DataArts Insight

Best Practices

Issue 01

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Controlling Dataset Permissions Using User Tags

By setting user tags and column-level permissions, you can ensure that only authorized users can access specific data fields, thereby reducing the risk of data breaches. This article demonstrates how to set user tags for **user1**, ensuring that **user1** can only access authorized data, thereby guaranteeing data security.

Step 1: Create a User Tag

- 1. Log in to the DataArts Insight console.
- 2. Click in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the lower left corner of the **Workspace** page.
- 3. Click the name of the desired project in the **My Projects** area in the right pane.
- 4. In the navigation pane on the left, choose **Data Management** > **Datasets**.
- 5. Locate your desired dataset and access its editing page.
- 6. On the displayed page, click the name of the desired dataset. If you have not set row permissions, all data for the **product_type** and **product_color** fields is displayed on the **Data Preview** tab.
 - By setting row-level permissions, you can allow specific users to view only part of the data in the **product_type** and **product_color** fields, for example, **book** and **green**.

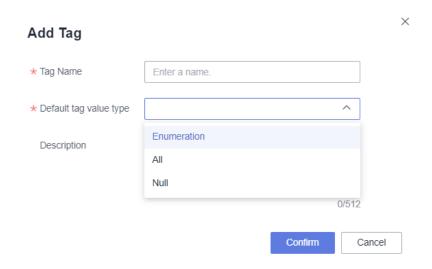
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Figure 1-1 Raw data

- 7. In the navigation pane on the left, choose **System Settings**.
- 8. Choose **Tag Management**. On the displayed **User Tags** tab page, click **Add Tag** in the upper right corner. This example adds the **tag_product_type** and **tag_product_color** tags.
- 9. After the tags are created, the tag value of each user is default, and the default tag value can be selected when creating a tag (Figure 1-2). If you want specific users to see specific data, you need to configure it separately, that is, perform the next step.

Figure 1-2 Adding a tag



10. Set the tag type of user1's **tag_product_type** and **tag_product_color** to **Enumeration**, and set the tag values to **book** and **green**.

By setting row-level permissions, user1 can only view data with **product_type** = **book** and **product_color** = **green** in the dataset in **Figure 1-1**.

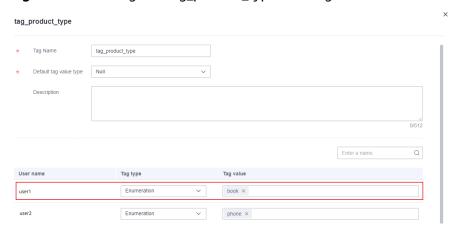
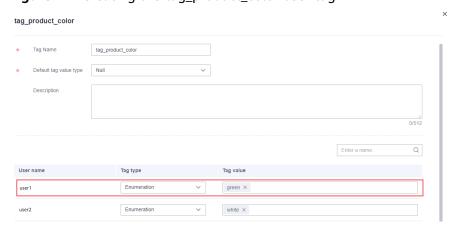


Figure 1-3 Creating the tag_product_type user tag

Figure 1-4 Creating the tag product color user tag



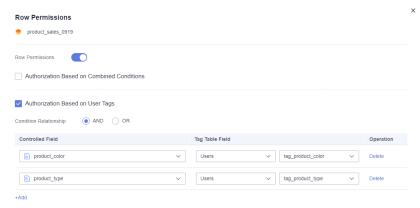
Step 2: Set Row-Level Permissions

- 1. In the navigation pane on the left, choose **Data Management** > **Datasets**.
- 2. Locate your desired dataset, click **More** in the **Operation** column, and select **Row Permissions**. In the displayed slide-out panel, enable **Row Permissions** and select **Authorization Based on User Tags**.
- 3. Select a condition relationship and click **Add** to add a controlled field. Set **Controlled Field** to **product_type** and **product_color**, and set **Tag Table Field** to **tag_product_type** and **tag_product_color** (**Figure 1-5**).

