person with whom you want to share the dashboard, and select an expiration date.

**Note:**

Row-level permissions must be granted to the account of the person with whom you want to share the dashboard. Otherwise, the effect cannot be verified.

5. Click **Save** to complete report sharing.

If row-level permissions are granted to the person with whom you want to share the dashboard, the person can only view the authorized data.

1.4 Implement multi-dataset association

The dashboard supports both single-dataset associations and multi-dataset associations to help you associate multiple charts.

Context

The dashboard supports both single-dataset associations and multi-dataset associations to help you associate multiple charts.

Multi-dataset association can associate data from different datasets. Make sure that the values of data members of association items are consistent. Otherwise, the association is invalid.

The following examples use the multi-dataset association function with the example of `company_sales_record_en_us` and `company_sales_record`, queries report content from different datasets.

Create a dataset

Procedure

1. Log on to the Quick BI console.
2. Click **Workspace** > **Data sources** to go to the data source management page.
3. Click **Create Data Sources**, and select a data source.

For more information about how to create a data source, see [Create a cloud data source](#), [Create a data source under self-built database](#), and [Upload local files](#).

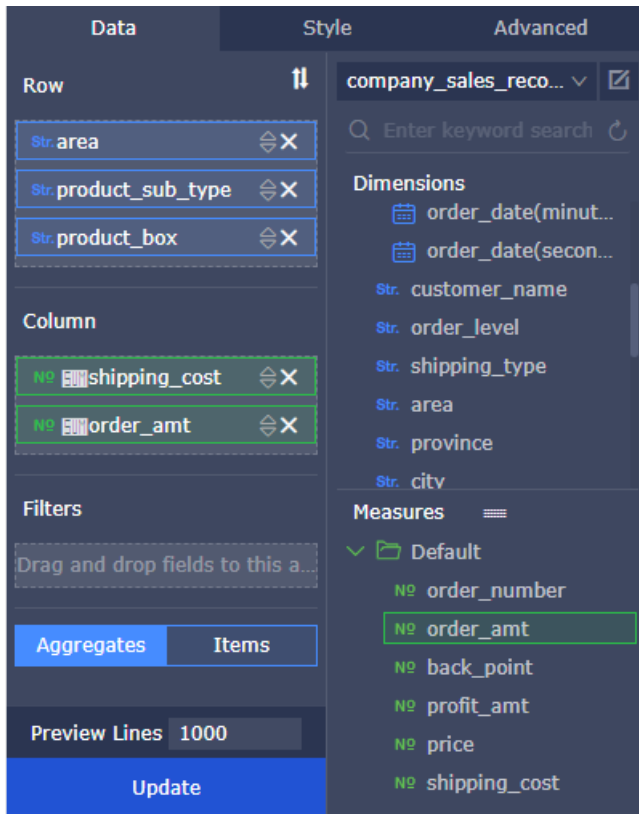
4. Click "Create Dataset" to create a dataset.

For more information about how to create a dataset, see [Create a dataset](#).

