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Quick BI

User Guide

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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 `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

Table of Contents

1.Data modeling

1.1. Overview of data modeling

Data modeling enables data visualization and allows you to quickly and easily obtain key information for decision-making.

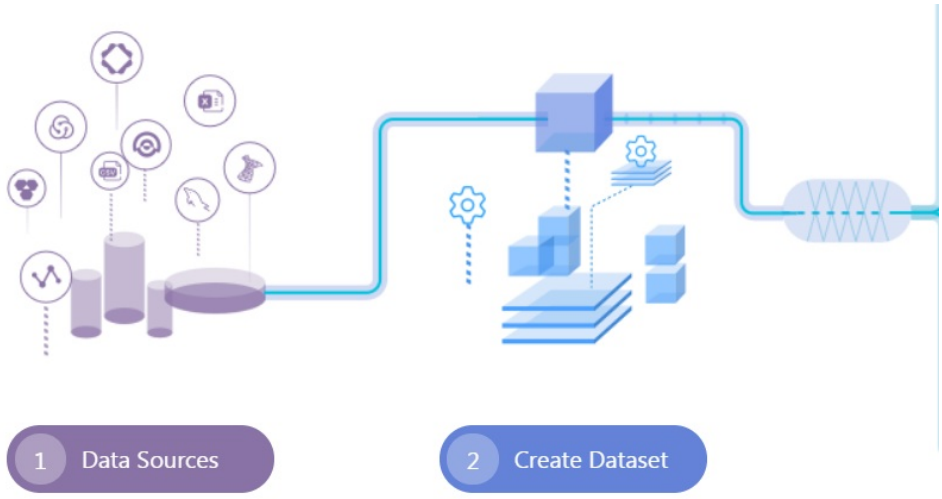
Background information

Data modeling is based on data sources and datasets. It is the basis for data visualization.

- **Data source**: allows IT engineers and data R&D engineers to obtain required data by connecting Quick BI with a specific data source.
- **Dataset**: allows IT engineers, data R&D engineers, and data analysts to process data by creating datasets on Quick BI.

Process

The following figure shows the data modeling process.



- Create a data source
- (Optional)Create a dataset folder
- Create a dataset
- Perform operations on a dataset

2.Build reports

The Report Building Service (RBS) supports the What You See Is What You Get (WYSIWYG) feature for designing data applications. You can use widgets and templates to generate charts for PC users and mobile users. Charts such as the dashboard, workbook, and classic workbook can be shared, published, and transferred to allow readers to see the created charts.

> **Note** The classic workbook is a beta feature and is not supported in future releases. Additionally, the classic workbook does not support custom group fields, data type conversion, snowflake schemas association, or database data association across different sources.

Service components

Create and manage dashboards

Create an interactive dashboard style chart. Dashboard charts include the following features:

- Supports dividing the dashboard into 12 sections.
- Supports 35 types of charts including bar, pie, dashboard, radar, polar, funnel, and card, and 5 types of widgets including the filter bar, text area, iFrame, TAB, and image.
- Supports global parameters, linkage, link (only for tables and scatters), drilling, and linkage query.
- Supports row-level permissions

Create and manage data applications

Data applications are the collections of the pre-defined dashboards. It provides you with an interactive selection feature that is similar to a menu, including the following features:

- Create and edit data applications based on templates.
- List, view, and delete data applications.

Share and transfer data works, and manage permissions

The system allows you to share and transfer charts you have created to readers with the following features:

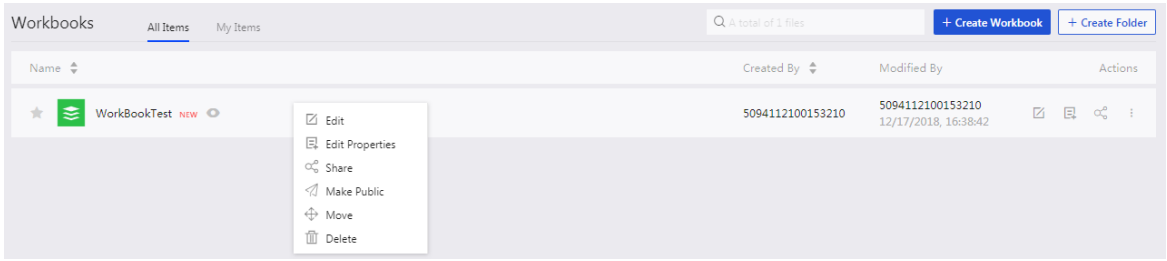
- Transfer and share dashboards and data applications.
- Manage permissions for accessing dashboards and data applications.
- Use the permission hierarchy and inheritance to control access for dashboards and data applications.

3.Manage files

BI portals are also referred to as data works. You can query and edit your chart files.

Procedure

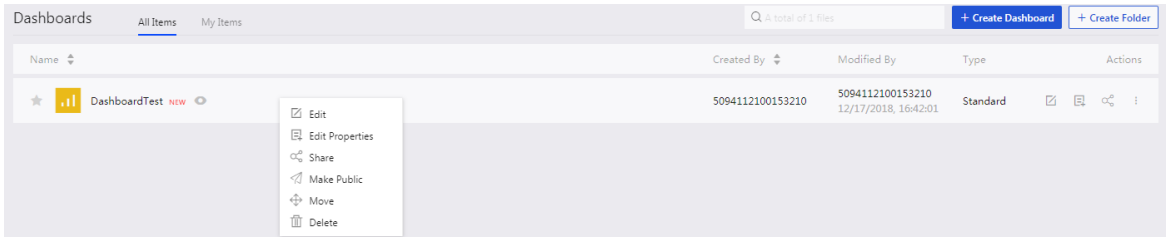
1. Log on to the Quick BI console.
2. Click the **Workspace** tab. In the left-side navigation pane of the Workspace page, click **Workbooks**.
3. Right-click a workbook, as shown in the following figure.



   - Edit: Edit the workbook.
   - Edit Properties: Change the workbook name.
   - Share: Share the workbook with other users for a specific period.
   - Make Public: Allow visitors to use a generated link to access the workbook without the need to log on to the system.
   - Move: Move the workbook to another directory.
   - Delete: Delete the workbook.

> **Note** A shared workbook is read-only and cannot be edited.

4. In the left-side navigation pane of the Workspace page, click **Dashboards**.
5. In the Dashboards page that appears, right-click a dashboard, as shown in the following figure.



   - Edit: Edit the dashboard.
   - Edit Properties: Change the dashboard name.
   - Share: Share the dashboard with other users for a specific period.
   - Make Public: Allow visitors to use a generated link to access the dashboard without the need to log on to the system.
   - Move: Move the dashboard to another directory.
   - Delete: Delete the dashboard.

6. In the left-side navigation pane of the Workspace page, click **BI Portals**.

7. On the BI Portals page that appears, right-click a BI portal, as shown in the following figure.

   - Edit: Edit the portal.
   - Edit Properties: Change the portal name.
   - Share: Share the portal with other users for a specific period.
   - Delete: Delete the portal.

4.Upload local files to a group workspace

This topic describes how to upload local files to a group workspace and what to do next in Quick BI Pro and Quick BI Enterprise Standard.

Prerequisites

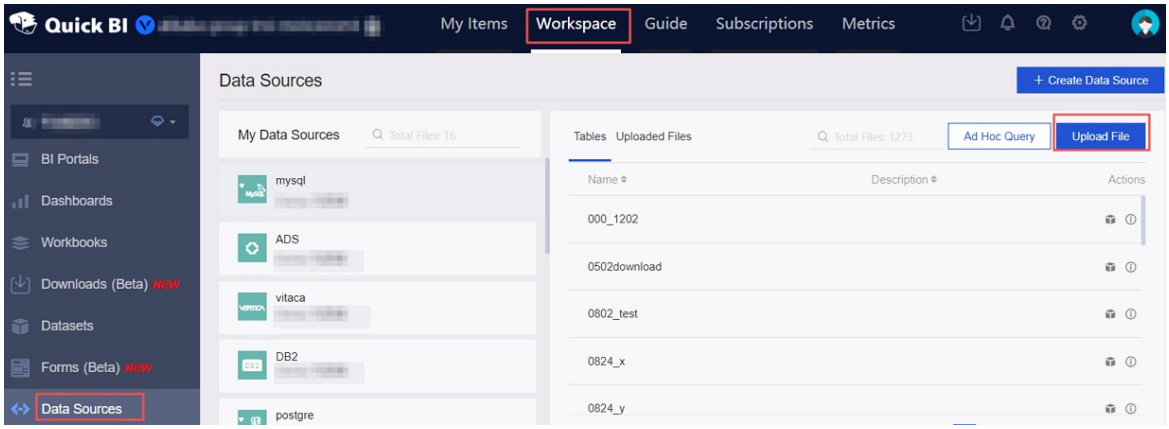
- You can upload local files to MySQL, SQL Server, MaxCompute, and Oracle databases.
- A data source is created based on one of the supported databases.
- The file that you want to upload is ready.