In this example, set **Condition Relationship** to **AND**. This means **user1** can view only the data whose **product_type** is **book** and **product_color** is **green**.

If **Condition Relationship** is set to **OR**. This means **user1** can view only the data whose **product_type** is **book** or **product_color** is **green**.

Figure 1-5 Setting row permissions



4. View the dataset as user **user1**. Choose **Data Management > Datasets** in the navigation pane on the left to access the dataset page (**Figure 1-6**). user1 can view only the data whose **product_type** is **book** and **product_color** is **green**.

Figure 1-6 Viewing the dataset



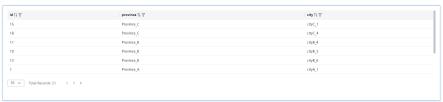
Using Cascading Controls for Secondary Filtering Queries

Query controls can perform data queries on tables within the dashboard, while cascading controls can achieve secondary filtering queries. The combined use of query controls and cascading controls helps improve the efficiency of user data queries. This article demonstrates how to set the query conditions for **province** and **city**, and how to achieve linkage between these two query conditions through the cascading function. When a user selects a **province**, the **city** will automatically update to display only the cities within that province, thereby simplifying the query process.

Step 1: Create a Table

- 1. Log in to the DataArts Insight console.
- 2. Click in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the lower left corner of the **Workspace** page.
- 3. Click the name of the desired project in the **My Projects** area in the right pane.
- 4. In the navigation pane on the left, choose **Data Analytics** > **Dashboard**. On the displayed page, click **Create Dashboard**.
- 5. In the top navigation bar on the dashboard creation page, click **Add Chart** and select **Table**.
- 6. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
- 7. Set the parameters on the **Field**, **Style**, and **Advanced** tab pages.
- 8. Click **Update** on the **Fields** tab. The chart data is automatically updated.

Figure 2-1 Creating a table



Step 2: Create a Query Control

- 1. In the top navigation bar on the dashboard creation page, click \bigcirc to create a query control.
- 2. In the newly created query control, click to create a query condition, and select **Dropdown list** as the display type.
 - Create a query control named province. Specifically, in the displayed
 Query Control Settings dialog box, select a dataset and the query field
 in the Condition Configuration area and select the chart and field to be
 associated (province) on the Associated Charts tab on the right.
 - Create a query control named city. Specifically, in the displayed Query
 Control Settings dialog box, select a dataset and the query field in the
 Condition Configuration area, select the chart and field to be associated
 (city) on the Associated Charts tab on the right, and set the rest
 parameters the same as those set during the creation of the province
 query control.

Query Control Settings Set as Mandatory Display Type Dropdown list V **✓** Str. province ||| city Dataset query_control_city_0108 * Query Field province ~ Display Field Please select a ... V Query Mode

Single select

Multi select Query Time

© Click to query Set Default Filter Value Filter Sorting Enhanced Search Default Prompt ... Enter Tip Value

Figure 2-2 Query control settings

Step 3: Configure a Cascading Control

- 1. Click 2 in the upper right corner of the query control.
- 2. For the **province** query condition, configure the cascading control by checking **city** and selecting the field **province**, as shown in **Figure 2-3**.
 - After successfully setting up the cascading control, when selecting **province_A** in the **province** query condition, the **city** query condition will only display cities within **province_A** (**Figure 2-4**).

OK Cancel

Figure 2-3 Configuring a cascading control

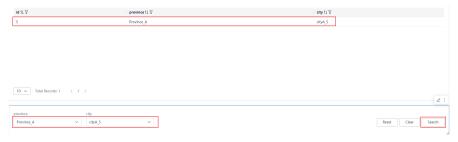
Figure 2-4 Cascading control effect



Step 4: Query Data

- 1. Select the desired province and city in the **province** and **city** query conditions.
- 2. Click **Search** in the lower right corner of the page. The queried data is displayed in the table.

Figure 2-5 Query results



3 Achieving Interaction Between Different Large Screens Through Redirection

Utilize the "redirection" feature to enable redirection between two data large screens, and configure "global parameters" to ensure that when returning from screen B to screen A, the user's query conditions are preserved, making data browsing more convenient.

