

DataArts Insight

User Guide

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Contents

- 1 Creating a Project..... 1**
 - 1.1 Project Overview..... 1
 - 1.2 Creating a Project..... 2
 - 1.3 Managing Projects..... 3
- 2 Creating a Data Source..... 8**
 - 2.1 Data Source Overview..... 8
 - 2.2 Connecting to a Data Source..... 10
 - 2.2.1 Connecting to a GaussDB(DWS) Data Source..... 10
 - 2.2.2 Connecting to a GaussDB Data Source..... 18
 - 2.2.3 Connecting to a MySQL Data Source..... 24
 - 2.2.4 Connecting to a PostgreSQL Data Source..... 31
 - 2.2.5 Connecting to a Doris Data Source..... 39
 - 2.2.6 Connecting to a ClickHouse Data Source..... 46
 - 2.2.7 Connecting to an API Data Source..... 53
 - 2.2.8 Connecting to a DLI Data Source..... 55
 - 2.2.9 Connecting to a Hive Data Source..... 57
 - 2.3 Uploading a File..... 67
 - 2.4 Sharing a Data Source..... 69
 - 2.5 Managing Data Sources..... 70
- 3 Creating a Dataset..... 72**
 - 3.1 Dataset Overview..... 72
 - 3.2 Creating a Dataset..... 72
 - 3.2.1 Creating a Dataset Through Visual Configuration..... 72
 - 3.2.2 Creating a Dataset Using SQL Statements..... 80
 - 3.3 Column Permissions..... 83
 - 3.3.1 No Viewing Rule..... 83
 - 3.3.2 Data Masking Rule..... 84
 - 3.4 Row Permissions..... 86
 - 3.4.1 Authorization Based on Combined Conditions..... 86
 - 3.4.2 Authorization Based on User Tags..... 88
 - 3.5 Sharing a Dataset..... 90
 - 3.6 Managing a Dataset..... 91