> **Note**
>
> - The table header of the file that you want to upload is placed in the first row. Sheet 1 cannot contain merged cells.
> - The number of columns in a file cannot exceed 100. The size of an XLS or XLSX file cannot exceed 20 MB and that of a CSV file cannot exceed 50 MB. If the size of a file exceeds the upper limit, we recommend that you break the file into batches, upload a batch, and append other batches one after another.
> - The system determines the data type of a column based on the values in the first 100 rows. If the values of the first 100 rows are all numbers, the system determines that this column is of the NUMERIC data type. If the value in any of the first 100 rows is a string, the system determines that this column is of the STRING data type. A NUMERIC field cannot have values of the STRING data type, but a STRING field can have values of the NUMERIC data type.

- The account that you use to access Quick BI has the permissions to create tables in the database based on which you create a data source.

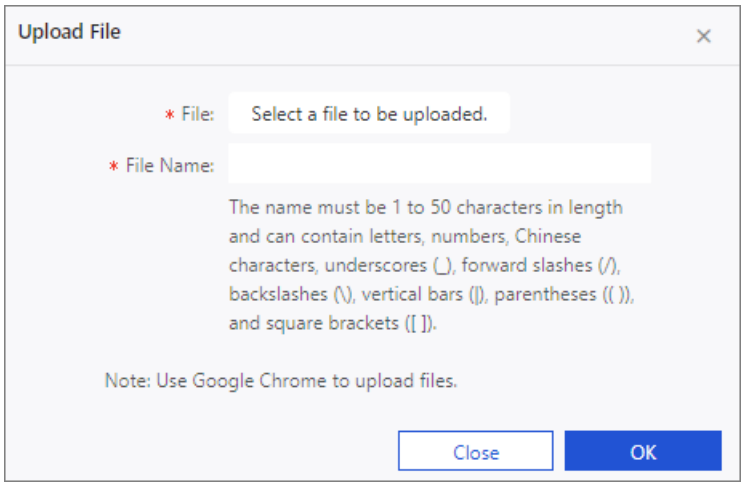
Procedure

1. Log on to the Quick BI console.
2. Click the **Workspace** tab, and click **Data Sources** in the left-side navigation pane.
3. On the **Data Sources** page, select the target data source and click **Upload File**.



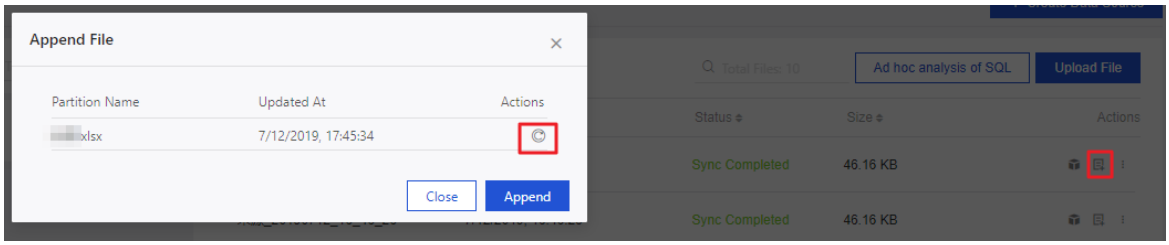
4. In the **Upload File** dialog box that appears, select the file that you want to upload, enter the file

name, and click **OK**.



Replace the data of a data source file

1. Click the **Workspace** tab, and click **Data Sources** in the left-side navigation pane.
2. In the uploaded file list, find the target file and click the  icon in the Actions column.
3. In the **Append File** dialog box that appears, find the target file and click the  icon in the Actions column.



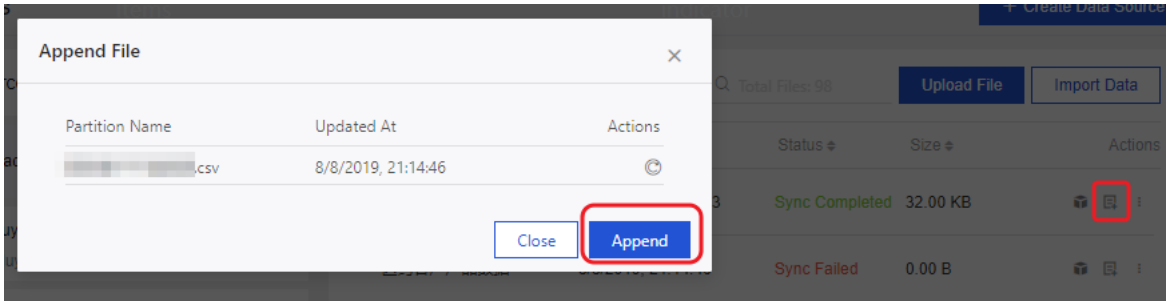
4. In the Replace File dialog box that appears, select the file that you want to upload, enter the file name, and click **OK**.

Append data to a data source file

Quick BI allows you to upload local files as data sources to meet your growing requirements for business analysis.

If new data is generated after you upload a business data file, you can append the new data to the uploaded file. This allows you to continuously track and analyze business data over a long period of time.

1. Click the **Workspace** tab, and click **Data Sources** in the left-side navigation pane.
2. In the uploaded file list, find the target file and click the  icon in the Actions column.
3. In the **Append File** dialog box that appears, click **Append**.



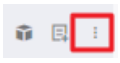
> **Note**
> - The file that you want to append can be in a different format from the previously uploaded file.
> - If you have uploaded a CSV file, you can append data from a sheet of an XLS or XLSX file to the CSV file. Make sure that the names and data types of fields in the XLS or XLSX file are the same as those in the CSV file.

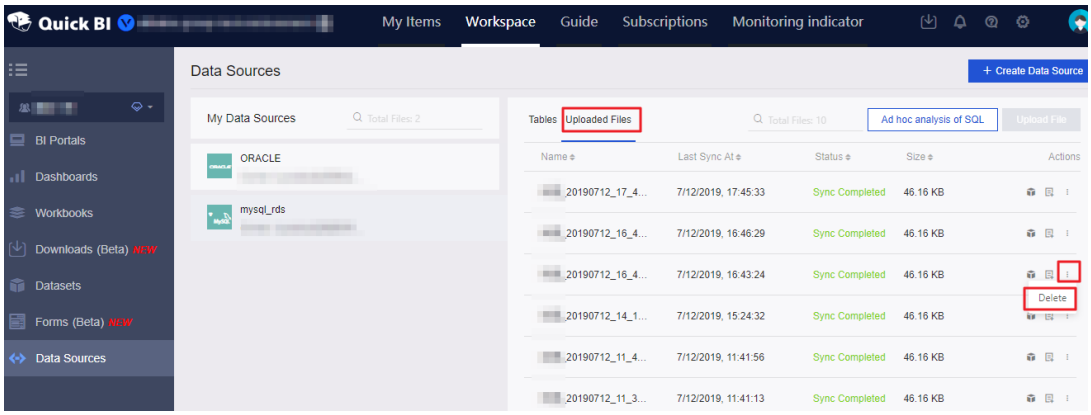
4. In the Append File dialog box that appears, select the file that you want to append, enter the file name, and click **OK**.

> **Note** The sequence and data types of fields in the file that you want to append must be the same as those in the previously uploaded file.

Delete a data source file

If you have appended a file that contains dirty data to a data source file, you can delete either the data source file or the appended file to ensure data accuracy. After the deletion, the dashboards created based on the data source display accurate data without the need to manually modify them. This ensures accurate data analysis.

1. Click the **Workspace** tab, and click **Data Sources** in the left-side navigation pane.
2. To delete a file, follow these steps:
   - Delete an uploaded file
     a. Find the file that you want to delete, and click the  icon in the Actions column.
     b. Click **Delete**.