Step 1: Create a Large Screen

- 1. Log in to the DataArts Insight console.
- 2. Click in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the lower left corner of the **Workspace** page.
- 3. Click the name of the desired project in the **My Projects** area in the right pane.
- 4. In the navigation pane on the left, choose **Data Management** > **Datasets**.
- 5. Find the desired dataset in the list and click **Create Screen** in the **Operation** column.
- 6. Create large screen A. In this example, a line chart and a single-select dropdown list are used.
 - a. Line chart: Click the **Common charts** icon, click **Line Chart**, select the **product_type** dimension and **product_price** metric, and click **Update**.
 - Single-select dropdown list: Click the Interactions icon, click Single-Select Dropdown List, select the product_type dimension, and click Update.
 - c. Name the large screen **screenA**.

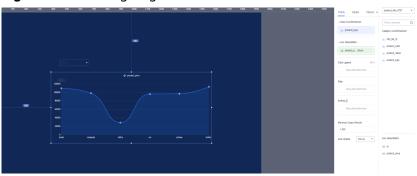


Figure 3-1 Creating large screen A

- 7. Create large screen B. In this example, a line chart and text are used.
 - a. Line chart: Click the **Common charts** icon, click **Line Chart**, select the **product_name** dimension and **product_price** metric, and click **Update**.
 - Single-select dropdown list: Click the **Text** icon, click **Text**, and enter << on the right.
 - c. Name the large screen screenB.

| Part | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100

Figure 3-2 Creating large screen B

Step 2: (Optional) Set Global Parameters

- 1. Set global parameters for large screen A.
 - a. Click 🖭 in the upper right corner of the page.
 - b. In the **Global Parameters** dialog box, find **Effective Controls** in the **Controls** area, and select **Single-Select Dropdown List**.
 - c. In the Charts area, select product_type from the Associated Field dropdown list and select Line Chart next to Effective Charts.
 - d. In the upper left corner of the dialog box, name the global parameter screenA_GlobalParameter.

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□ Effective Controls ▼ rightSideBar.selectAll \checkmark Whether to allow the guery control to change the input value Associated Field Dataset product_info_0727 product_type Effective Charts rightSideBar.selectAll Cancel

Figure 3-3 Setting global parameters for large screen A

- 2. Set global parameters for large screen B.
 - a. In the **Charts** area, select **product_type** from the **Associated Field** dropdown list and select **Line Chart** and **Text** next to **Effective Charts**.
 - b. In the upper left corner of the dialog box, name the global parameter **screenB_GlobalParameter**.

□ NOTE

Global parameters are optional. By configuring global parameters, when redirecting from screen B to screen A, the single-select dropdown parameters of screen A will remain unchanged and only filtered data is displayed. If global parameters are not set, when redirecting from screen B to screen A, screen A will display all data.

Step 3: Set Redirection Parameters

- Set redirection parameters for large screen A.
 - a. Click the line chart. Click the **Interactions** tab and click the edit icon next to **Redirect**.
 - b. Select **product_type** for **Fields to Bound**.
 - c. Select Screen and screenB for Redirect to Reports/Screens.
 - d. In Associated Parameters, select Global Parameter and screenA_GlobalParameter for Effective Parameters of This Screen and screenB_GlobalParameter for Global Parameters for Redirecting to Reports/Screens.

□ NOTE

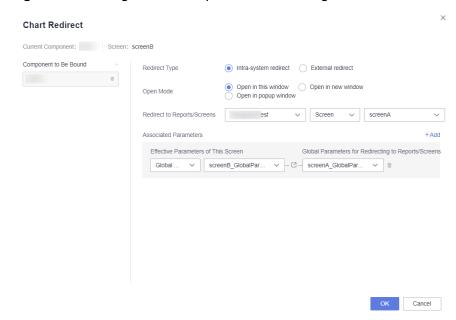
If you did not set global parameters, skip d. For how to set global parameters, see **Step 2**: **(Optional) Set Global Parameters**.