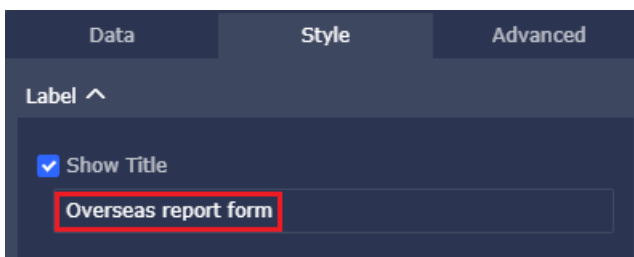
Create a dashboard

Procedure

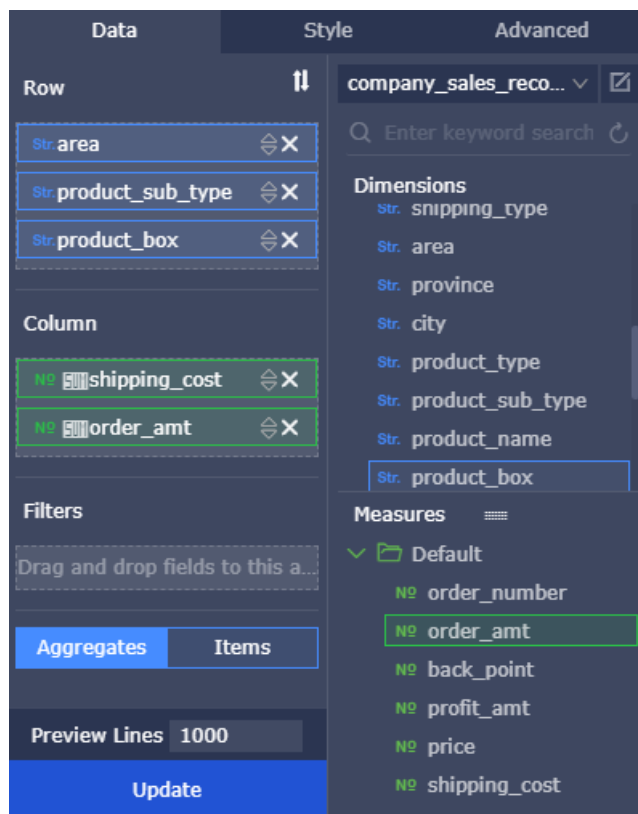
1. Click **Dashboard** to go to the dashboard management page.
2. Click the dataset switch icon to select the `company_sales_record_en_us` dataset.
3. Select a chart type, for example, Table.
4. Select a field, as shown in the following figure.



5. Click **Update**.
6. Click the **Style** tab, and rename the chart as **Overseas report form**, as shown in the following figure.

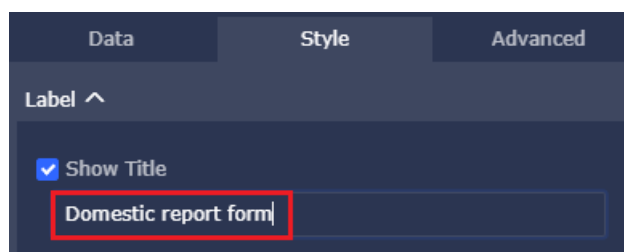


7. Click the dataset to switch to the `company_sales_record` dataset.
8. Select a data chart, for example, Table.
9. Select the required field, as shown in the following figure.



10. Click **Update**. The system automatically draws the chart.

11. Click **Style**, and rename the chart as **Domestic report form**.



12. Click **Save** to save the dashboard, as shown in the following figure.

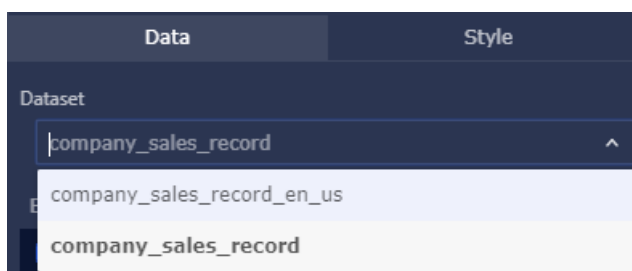
Overseas report form				
area	product_sub_type	product_box	shipping_cost	order_amt
Center	Accessory	Small Box	565.37	91617.065500000001
Center	Accessory	Small bag	579.5400000000003	77840.684000000001
Center	Appliance	Huge Box	32.18	10459.9755
Center	Appliance	Large Box	69.6	2031.1399999999999
Center	Appliance	Medium Box	42.839999999999996	3052.01
Center	Appliance	Small Box	140.82	19216.121500000005
Center	Bookshelves	Huge Paperbag	542.1700000000001	45997.294
Center	Box	Huge Box	251.03	25440.79