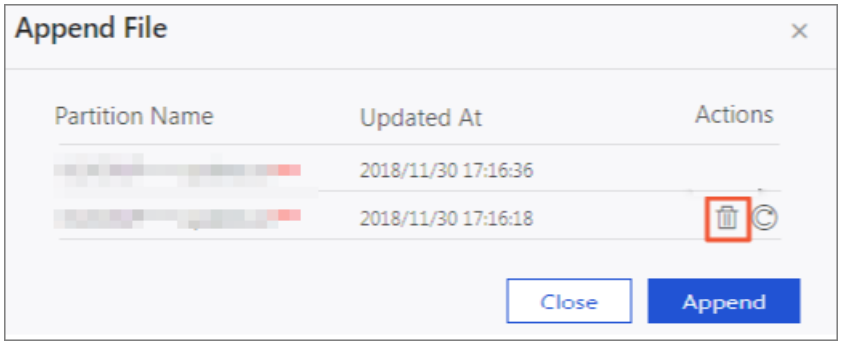


c. In the message that appears, click **OK**.

- Delete an appended file

a. Find the file that contains the appended file that you want to delete, and click the icon in the Actions column.

b. Find the appended file that you want to delete, and click the icon in the Actions column.

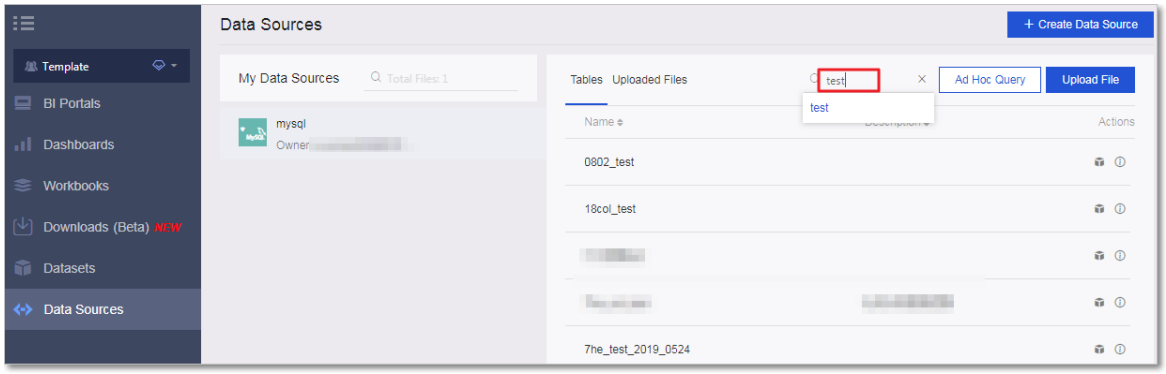


c. In the message that appears, click **OK**.

5.Search for tables in a data source

Procedure

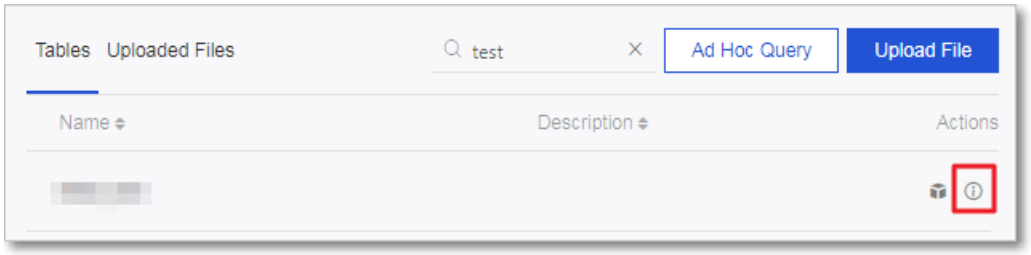
1. Log on to the Quick BI console.
2. Click **Data Sources** to go to the Data Sources page.
3. Enter a table name into the search box and click the **Search** icon to search for the table.

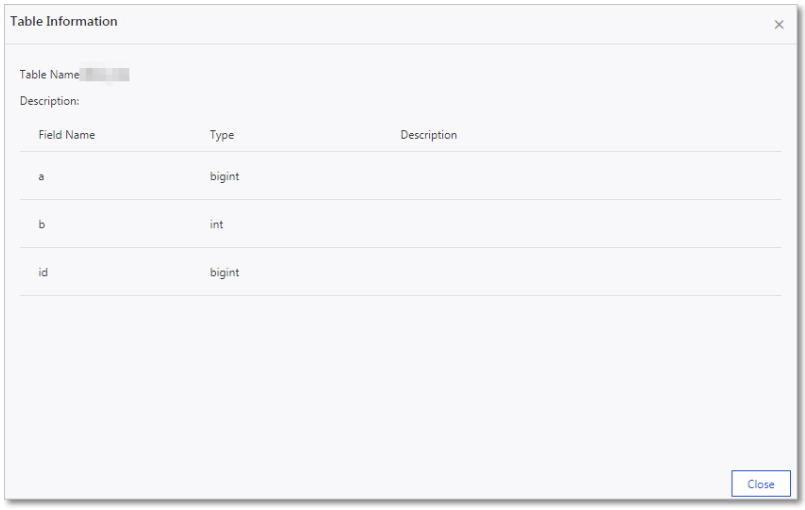


6.View the tables in a data source

Procedure

1. Log on to the Quick BI console.
2. Click **Data Sources** to go to the Data Sources page.
3. In the My Data Sources list, click a data source. All tables stored in the data source are displayed on the right side of the page.
4. Select a table and click the **View Details** icon to view the details of the table.



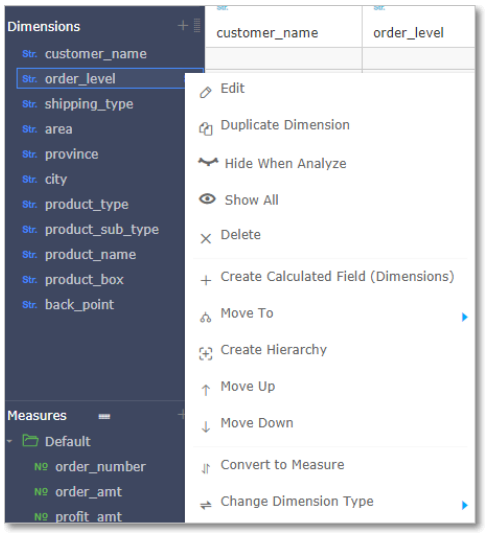


7.Edit dimensions and measures

This topic describes how to edit dimensions and measures.

Edit a dimension

1. You have logged on to the Quick BI console.
2. On the Quick BI homepage, click **Workspace** in the top navigation bar to go to the Workspace page.
3. In the left-side navigation pane of the Workspace page, click **Datasets** to go to the Datasets page.
4. Select a dataset, click the dataset name or click the icon to go to the dataset edit page.
5. Select a dimension, for example, **order_level**.
6. In the Dimensions list of the Dataset pane, right-click a field or click the icon corresponding to the field to open the field edit menu, as shown in the following figure.