Chart Redirect Current Component: Dataset: product_info_0727 Screen: screenA Fields to Bound Redirect Type Str. product_type ▼ ₩ Open Mode Redirect to Reports/Screens Ro 'est ▼ Screen ▼ screen2-0806 +Add Associated Parameters Effective Parameters of This Screen Global Parameters for Redirecting to Reports/Screens Global ... ▲ screenA_GlobalPar... ▼ - 3 - screen2_GlobalPar... ▼ 🕆 Associated... Enter a fixe... Control Var. Global Par... Cancel

Figure 3-4 Setting redirection parameters for large screen A

- 2. Set redirection parameters for large screen B.
 - Click the text control. Click the Interactions tab and click the edit icon next to Redirect.
 - b. Select **Text 1** for the component to be bound.
 - c. Select **Screen** and **screenA** for **Redirect to Reports/Screens**.
 - d. In Associated Parameters, select Global Parameter and screenB_GlobalParameter for Effective Parameters of This Screen and screenA_GlobalParameter for Global Parameters for Redirecting to Reports/Screens.

Figure 3-5 Setting redirection parameters for large screen B



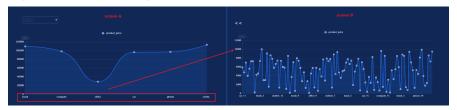
■ NOTE

If you did not set global parameters, skip **d**. For how to set global parameters, see **Step 2: (Optional) Set Global Parameters**.

Step 4: Redirect Between Screen A and Screen B

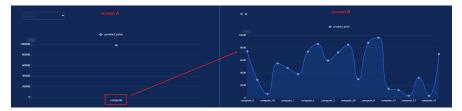
- 1. Click **Save and Publish** in the upper right corner of the screen editing page. Make sure that screen A and screen B are both in the **Published** state.
- 2. Click **Preview** in the upper right corner of the screen A editing page to preview screen A. Click the horizontal coordinate of the line chart to access screen B.

Figure 3-6 Redirecting from screen A to screen B



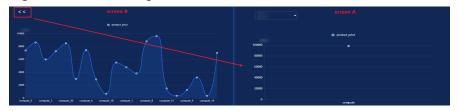
3. Select a product type from the single-select dropdown list on the screen A. This step uses **compute** as an example. Click the horizontal coordinate of the line chart to access screen B. In this case, only compute information is displayed on screen B.

Figure 3-7 Redirecting to screen B after filtering



4. Click << in the upper left corner of screen B to redirect to screen A.

Figure 3-8 Redirecting from screen B to screen A



4 Querying Product Sales Data Using the Intelligent Analysis Assistant

DataArts Insight supports intelligent Q&A through natural language interaction, allowing you to obtain data results directly and achieve instant data responses. This section uses the sales data of a specific product category as an example to illustrate how to use the intelligent analysis assistant to quickly obtain data results and related charts.

Data Description

This example includes the following data tables: **lineorder** (order table), **customer** (customer information table), **part** (product information table), and **date** (date information table).

Table 4-1 Field description

Table Name	Field	Description	Туре
lineorder	lo_orderpriority	Order priority	Dimension
	lo_shipmode	Shipping mode	Dimension
	lo_commitdate	Commitment date	Dimension
	lo_linenumber	Line number	Dimension
	lo_orderdate	Order date	Dimension
	lo_quantity	Quantity	Metric
	lo_ordtotalprice	Total order price	Metric
	lo_discount	Discount	Metric
	lo_revenue	Revenue	Metric
	lo_supplycost	Supply cost	Metric
	lo_tax	Tax	Metric