Domestic report form				
area	product_sub_type	product_box	shipping_cost	order_amt
Center	Accessory	Small Box	565.37	91617.065500000001
Center	Accessory	Small bag	579.5400000000003	77840.684000000001
Center	Appliance	Huge Box	32.18	10459.9755
Center	Appliance	Large Box	69.6	2031.1399999999999
Center	Appliance	Medium Box	42.839999999999996	3052.01
Center	Appliance	Small Box	140.82	19216.121500000005
Center	Bookshelves	Huge Paperbag	542.1700000000001	45997.294
Center	Box	Huge Box	251.03	25440.79

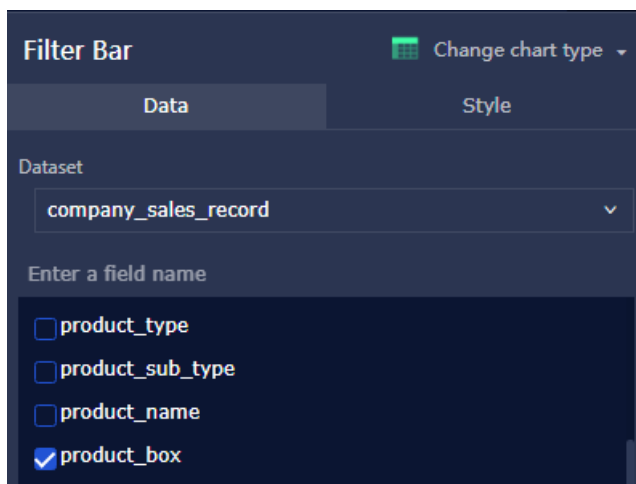
Implement multi-dataset association

Procedure

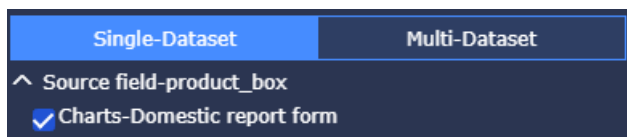
1. Click the Filter Bar control and drag the control to the top of the dashboard.
2. On the data tab, select a dataset that needs to function, for example, maid, as shown in the following figure.



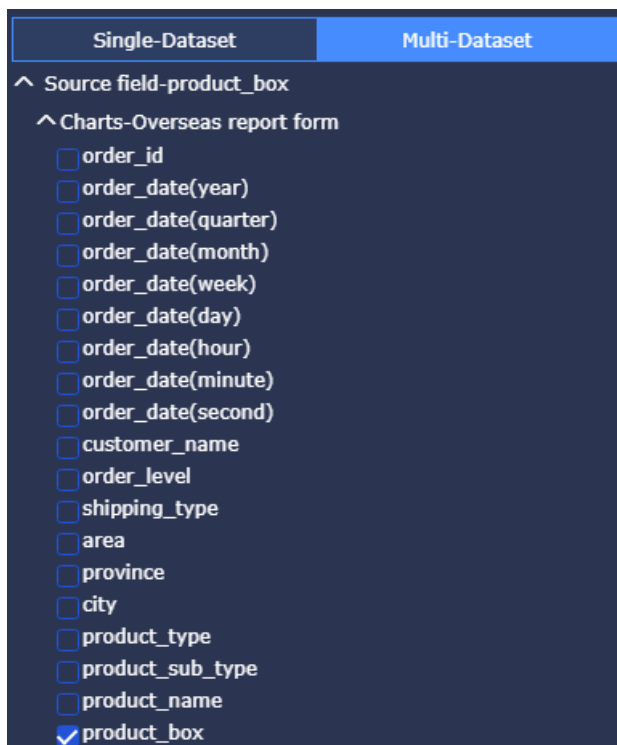
3. Select a required field, for example, product_box.