4 Creating a Data Model.....93

4.1 Creating a Model by Joining Multiple Tables..... 93

4.2 Creating a Dimension..... 96

4.3 Creating a Hierarchy..... 103

4.4 Setting SET Statements..... 104

5 Creating an Indicator..... 106

5.1 Overview..... 106

5.2 Creating an Indicator..... 106

5.3 Sharing an Indicator..... 115

5.4 Managing Indicators..... 116

5.5 Example Typical Scenario..... 117

6 Creating a Dashboard..... 122

6.1 Dashboard Overview..... 122

6.2 Creating a Dashboard..... 123

6.3 Visual Controls on a Dashboard..... 125

6.3.1 Query Control..... 125

6.3.2 Tab..... 129

6.3.3 Composite Container..... 132

6.3.4 Rich Text..... 134

6.3.5 Intelligent Chart..... 140

6.3.6 Table..... 146

6.3.6.1 Table..... 146

6.3.6.2 Cross Table..... 156

6.3.6.3 Heatmap..... 162

6.3.7 Line/Plane Chart..... 169

6.3.7.1 Line Chart..... 169

6.3.7.2 Area Chart..... 177

6.3.7.3 Stacked Area Chart..... 185

6.3.7.4 Line Chart and Clustered Column Chart..... 193

6.3.7.5 Combination Chart..... 198

6.3.8 Column/Bar Chart..... 204

6.3.8.1 Clustered Column Chart..... 204

6.3.8.2 Stacked Column Chart..... 212

6.3.8.3 Stacked Bar Chart..... 218

6.3.8.4 Gantt Chart..... 224

6.3.9 Indicator..... 229

6.3.9.1 Indicator Dashboard..... 229

6.3.9.2 Dashboard..... 235

6.3.9.3 Treemap Chart..... 239

6.3.10 Pie/Ring Chart..... 244

6.3.10.1 Pie Chart..... 244

6.3.10.2 Radar Chart..... 251

- 6.3.11 Scatter/Bubble Chart..... 256
 - 6.3.11.1 Scatter Chart..... 256
 - 6.3.11.2 Bubble Chart..... 264
- 6.3.12 Other..... 272
 - 6.3.12.1 Word Cloud Chart..... 272
 - 6.3.12.2 Parallel Coordinates..... 276
 - 6.3.12.3 Sankey..... 281
 - 6.3.12.4 Funnel..... 286
 - 6.3.12.5 Timeline..... 291
- 6.4 Customizing Dashboard Pages and Grids..... 294
- 6.5 Previewing a Dashboard..... 297
- 6.6 Publishing a Dashboard..... 298
- 6.7 Sharing a Dashboard..... 298
- 6.8 Managing Dashboards..... 300
- 6.9 Managing Charts..... 301
- 6.10 Viewing a Dashboard on a Mobile Device..... 303
- 7 Creating a Large Screen..... 306**
 - 7.1 Large Screen Overview..... 306
 - 7.2 Creating a Large Screen..... 306
 - 7.3 Setting Global Parameters..... 310
 - 7.4 Large Screen Components..... 319
 - 7.4.1 Common Charts..... 319
 - 7.4.1.1 Creating a Common Chart..... 319
 - 7.4.1.2 Line Chart..... 322
 - 7.4.1.2.1 Line Chart..... 322
 - 7.4.1.2.2 Combination Chart..... 332
 - 7.4.1.2.3 Dual Y-Axis Combination Chart..... 342
 - 7.4.1.2.4 Step Line Chart..... 351
 - 7.4.1.3 Pie Chart..... 360
 - 7.4.1.3.1 Pie Chart..... 361
 - 7.4.1.3.2 Circular Progress Bar..... 370
 - 7.4.1.3.3 Rose Chart..... 374
 - 7.4.1.3.4 Radar Chart..... 383
 - 7.4.1.4 Bar Chart..... 388
 - 7.4.1.4.1 Bar Chart..... 388
 - 7.4.1.4.2 Horizontal Bar Chart..... 404
 - 7.4.1.4.3 Combination Chart..... 415
 - 7.4.1.4.4 Dual Y-Axis Combination Chart..... 424
 - 7.4.1.4.5 Gantt Chart..... 437
 - 7.4.2 Creating a Map..... 444
 - 7.4.2.1 Creating a Map..... 444
 - 7.4.2.2 China Map..... 444

7.4.2.3 World Map.....	447
7.4.2.4 Custom Map.....	453
7.4.2.5 Multi-Layered Map.....	462
7.4.3 Creating Media.....	466
7.4.3.1 Image.....	466
7.4.3.2 Video.....	468
7.4.4 Preparing a Text.....	469
7.4.4.1 Creating a Text.....	470
7.4.4.2 Title.....	473
7.4.4.3 Text.....	478
7.4.4.4 Word Cloud.....	484
7.4.4.5 Timer.....	486
7.4.4.6 Carousel Table.....	486
7.4.4.7 Table.....	490
7.4.4.8 Ticker Board.....	500
7.4.4.9 Threshold Board.....	504
7.4.4.10 Marquee Parameters.....	507
7.4.4.11 Carousel Bar Chart.....	508
7.4.4.12 Treemap.....	511
7.4.5 Adding Materials.....	516
7.4.6 Creating Interactions.....	521
7.4.7 Using More Components.....	528
7.4.7.1 Creating a Component.....	528
7.4.7.2 Date Selector.....	529
7.4.7.3 Funnel Chart.....	531
7.4.7.4 Dashboard.....	537
7.4.7.5 Progress Bar.....	540
7.4.7.6 Industry Distribution Map.....	544
7.4.7.7 Milestone.....	548
7.5 Previewing a Large Screen.....	551
7.6 Publishing a Large Screen.....	552
7.7 Copying a Large Screen.....	552
7.8 Sharing a Large Screen.....	553
7.9 Managing a Large Screen.....	555
8 Custom Components.....	557
8.1 Overview.....	557
8.2 Creating a Custom Component.....	557
8.3 Managing Custom Components.....	561
8.4 Custom Component Development Package.....	563
8.4.1 Component Development Package Files.....	563
8.4.2 Index.js File.....	564
8.4.3 gui.json File.....	569