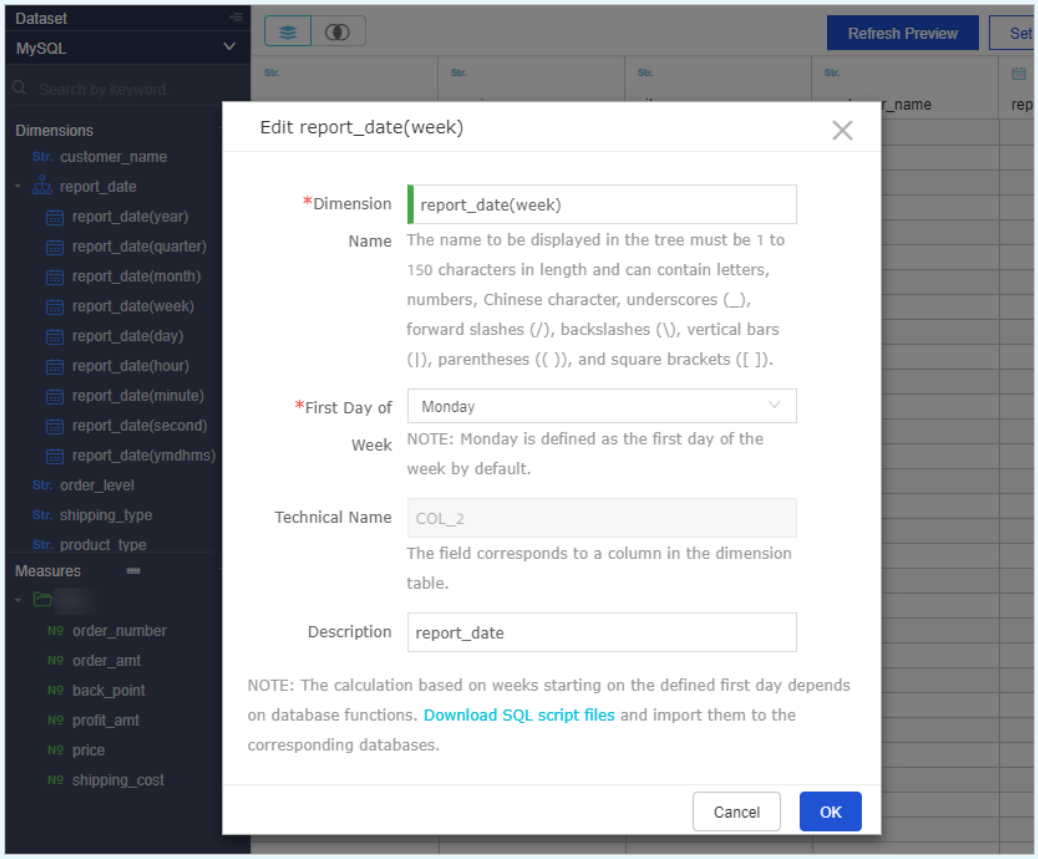


Action	Description
Edit	Edits the measure name and description.
Duplicate Dimension	Duplicates a dimension. The name of the duplicate dimension ends with Duplicate.
Hide When Analyze	Hides dimensions as needed.
Show All	Shows all dimensions.
Delete	Deletes a field.

Action	Description
Create Calculated Field (Dimensions)	Creates a dimension field and customizes its calculation method.
Move To	Moves a dimension to a hierarchy for drilling.
Create Hierarchy	Adds a dimension field to a new hierarchy.
Move Up/Move Down	Moves a dimension field. You can drag or right-click a field to move it.
Convert to Measure	Converts a dimension field to a measure field.
Change Dimension Type	You can switch the dimension type for a field between **Date/Time (Source Format)**,**Geo**,**String** and **Number**. Note ◦ If Geo is set to **State/Province/Municipality**, the province level and city level are both **State/Province/Municipality**, and the district level is **District**. For example, the value of the province field is Chongqing, the value of the city field is Chongqing, and the value of the district field is a district, such as Jiangbei district. ◦ For example, you need to change the dimension type to **Geo** when you create a bubble map or a colored map. Otherwise, the map chart is not displayed properly.

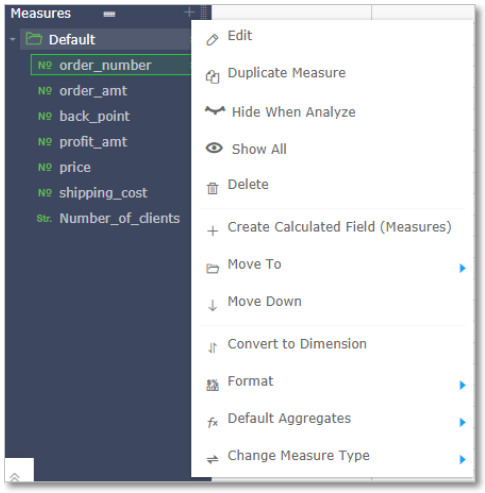
Note

- You can duplicate, hide, and delete dimensions at different hierarchy levels.
- You can set the start time for any day of a week in the week field.



Edit a measure

1. You have logged on to the Quick BI console.
2. On the Quick BI homepage, click **Workspace** in the top navigation bar to go to the Workspace page.
3. In the left-side navigation pane of the Workspace page, click **Datasets** to go to the Datasets page.
4. Select a dataset, click the dataset name, or click the icon to go to the dataset edit page.
5. Select a measure, for example, **order_number**.
6. Right-click a dimension field or click the icon corresponding to the field to open the field edit menu, as shown in the following figure.

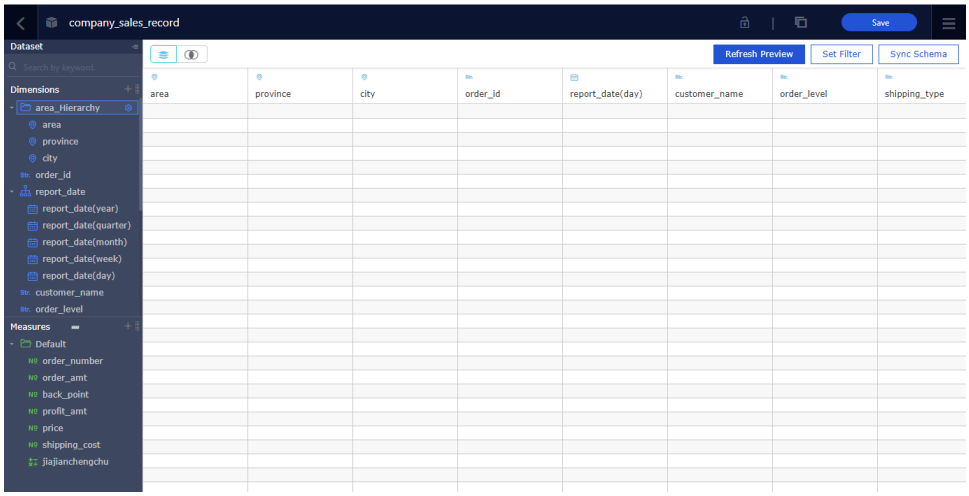


Action	Description
Edit	Edits the measure name and description.
Duplicate Measure	Duplicates a measure. The name of the duplicate measure ends with Duplicate.
Hide When Analyze	Hides measures as needed.
Show All	Shows all measures.
Delete	Deletes a field.
Create Calculated Field (Measures)	Creates a measure field and customizes its calculation method.
Move To	Moves a measure to an existing folder.
Move Down	Moves a measure field. You can drag or right-click a field to move it.
Convert to Dimension	Converts a measure field to a dimension field.
Format	Sets the display format for numbers.
Default Aggregates	Specifies the aggregate function. Aggregate functions include Sum, Maximum, and Minimum.
Change Measure Type	You can switch the measure type for a field between **String** and **Number**.

8.Change field types

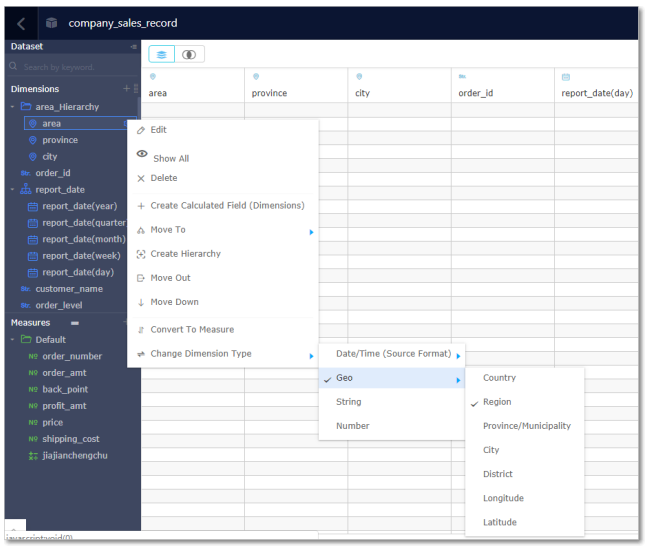
To create a map chart, such as a geo bubble map or a geomap, select dimension fields containing geographical information and change the dimension type from String to Location. Otherwise, the map cannot be displayed.

1. Click **Datasets** to go to the Datasets page.
2. Select a target dataset, for example, company_sales_record, and click Edit to go to the dataset editing page, as shown in the following figure.