4. Click **Single-Dataset**, and select the domestic report form.

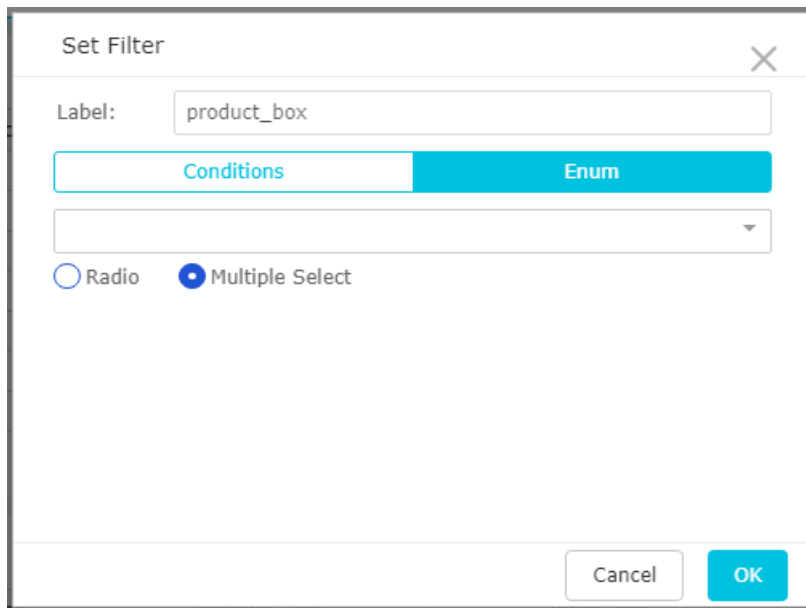


5. Click **Multi-Dataset**, and click the drop-down arrow next to the overseas report form to open the field list.
6. Select the field you selected on the Data page (product_box).

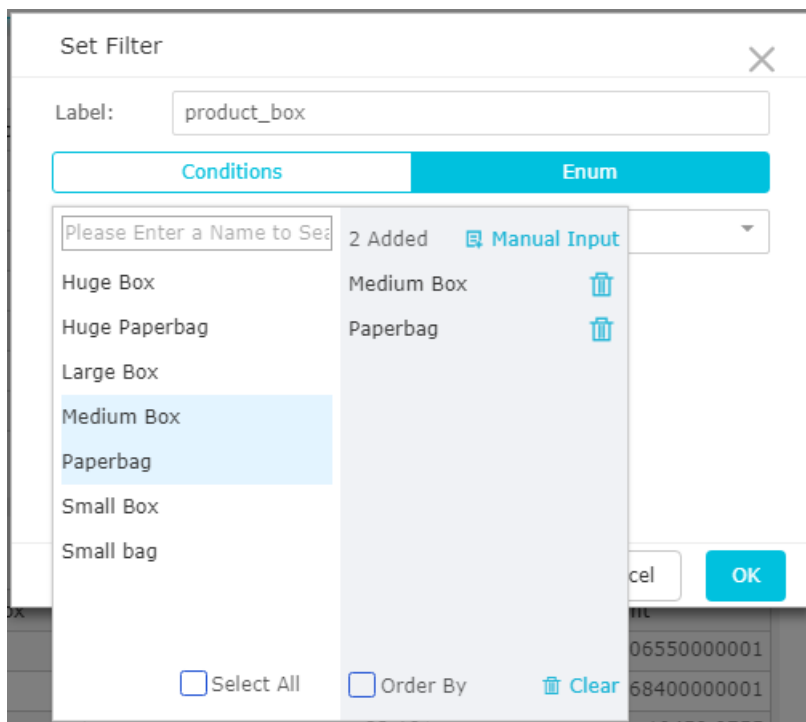


7. In the control, click **Product box** area to open the field filter menu.

8. Select **Enum** as the field filtering condition, and then select **Radio** or **Multiple Select**, as shown in the following figure.