8.4.4 UI Types.....	577
9 Intelligent Analysis Assistant.....	581
9.1 Overview.....	581
9.2 Creating an Intelligent Analysis Assistant.....	584
9.3 Configuring an Intelligent Analysis Assistant.....	588
9.3.1 Overview.....	588
9.3.2 Configuring Models.....	591
9.3.3 Configuring Prompts.....	594
9.3.4 Configuring Scenes.....	598
9.3.5 Configuring Keywords.....	600
9.3.6 Configuring Named Entities.....	604
9.3.7 Configuring a Question Template.....	607
9.3.8 Configuring Associated Queries.....	610
9.3.9 Configuring Templated Insights.....	613
9.3.10 Configuring Synonyms.....	616
9.3.11 Configuring Time Limits.....	620
9.4 Conversation with an Intelligent Analysis Assistant.....	625
9.4.1 Intelligent Data Insight.....	625
9.4.2 Intelligent Insights.....	633
9.4.3 Intelligent Building.....	640
9.5 Evaluating an Intelligent Analysis Assistant.....	642
9.6 Sharing an Intelligent Analysis Assistant.....	649
9.7 Managing Intelligent Analysis Assistants.....	651
9.8 Viewing an Intelligent Analysis Assistant on Mobile.....	654
10 Data Portal.....	656
10.1 Creating a Data Portal.....	656
10.2 Sharing a Data Portal.....	659
10.3 Managing Data Portals.....	660
11 Embedded Analytics.....	663
11.1 Creating Embedded Analytics.....	663
11.2 Managing Embedded Analytics.....	666
12 Migrating Resources.....	668
12.1 Resource Migration Overview.....	668
12.2 Creating a Resource Package.....	670
12.3 Exporting a Resource Package.....	671
12.4 Importing a Resource Package.....	672
12.5 Managing Resource Packages.....	675
13 System Configuration.....	677
13.1 Organization Management.....	677
13.1.1 User Management.....	677

13.1.2 Tag Management.....	679
13.1.3 Agency Management.....	682
13.2 Function Settings.....	682
13.2.1 Configuring an OBS Bucket.....	682
13.2.2 Quota Management.....	685
13.3 Collaborative Office.....	689
13.3.1 Subscription Management.....	689
13.3.2 Access Office Software.....	693
13.3.2.1 Lark.....	693
13.3.2.2 DingTalk.....	695
14 Model Management.....	697
14.1 Model Service.....	697
15 Permissions Management.....	700
15.1 Creating an IAM User and Granting It Permissions.....	700
15.2 Creating a Custom Policy.....	701
15.3 DataArts Insight Resources.....	704
16 Auditing.....	706
16.1 Key Operations Supported by CTS.....	706
17 FAQ.....	709
17.1 What Are the Use Cases of DataArts Insight?.....	709
17.2 Regions and AZs.....	709
17.3 Why Isn't the Data Source Connected to DataArts Insight Working?.....	711

1 Creating a Project

1.1 Project Overview

DataArts Insight Project

Before creating a dashboard or a large screen using DataArts Insight, you need to create a project first. Under a project, you can connect data sources, create datasets, create dashboards, create large screens, and more. Projects allow you to manage and isolate resources in different groups.

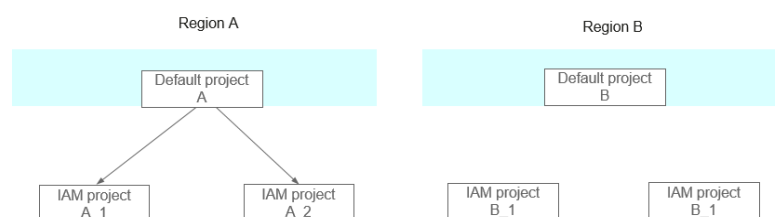
Differences Between DataArts Insight Projects, IAM Projects, and Enterprise Projects

- **IAM project:** You can use projects to group and isolate resources (including compute, storage, and network resources) across physical regions. A default project is provided for each region, and you can create subprojects under each default project. You can grant permissions to IAM users for accessing resources in specific projects.

For more refined access control, create subprojects under a project and purchase resources in the subprojects. IAM users can then be assigned permissions to access only specific resources in the subprojects.