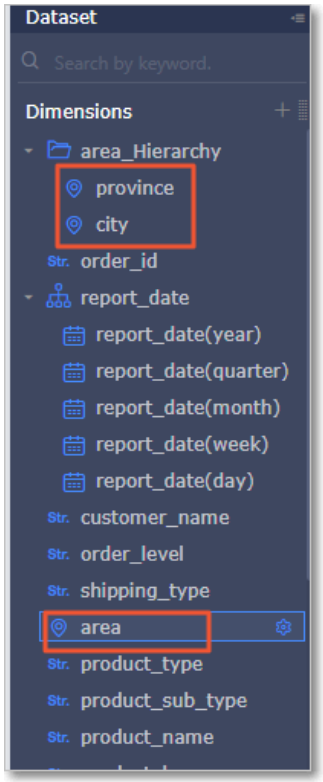


3. In the dimension list, locate the area option.
4. Right-click the dimension and choose **Change Dimension Type > Location > Region**, as shown in the following figure.

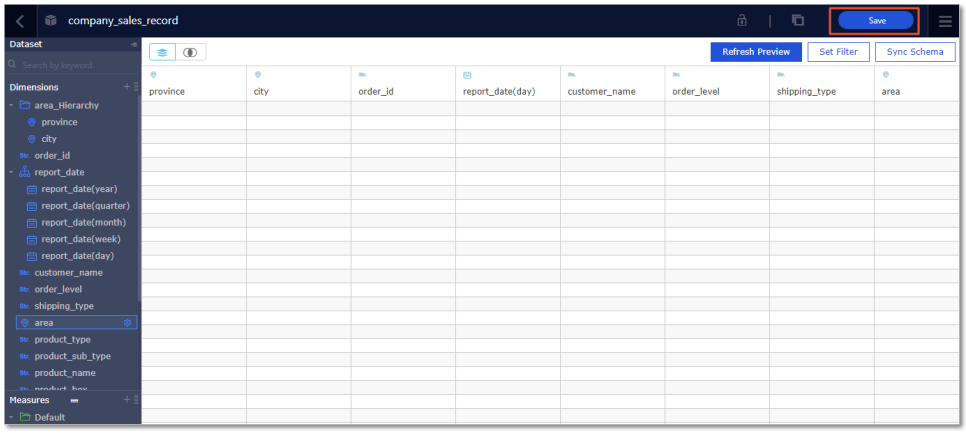
> **Note** When the dimension type is changed to geographical information, the selected geographical information must match with the field. For example, if the field is area, you must select Region in the geographical information list. Otherwise, the dimension type cannot be changed.



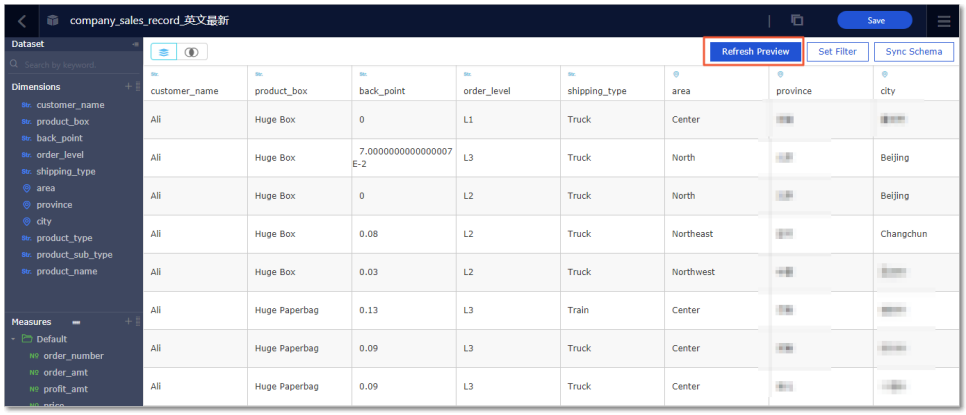
5. You can change to Province/Municipality or City in the same way, as shown in the following figure.



6. After the dataset is edited, click **Save**, as shown in the following figure.



7. Click **Refresh Preview**. The data is automatically displayed in the table, as shown in the following figure.

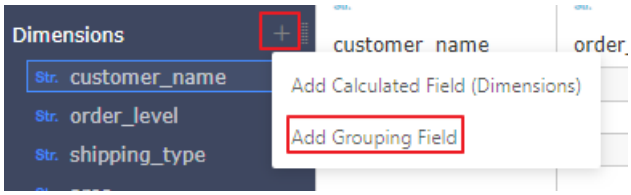


9.Add a grouping field

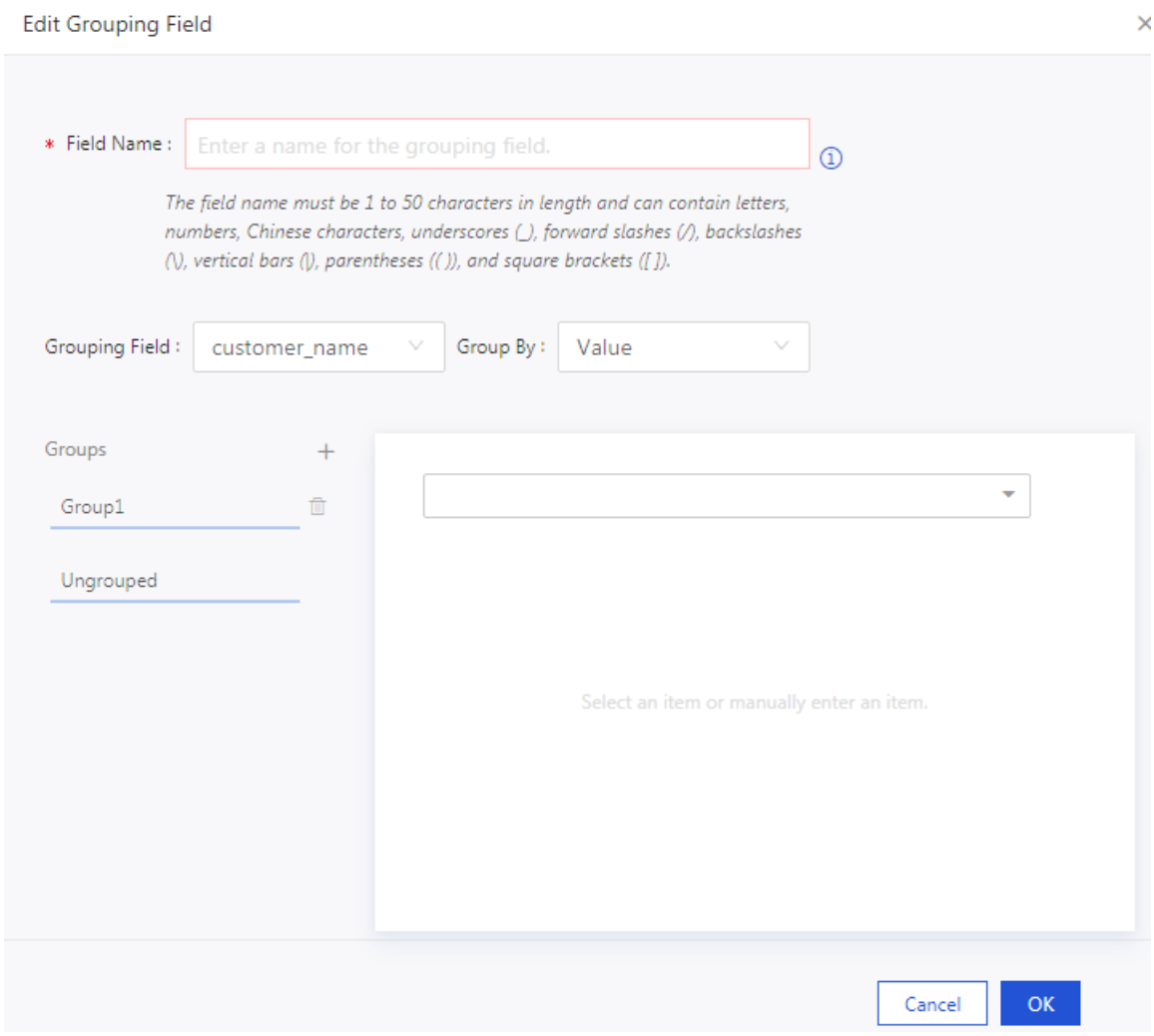
On the dataset edit page, you can select **Add Grouping Field** to classify values in a field into different groups, and create a new field to store the grouping information.

> **Note**
>
> - This function is only available in Quick BI Pro.
> - Classic workbooks do not support the grouping function. Classic workbook is a feature of the beta version. It will be deprecated soon. We recommend that you use workbooks.