9. Click the drop-down arrow of the product box, and select the item to be filtered.



10. Click **Search**, and the control performs the query on both the domestic and overseas report forms.

product_box: Medium Box, Paperbag

Search

Overseas report form

area	product_sub_type	product_box	shipping_cost	order_amt
Center	Appliance	Medium Box	42.839999999999996	3052.01
Center	Box	Medium Box	6.5	96.01
Center	Chair	Medium Box	69.15	14113.851999999999
Center	Decorator	Medium Box	129.57	26082.379500000003
Center	Decorator	Paperbag	62.21	9524.93
Center	Machines	Medium Box	205.73000000000002	48607.869999999995
Center	Paper	Paperbag	312.92999999999995	55140.079500000001
Center	Pen	Paperbag	218.44000000000003	23750.8855

Domestic report form

area	product_sub_type	product_box	shipping_cost	order_amt
Center	Appliance	Medium Box	42.839999999999996	3052.01
Center	Box	Medium Box	6.5	96.01
Center	Chair	Medium Box	69.15	14113.851999999999
Center	Decorator	Medium Box	129.57	26082.379500000003
Center	Decorator	Paperbag	62.21	9524.93
Center	Machines	Medium Box	205.73000000000002	48607.869999999995
Center	Paper	Paperbag	312.92999999999995	55140.079500000001
Center	Pen	Paperbag	218.44000000000003	23750.8855

1.5 Use the Filter Bar to search for data

The Filter Bar allows you to search for data. You can set the data range to search for data you need.

Context

Example: Search for provinces and cities where the order amount is between 2500 and 4500.

The following example uses company_sales_record as its dataset.

Create a dataset

Procedure

1. Log on to the Quick BI console.
2. Click **Workspace** > **Data sources** to go to the data source management page.
3. Click **Create Data Sources**, and select a data source.

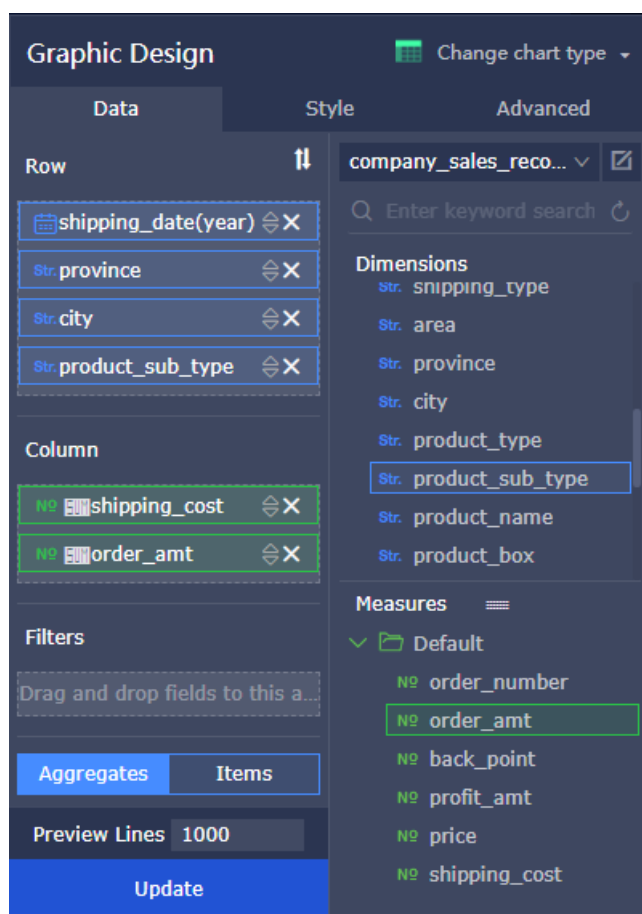
For more information about how to create a data source, see [Create a cloud data source](#), [Create a Data Source from External Database](#), and [Upload Local Files](#).