Create an [IAM project](#).

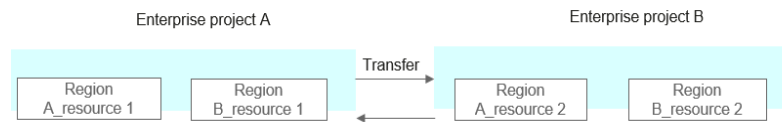
Figure 1-1 IAM projects



- **Enterprise projects** group and manage resources across regions. Resources in enterprise projects are logically isolated from each other.

An enterprise project can include resources in multiple regions, and resources can be added to or removed from enterprise projects. Enterprise projects allow you to assign permissions for specific cloud resources. You cannot create IAM projects after enabling Enterprise Management.

Figure 1-2 IAM enterprise projects



- **DataArts Insight projects** can only be created within DataArts Insight to group and isolate DataArts Insight resources. A DataArts Insight project is bound to a specific region, and the resources within it cannot be used in other regions. You can bind a DataArts Insight project with an enterprise project to enable authorization of project resources across regions.

Notes and Constraints

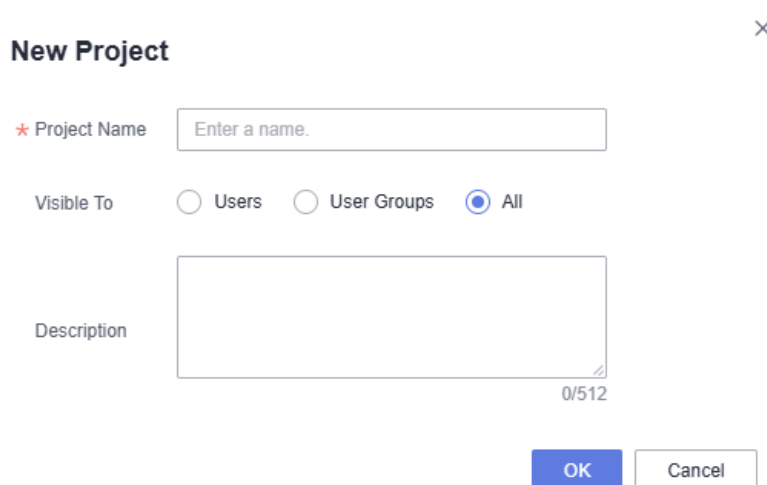
A maximum of 200 projects can be created.

1.2 Creating a Project

DataArts Insight projects allow you to manage and isolate resources in different groups. Before using DataArts Insight to create charts, create a project. Then, you need to create data sources, dashboards, large screens, and data portals in the project. This section describes how to create a project.

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
3. On the top menu, click **Project**. On the displayed page, click **Create Project**.

Figure 1-3 Creating a project

New Project ×

★ Project Name

Visible To ☐ Users ☐ User Groups ☒ All

Description

0/512

OK Cancel

4. Enter the project name, visible type, members, and description.

NOTE

- The project name can contain up to 50 characters. Only letters, numbers, parentheses (()), square brackets ([]), slashes (/), backslashes (\), vertical bars (|), and underscores (_) are allowed.
- The description can contain a maximum of 512 characters.
- A project is visible to only the creator and members selected during the project creation.

5. After entering project information, click **OK**.

1.3 Managing Projects

DataArts Insight allows you to edit and delete projects. This section describes the process of editing and deleting projects.

Prerequisites

- You have been granted the permission to edit and delete projects.

Notes and Constraints

- Administrator and project owner: have all project permissions and can grant project permissions to other members.
- Common user: can only view joined projects.

Editing a Project

1. On the top menu, click **Project**.
2. Locate the desired project, click , and select **Set**. The project settings slide-out panel is displayed ([Figure 1-5](#)).