1. On the Datasets page, click a dataset name.
2. On the Datasets page, choose **+ > Add Grouping Field** next to Dimensions.



3. In the **Edit Grouping Field** dialog box, enter the required information and click **OK**.



4. Click **Save** and then click **Refresh Preview**. The dimension list shows the grouping field.

10.Enable table scan

Enable table scan

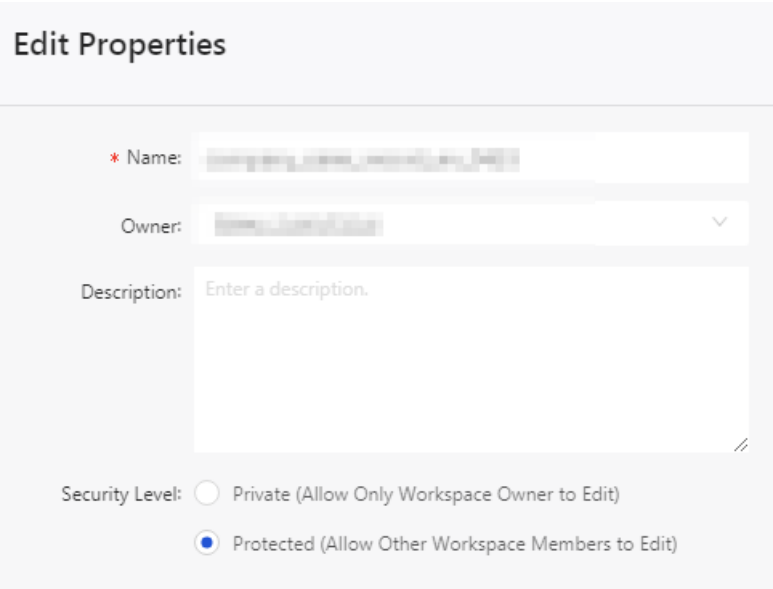
You can enable the table scan function for MaxCompute (formerly known as ODPS) datasets. Follow these steps to enable table scan:

1. On the Datasets page, right-click a MaxCompute dataset, and select **Edit Properties**.
2. On the **Properties** page, select the **Table Scan** option to enable this function.

11.Rename, transfer, and set security levels

You can rename, transfer, and set the security level for a dataset by editing the properties of the dataset.

1. Log on to the Quick BI console.
2. Click **Datasets** to go to the Datasets page.
3. Select a dataset, click the More icon in the Actions column and select the **Edit Properties** icon from the drop-down list.
4. On the Edit Properties page, you can perform the following operations on the dataset.



   - Change the dataset name.
   - Change the dataset owner.
   - Change the security level. If you choose **Protected** as the security level, you need to lock the data object first before editing it.
   - Scan Full Table: Enables this feature to scan the full table.

     > **Note** This feature only applies to MaxCompute data sources.

12.Dataset row-level permissions

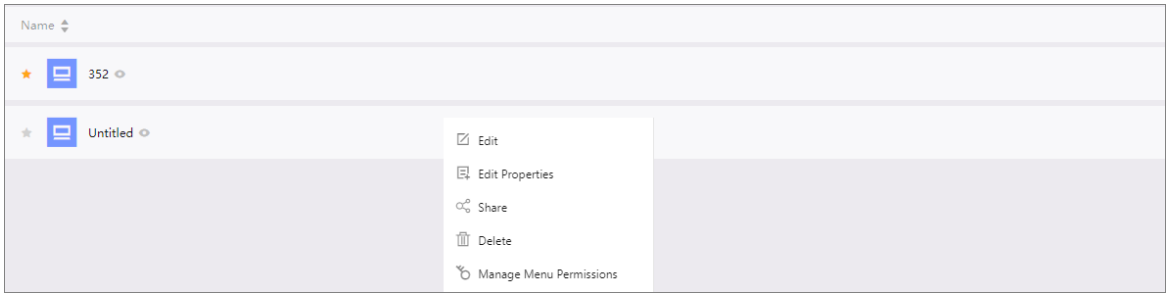
For more information about row-level permissions of datasets, see Configure row-level permissions (old version).

13.Configure menu permissions for a BI portal

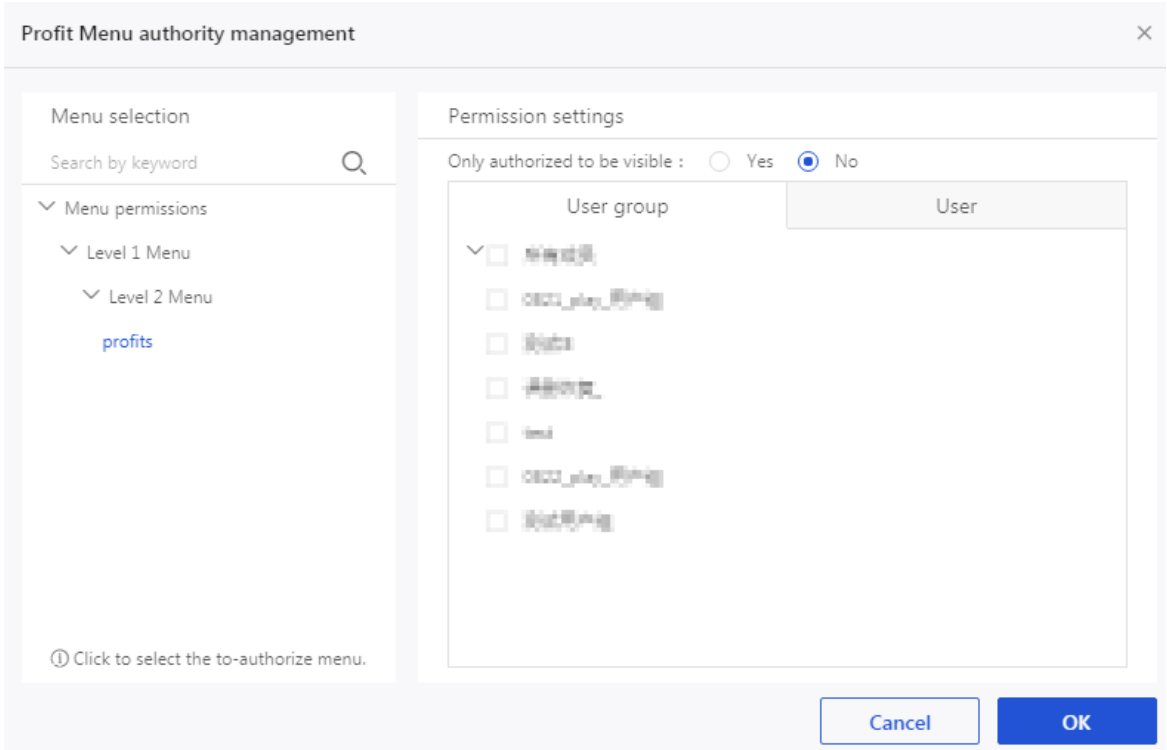
Workspace administrators can manage permissions to view BI portal menus.

Workspace administrators can grant menu permissions to a specified user or user group. Procedure:

1. Log on to the Quick BI console.
2. Select the target workspace. For information about how to create a workspace, see Create a workspace.
3. In the left-side navigation pane, click **BI Portals**.
4. On the BI Portals page that appears, select the target portal and click **More** in the Actions column, or right-click the target portal and select **Manage Menu Permissions**, as shown in the following figure.



5. In the **Manage Menu Permissions** dialog box that appears, select the target menu, specify whether the menu is available only to authorized users, and select the users or user groups that you want to authorize. The configuration takes effect immediately.



> **Note** The meanings of values of **Available Only to Authorized Users** are as follows:
>
> - Yes: Only authorized users and user groups can access this menu.
> - No: All users and user groups can access this menu.

For information about how to create a user group, see Create a user group.

6. Click **Close** to complete configuring the menu permissions.

14.Open Service

14.1. Overview of the open service

The open service allows third parties to access Quick BI reports and data by embedding reports or using the data service. The data service is available only in Quick BI Pro.

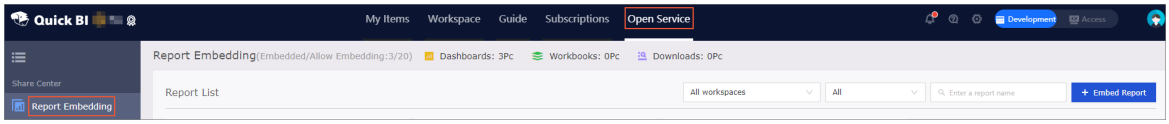
For more information about the open service, see Report embedment and Data service.