Table Name	Field	Description	Туре
customer	c_name	Customer name	Dimension
	c_address	Customer address	Dimension
	c_city	Customer city	Dimension
	c_nation	Customer country	Dimension
	c_region	Customer continent	Dimension
	c_phone	Customer phone	Dimension
	s_name	Supplier name	Dimension
	s_address	Supplier address	Dimension
	s_city	Supplier city	Dimension
	s_nation	Supplier country	Dimension
	s_region	Supplier continent	Dimension
	s_phone	Supplier phone	Dimension
part	p_name	Product name	Dimension
	p_category	Product category	Dimension
	p_brand	Product brand	Dimension
	p_type	Product specifications	Dimension
	p_container	Packing	Dimension
	p_size	Size	Metric
date	d_dayofweek	Day of the week	Dimension
	d_month	Month	Dimension
	d_sellingseason	Season	Dimension
	d_holidayfl	Holiday	Dimension
	d_lastdayinweekfl	Weekend	Dimension
	d_lastdayinmonthfl	End of month	Dimension

Step 1: Upload a Data File

1. Log in to the DataArts Insight console.

- 2. Click in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the lower left corner of the **Workspace** page.
- 3. Click the name of the desired project in the **My Projects** area in the right pane.
- 4. In the navigation pane on the left, choose **Data Management** > **Data Sources**.
- 5. Click inext to the data source name and select Uploaded Files (Figure 4-1). Select the Excel file you want to upload, modify parameters as required, and click OK. Repeat this step to upload all data tables in sequence. For details about the data table, see Data Description.

Figure 4-1 Uploading a file



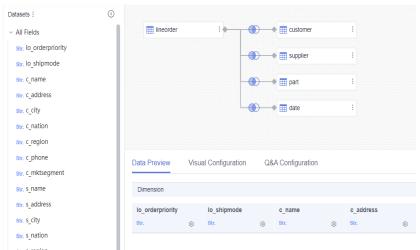
□ NOTE

Before uploading files, you need to configure the data storage bucket on the **System Settings** > **OBS Bucket Settings** page.

Step 2: Create a Dataset

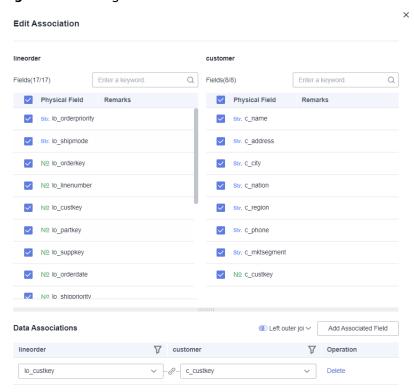
- Choose Data Management > Datasets. On the displayed page, click Create Dataset.
- Under My Data Sources, select a data source. Click the Uploaded Files and double-click or drag the data table uploaded in Step 1: Upload a Data File to add it to the operation panel.

Figure 4-2 Selecting a data table



- 3. Set the association between data tables (**Figure 4-3**). In this example, the different tables are connected by the left outer join, and the connection fields are as follows:
 - lineorder.lo_custkey = customer.c_custkey
 - lineorder.lo_suppkey = supplier.s_suppkey
 - lineorder.lo_partkey = part.p_partkey
 - lineorder.lo_orderdate = dates.d_datekey

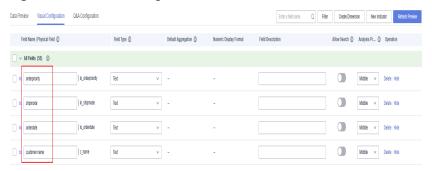
Figure 4-3 Editing associations



Step 3: Configure the Dataset

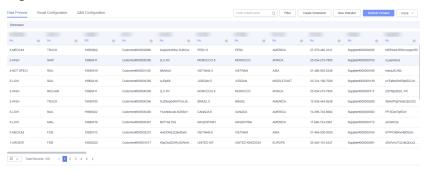
Click the Visual Configuration tab and set the meaning of the field names.
 For the field meaning in this example, see the description in Table 4-1. Once configured, it will help analysts understand and improve the Q&A accuracy of the intelligent analysis assistant.