Figure 1-4 Editing a project

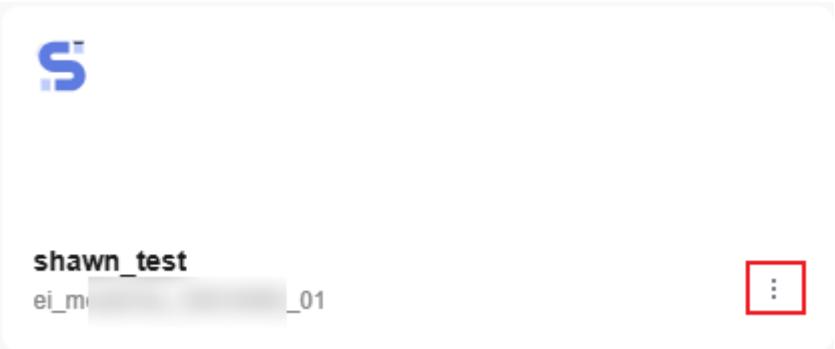
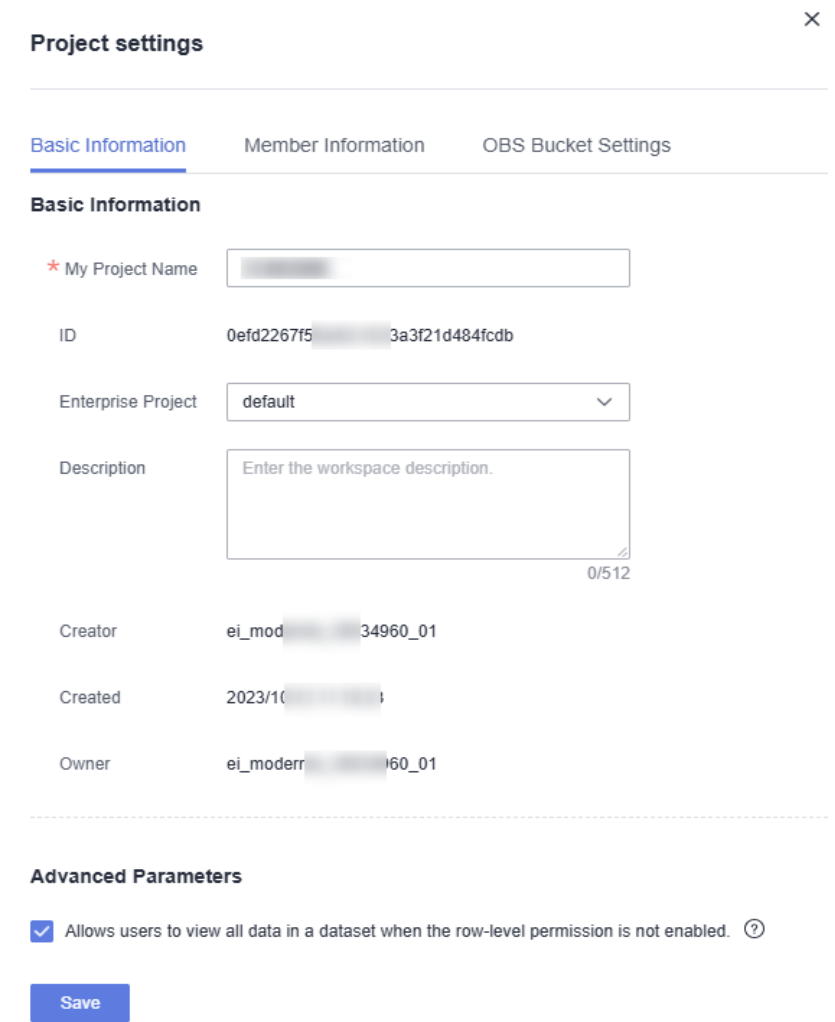


Figure 1-5 Project settings



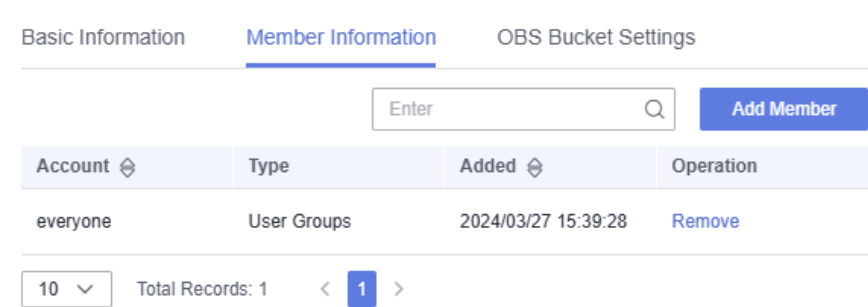
3. On the **Basic Information** tab page, you can edit parameters such as the project name, enterprise project, and description (Table 1-1).