4. Click **Create Dataset** to create a dataset.

Create a dashboard

Procedure

1. Click **Dashboard** to go to the dashboard management page.
2. Click the dataset to switch to the company_sales_record dataset.
3. Select a chart type, for example, Table.
4. Select a field, as shown in the following figure.

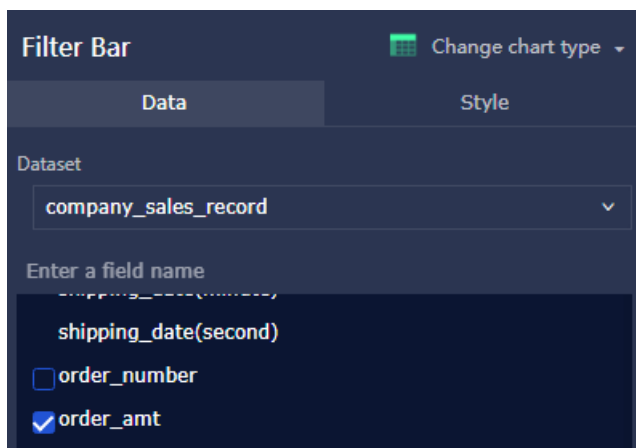


5. Click **Update**, and the system automatically draws a chart.

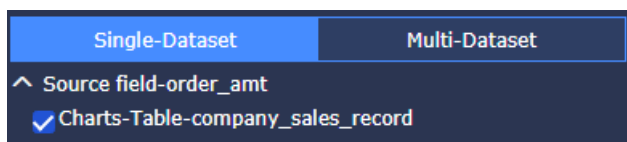
Search for data

Procedure

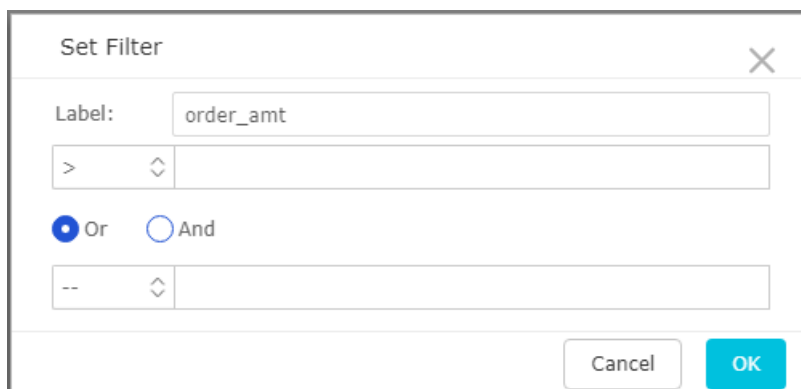
1. Click **Filter Bar**.
2. Select company_sales_record as the source dataset.
3. Select order amount as the search field, as shown in the following figure.



4. Click **Single-Dataset**, and select the table as the associated chart, as shown in the following figure.



5. In the query box, click the field name to open the field filtering menu.



6. Set the search range for the numeric values, as shown in the following figure.



7. Enter a range to search for the amount between these two numbers, as shown in the following figure.

order_amt:

>

2500

and

<

4500

Search

8. Click **Search** and the chart associated with the control is updated automatically.

The numbers of order amount between 2500 and 4500 in the table are shown in the following figure.

Table-company_sales_record

shipping_date(year)	province	city	product_sub_type	shipping_cost	order_amt
2013	Anhui	Bozhou	Box	29.3	2,990.6
2013	Anhui	Bozhou	Telephone	5.9	4,008.7
2013	Anhui	Huaibei	Telephone	5.3	2,860.9
2013	Anhui	Liuan	Pen	13.1	3,517.8
2013	Anhui	Suzhou	Telephone	94.6	3,734.0
2013	Anhui	Tongling	Decorator	28.1	3,313.9
2013	Gansu	Lanzhou	Table	29.2	3,905.8
2013	Guangdong	Chaozhou	Chair	30.0	3,041.3