Figure 4-4 Visual configuration



2. Click the **Data Preview** tab and then **Refresh Preview** to view basic information about the dataset.

Figure 4-5 Data Preview tab

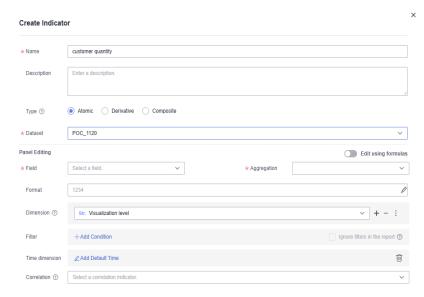


3. Confirm the information and click Save.

Step 4: Create an Indicator

- In the navigation pane on the left, choose Data Management > Indicator.
 On the displayed page, click Create Indicator.
- 2. Create four indicators by setting the parameters based on Table 4-2.

Figure 4-6 Creating a customer quantity indicator



[Total order amount]/[Customer quantity]

Indicator Indicator **Parameter Settings** Name Type customer Atomic Field: customer name quantity **Aggregation**: deduplication **Dimension**: order time total order Atomic Field: total order price amount Aggregation: sum **Dimension**: order time pop Derivative **Atomic**: customer quantity customer Derivative: YoY and PoP growth rate quantity **Comparison**: month-over-month growth

Table 4-2 Indicator creation parameters

Composite

Step 5: Create an Intelligent Analysis Assistant

Customer

unit price

- In the navigation pane on the left, choose Data Analytics > Intelligent Analysis Assistants.
- 2. Click **Create Domain**. In the dialog box that appears (**Figure 4-7**), enter a name and select an associated dataset.

Figure 4-7 Creating an intelligent analysis assistant



- 3. Click **OK**.
- 4. In the list, locate the intelligent analysis assistant you created, and click **Train** in the **Operation** column. If **Training Status** is **Successful**, as shown in **Figure** 4-8, the intelligent analysis assistant is successfully trained.

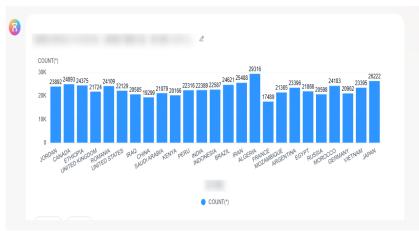
Figure 4-8 Training the intelligent analysis assistant



Step 6: Use the Intelligent Analysis Assistant for Q&A

- 1. In the navigation pane on the left, choose **Data Analytics** > **Intelligent Analysis Assistants**.
- 2. Locate the intelligent analysis assistant you trained and click **Q&A** in the **Operation** column.
- 3. Enter questions on the Q&A page. This example lists two sample questions. For more sample questions, refer to **Table 4-3**.
 - a. Sample question 1: Find the number of orders with a total price higher than 5 million in each customer's country.

Figure 4-9 Result for sample question 1



b. Sample question 2: Check the number of customers in different countries.

Figure 4-10 Result for sample question 2



Table 4-3 Sample questions

No.	Question			
1	Find the number of orders with a total price higher than 5 million in each customer's country.			
2	What is the average total price of customer orders with discounts between 10% and 30%?			
3	Total number of major trouble tickets created in each project in 2023 (field status: major, minor).			
4	Total number of reliability issues created in each project in 2023 (field category: reliability issues, security issues).			
5	Query the sales of each project this year.			
6	Query the sales for May 2023.			
7	Total price of high-priority orders for railway shipments in May 1992.			
8	Check the number of customers in different countries.			
9	Query the total number of products supplied by different suppliers.			
10	Count the number of customers per month in 1992.			
11	Monthly comparison of customer numbers in different countries in 1992.			
12	Query the trend of total credit card spending each month.			
13	Query the total spending for each quarter.			
14	Query the total spending for different categories of products.			
15	Count the total spending by region and product category.			
16	Display the merchant number and manager number for all active merchants.			
17	Query the merchant number and loan amount for active merchants.			
18	Sort customer information by descending order of revenue.			
19	Query the country with the lowest total revenue.			
20	Top 10 suppliers by supply cost in Asia.			