Table 1-1 Basic information parameters

Parameter	Description
My Project Name	The project name can contain up to 50 characters. Only letters, numbers, parentheses (()), square brackets ([]), slashes (/), backslashes (\), vertical bars (), and underscores (_) are allowed.
ID	DataArts Insight project ID.
Enterprise Project	Enterprise project the project belongs to.
Description	Add a description to the project. You can enter information such as the purpose and use cases of the project, making it easier for future management. Enter a maximum of 512 characters.
Creator	User who creates the project.
Created	Time when the project is created.
Owner	Owner of the project, who has the same permissions as the administrator.
Allows users to view all data in a dataset when the row-level permission is not enabled.	- Check this parameter to view all data in the dataset when row-level permissions are not enabled. When row-level permissions are enabled, check this parameter to view data with row-level permissions. - Unchecking this parameter means that all data in the dataset cannot be queried when row-level permissions are not enabled, and the dashboards, large screens, and intelligent analysis assistants that rely on the dataset cannot query the data.

4. Click the **Member Information** tab. On this tab page, you can view all users and user groups within the project. You can click **Add Member** in the upper right corner to add a user or user group.

Figure 1-6 Member information



5. Click the **OBS Bucket Settings** tab. For details, see [Configuring an OBS Bucket](#).

Figure 1-7 OBS bucket settings

Basic Information

Member Information

OBS Bucket Settings

Data storage bucket

☒ Follow default configuration

★ Endpoint

Enter an endpoint.

★ Bucket Name

Enter a bucket name.

Path Prefix

Enter a path prefix.

★ Max. Retention Period (Days)

–

0

+

Setting this parameter to 0 removes any restrictions on the retention period.

★ File Encryption ?

☒ None

☐ SSE-OBS

AK

Enter an AK.

SK

Enter an SK.

Save

Static resource storage bucket

☒ Follow default configuration

★ Bucket Type

☒ System Open Bucket

☐ User-defined Bucket

Save

Deleting a Project

1. On the top menu, click **Project**.

2. In the **My Projects** list, locate the project you want to delete, click , and select **Delete**.

3. In the displayed **Delete My Project** dialog box, click **OK**.

NOTE

Note that this operation is irreversible and all resources under the project will be permanently removed, including all data sources, dashboards, and other resources. Please proceed with caution.

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6

Setting a Project as the Default

1. On the top menu, click **Project**.
2. In the **My Projects** list, locate the project you want to set as the default, click , and select **Set as default project**.

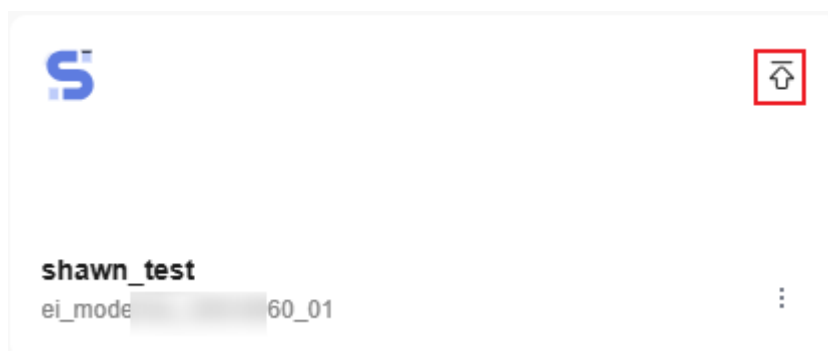
NOTE

- You can set only one project as the default. Once the setting is successful, the default project is preferentially displayed on the **Workspace** page and in the **My Projects** list of the **Intelligent Q&A** page.
- When the Q&A page is refreshed, if the URL contains *workspaceId*, the selected project in the **My Projects** list is the one in the URL.