14.2. Report embedment

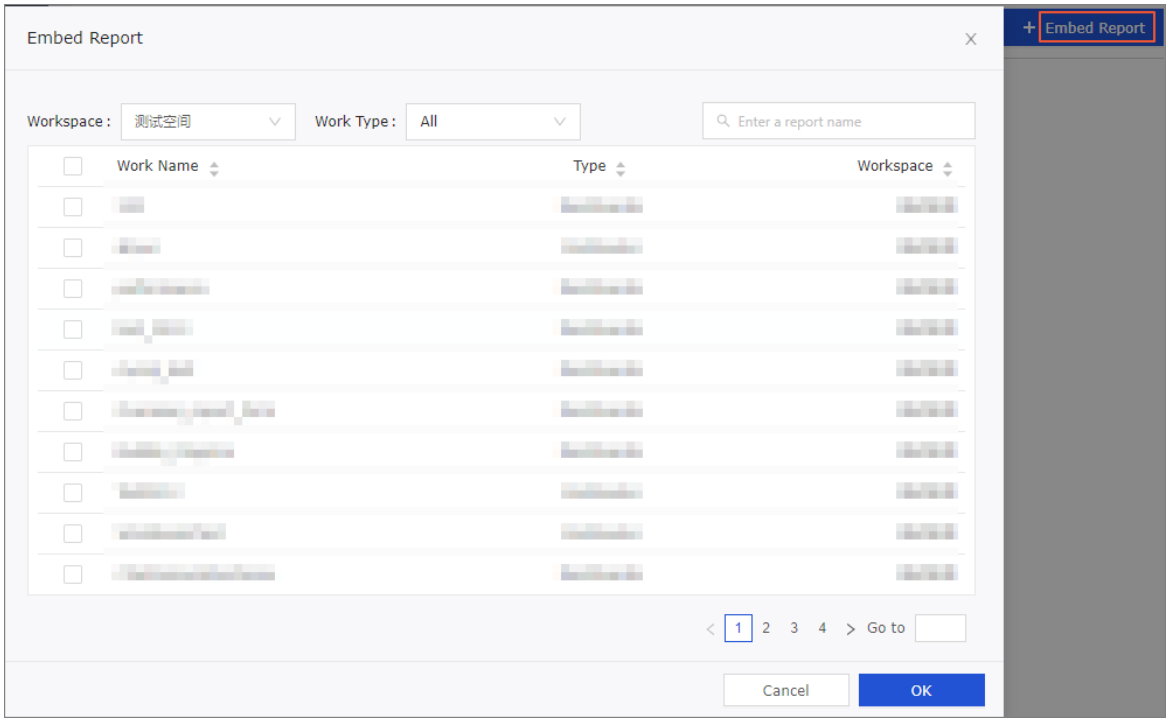
Quick BI Pro and Quick BI Enterprise Standard allow you to embed third-party reports. The types of data objects include dashboard, workbook, and downloads.

Follow these steps to embed reports:

1. On the homepage of Quick BI, click **Open Service**.
2. In the left-side navigation pane, click **Report Embedding** under **Center**, as shown in the following figure.



3. Click **Embed Report** in the upper-right corner.
4. In the **Embed Report** dialog box that appears, select third-party reports that you want to embed, and click **OK**, as shown in the following figure.



5. You can click the **Delete** icon next to an embedded report to delete it.

> **Note** In Quick BI Pro, row-level permissions do not take effect for an embedded third-party report. After you embed a third-party report, your permissions on the report are the same as the report owner. Quick BI Enterprise Standard provides signature authentication and dynamically passes information about RAM users to grant different permissions to different users on an embedded report. Multiple users can view and edit a report but only accounts added to Quick BI can save modifications. If the license quota of the Enterprise Standard Edition is 200, a maximum of 200 users can edit a single report.

The Report Embedding page lists third-party reports that can be embedded. You can search for reports by workspace, report type, or report name. The following table lists the number of third-party reports that can be embedded.

Quick BI Edition	License quota	Number of third-party reports that can be embedded
Quick BI Pro	20	20
	50	50
	100	100
	150	150
	200	200
Quick BI Enterprise Standard	50	100
	100	200
	200	500
	300	1,000

15.Associate multiple datasets with a dashboard

When you configure a cross-chart reference, you can associate a single dataset or multiple datasets with available charts in a dashboard. When you want to compare data from multiple datasets, you must select an associated field from each dataset. Some values of these selected fields must be the same. Otherwise, you cannot compare multiple datasets. This example is based on the company_sales_record_en_us and company_sales_record datasets.

Create a dataset

1. Log on to the Quick BI console.
2. Choose **Workspace > Datasets** to enter the Datasets page.
3. Click **Create Data Sources** to select a data source.
4. Click the **Create Dataset** icon to Create a dataset.

Create a dashboard

1. Click **Dashboards** to enter the Dashboards page.
2. On the Data tab, select the company_sales_record_en_us dataset.
3. Select a chart such as table.
4. Select the required fields.
5. Click **Update** to update the chart.
6. Click the **Style** tab, rename the chart to **Overseas report**.
7. On the Data tab, select the company_sales_record dataset.
8. Select a chart and fields, such as table.
9. Click **Update** to update the chart.
10. Click the **Style** tab, rename the chart **Domestic report**.
11. Click **Save** to save the dashboard.

Associate multiple datasets with a dashboard

1. Click the **Filter Bar** control, and drag the control at the top of the dashboard.
2. On the **data** tab, select a dataset, such as company_sales_record.
3. Select a field to be filtered such as product_box.
4. Click the **Set Filter** icon.
5. In the **Set Filter** dialog box, click the **Single-Dataset** tab and select Domestic report.
6. Click the **Multi-Dataset** tab, and click the drop-down arrow of Overseas report to view the field list.
7. Select the product_box field.
8. In the **Set Filter** area, click **Filter by Enumeration** and select **Radio** or **Multiple Select**.
9. Click the drop-down arrow of product_box, select the values to be filtered, and click **OK**.
10. Click **Search** to obtain the query results from both the Overseas report chart and the Domestic

report chart.

16.Authorization based on users or user groups

Row-level permission control of Quick BI allows you to perform authorization based on users/user groups or tags. Authorization based on users or user groups is suitable for scenarios that involve a small number of users. This topic describes how to grant permissions to users or user groups.

Prerequisites

A dataset is created. For more information, see Create a dataset.

Context

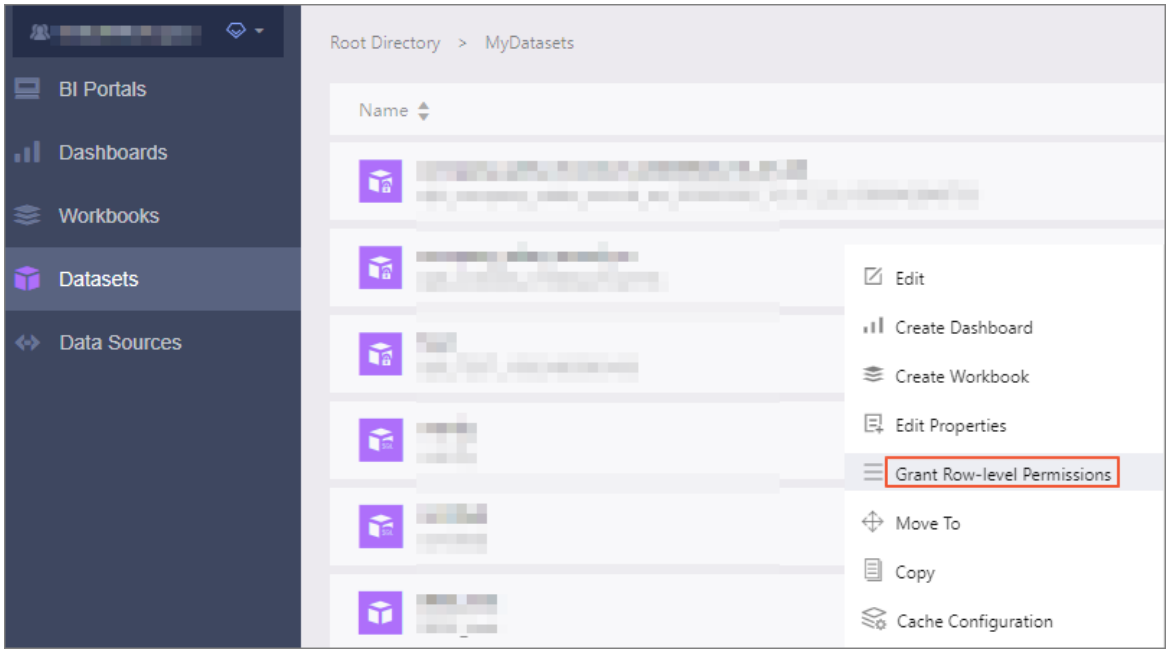
Currently, only Quick BI Pro and Quick BI Enterprise Standard allow you to configure row-level permissions on a dataset in a group workspace.