Pinning a Project

1. On the top menu, click **Project**.
2. On the displayed **My Projects** page, locate the project you want to pin and click . Once pinned, the project is automatically moved to the top of the list for quick viewing and operation.

Figure 1-8 Pinning a project



2 Creating a Data Source

2.1 Data Source Overview

Data sources are the foundation of data analysis. To analyze data, you must first connect DataArts Insight to a data source. DataArts Insight provides secure and reliable data connection methods, offering data analysts a variety of ways to access data sources. This effectively improves data analysis efficiency. DataArts Insight currently supports GaussDB(DWS), GaussDB, MySQL, PostgreSQL, Doris, ClickHouse, API, DLI, and Hive data sources. This section walks you through how to connect to a data source.

Supported Data Source Types

Table 2-1 Supported data source types

Data Source	Type	Connection Method	How to Connect
GaussDB(DWS)	Big data platform	Public network/VPC endpoint service/VPC	Connecting to a GaussDB(DWS) Data Source
GaussDB	Big data platform	Public network	Connecting to a GaussDB Data Source
MySQL	Relational database	Public network/VPC endpoint service/VPC	Connecting to a MySQL Data Source
PostgreSQL	Big data platform	Public network/VPC endpoint service/VPC	Connecting to a PostgreSQL Data Source

Data Source	Type	Connection Method	How to Connect
Doris	Big data platform	Public network/VPC endpoint service/VPC	Connecting to a Doris Data Source
ClickHouse	Big data platform	Public network/VPC endpoint service/VPC	Connecting to a ClickHouse Data Source
DLI	Big data platform	N/A	Connecting to a DLI Data Source
Hive	Big data platform	Public network/VPC endpoint service/VPC	Connecting to a Hive Data Source

Notes and Constraints

- The data source and the DataArts Insight project must belong to the same enterprise project.
- The data source and the DataArts Insight project must belong to the same region. This means only data sources in the same region as the DataArts Insight project are allowed to connect to DataArts Insight.
- The network type of data sources must meet the following requirements:
 - If the data source is an on-premises database, a public network or a dedicated connection is required. Ensure that the host where the data source is located can access the public network and the port has been enabled in the firewall rule.
 - If the data source is a cloud service, such as GaussDB(DWS) and ClickHouse, the following conditions must be met for network interconnection:
 - If DataArts Insight and the cloud service are in different regions, a public network or a dedicated connection is required to enable the connection.
 - If DataArts Insight and the cloud service are in the same region:
 - By default, different instances in the same VPC, subnet, and security group can communicate with each other.
 - If the VPC is the same as the VPC but the subnets or security groups are different, you need to configure routing rules and security group rules. For details about how to configure routing rules, see [How Do I Configure Routing Rules?](#) For details about how to configure security group rules, see [Security Group Configuration](#).

- DataArts Insight automatically generates VPC endpoints for connecting to the VPC networks when data sources from various VPCs are connected to it.

2.2 Connecting to a Data Source

2.2.1 Connecting to a GaussDB(DWS) Data Source

DataArts Insight allows you to connect to a GaussDB(DWS) data source. This section describes how to connect DataArts Insight to a GaussDB(DWS) data source.

DataArts Insight can connect to GaussDB(DWS) through the following methods:

- **Public network connection:** To connect to cloud service resources that do not belong to your current account, use this method. The data source must be bound to an EIP.
- **VPC network connection:** To connect to cloud service resources under your current account, use this method.
- **VPCEP service:** To connect to data sources that are not associated with your current account or for which you lack VPCEP permissions, as well as ECS self-built data sources, use this method.