Procedure

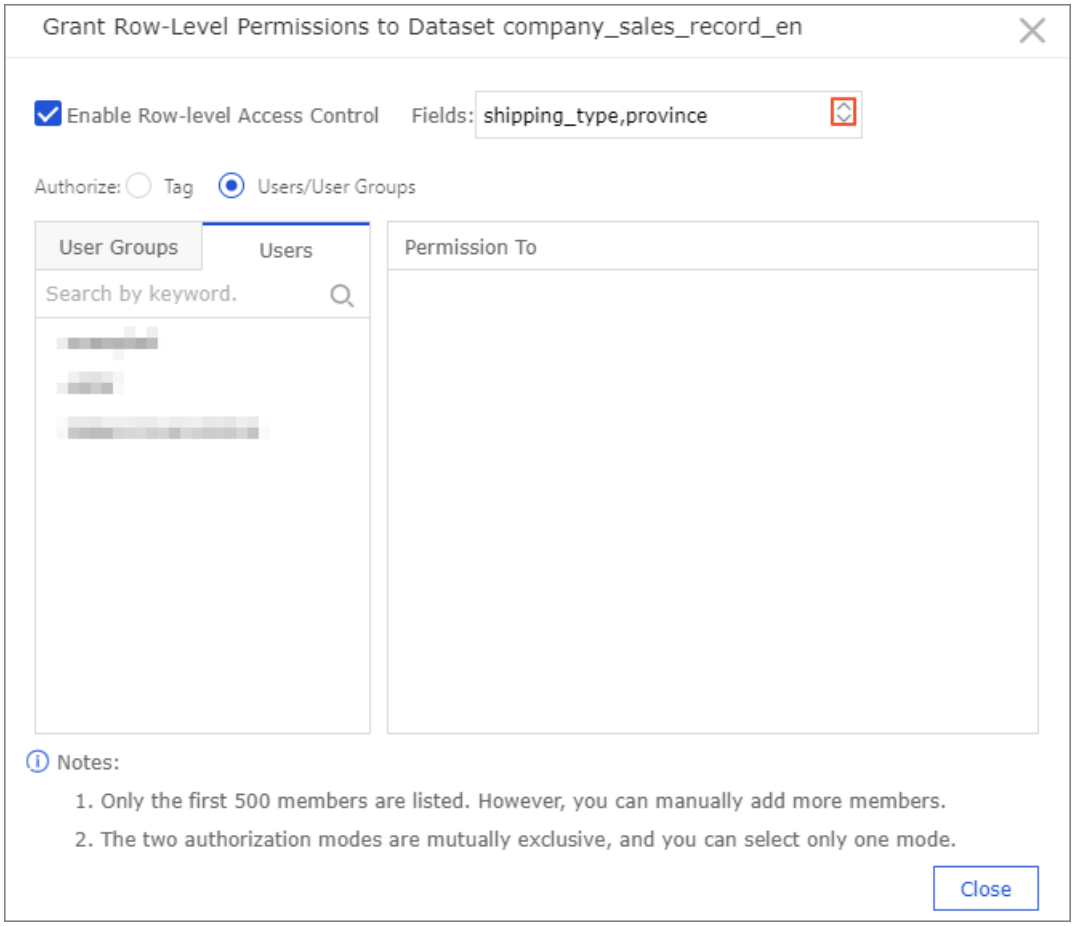
1.
2.
3.
4. Click the icon and select the target group workspace from the drop-down list.

5. On the **Datasets** page, find the target dataset, click the icon in the **Actions** column, and select **Grant Row-level Permissions**.

   You can also right-click the target dataset and select **Grant Row-level Permissions**.



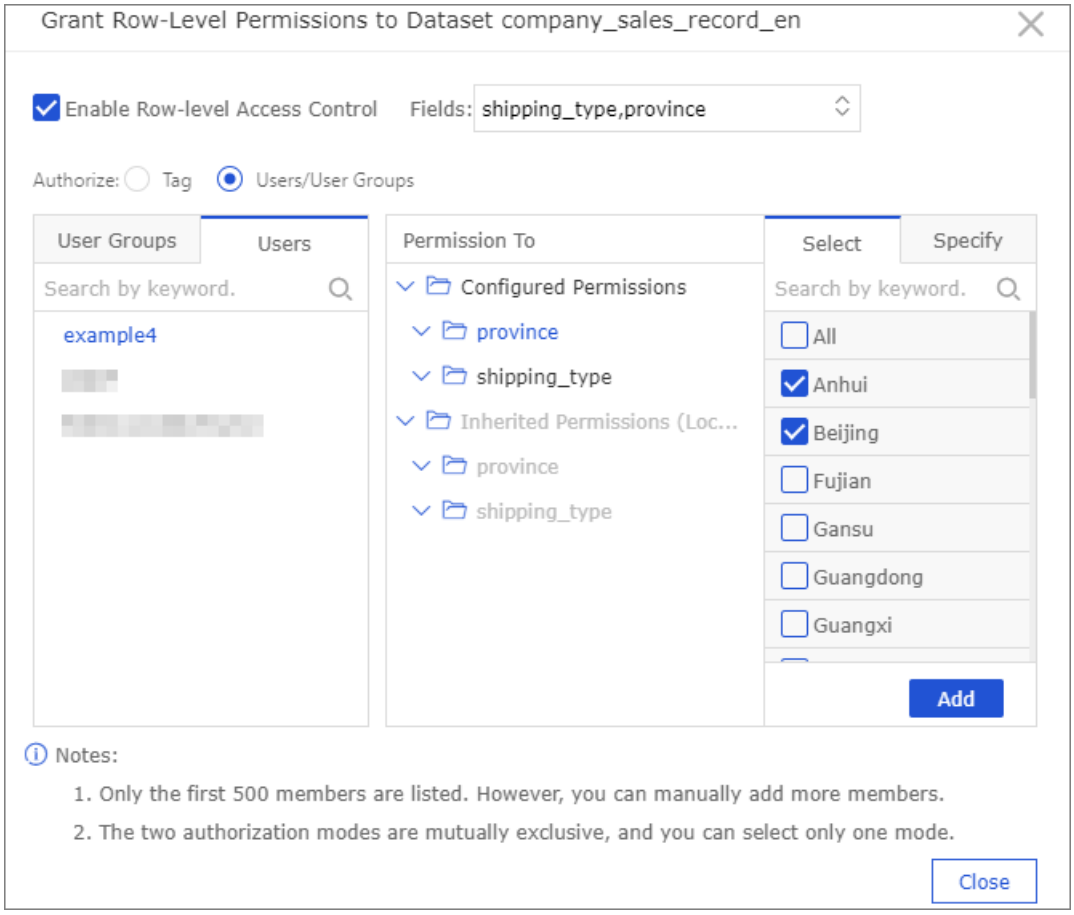
6. In the Grant Row-Level Permissions to Dataset XXX (XXX indicates the dataset name) dialog box, select **Enable Row-level Access Control** and select **Users/User Groups** for Authorize.
7. Click the drop-down icon next to Fields. Select the fields based on which authorization is performed, such as province and Measure Value.



> **Note** The values of **Measure Value** are the measures in the dataset. You can grant row-level permissions based on Measure Value to allow different users to view different measures.

8. In the **Permission To** section, click **province**. The **Select** section displays all provinces.
9. Select a user or user group and configure permissions in the **Select** section.

   The following figure shows that the user is authorized to view data of Beijing and Anhui.



> **Note** If row-level permission control is enabled for a field in a dataset, users must be granted permissions on this field to access the charts generated based on this dataset.

For information about how to create a user group, see Create a user group.

10. Click **Add**.