Preparations

Do the following to check if an EIP or VPCEP security group is added:

1. Log in to the management console.
2. In the service list, choose **EI Enterprise Intelligence > Data Warehouse Service**.
3. Select a region in the upper left corner.
4. In the navigation pane on the left, choose **Dedicated Clusters > Clusters**.
5. Click the name of the cluster you want to connect to. The cluster details page is displayed.
6. On the displayed page, find the **Network** area and click the security group next to **Security Group**. Click the **Inbound Rules** tab and check if an EIP or VPCEP security group is added.
 - If yes, return to the DataArts Insight data source editing page to connect to the data source.
 - If no, perform the following steps to add a security group:
 - i. Click **Add Rule**. In the displayed **Add Inbound Rule** dialog box, set the protocol, port, and source IP address.
 - ii. Confirm the parameter settings and click **OK** to return to the DataArts Insight page and connect to the data source.

NOTE

If the data source connection test fails after the security group is added, the possible cause is that SASL_SSL is not enabled for that data source.

Accessing a GaussDB(DWS) Data Source Through a Public Network

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 upper right corner of the **Workspace** page.
3. On the top of the console, click **Projects** and click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **GaussDB(DWS)** and **Access Network Type** to **Public network**.
5. Set other parameters based on [Table 2-2](#).

Figure 2-1 Public network data source parameters

Create Data Source

* Source Database Type	GaussDB(DWS)
* Access Network Type	Public network
* Name	Enter a name.
* Domain Name	Enter a domain name.
* Username	Enter a username.
* Password	Enter a password.
* Port	Enter a port.
* Database	Enter a database name.
* SASL_SSL	☒

Table 2-2 Parameters

Parameter	Mandato ry	Description
Source Database Type	Yes	Type of the data source to be connected.
Access Network Type	Yes	Select Public network for GaussDB(DWS) instances with public IP addresses, not restricted by account, region, or other limitations.
Name	Yes	Name the current data connection for easier subsequent use and configuration.

Parameter	Mandatory	Description
Domain Name	Yes	Public IP address or domain name bound to the target data source, which can be obtained from the public IP address in the Connection Information area on the GaussDB(DWS) instance details page.
Port	Yes	External port of the target data source on the corresponding node, which can be obtained from the port number in the Connection Information area on the GaussDB(DWS) instance details page.
Database	Yes	Select the database in the target data source based on service requirements.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.
Username	Yes	Username used for connection authentication.
Password	Yes	Password used for connection authentication.

6. Click **Test Connection** to test the data source connectivity.
7. Once the test is successful, click **OK**.

Accessing a GaussDB(DWS) Data Source Through a VPC Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **GaussDB(DWS)** and **Access Network Type** to **GaussDB(DWS)**.
5. Set other parameters based on [Table 2-3](#).

Figure 2-2 VPC data source parameters

Create Data Source ×

★ Source Database Type

GaussDB(DWS) ▾

★ Access Network Type

GaussDB(DWS) ▾

★ Region

▾

★ Name

—Enter—

Description

★ Instance

▾

★ Servers

Enter the IP address of the ELB or GaussDB(DWS).

★ Database

★ SASL_SSL

☒

★ Username

Enter a username.

★ Password

Enter a password. 

Table 2-3 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, GaussDB(DWS) is selected.
Access Network Type	Yes	Select GaussDB(DWS) for GaussDB(DWS) instances purchased under the current account. After this type is selected, the service directly calls the query API of GaussDB(DWS) to obtain the instance list and fill it into the Instance dropdown list.
Region	Yes	Region where target instances are deployed. Currently, DataArts Insight only supports direct connection to GaussDB(DWS) instances within the same region. For cross-region scenarios, select another access network type.
Name	Yes	Name the current data connection for easier subsequent use and configuration.
Description	No	Supplementary information about the current data connection for future reference.
Instance	Yes	List of GaussDB(DWS) service instances under the region corresponding to the current account, allowing direct selection for connection.

Parameter	Mandatory	Description
Servers	Yes	Information about the node to be connected to the GaussDB(DWS) instance. You can obtain the information from the private IP address and port number in the Connection Information area on the GaussDB(DWS) instance details page. NOTE If the cluster is associated with an ELB, the ELB address will be automatically populated. However, if there is no ELB associated with the cluster, the IP address and port number of the first node will be used by default.
Database	Yes	Select the database in the target data source based on service requirements.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.
Username	Yes	Username used for connection authentication.
Password	Yes	Password used for connection authentication.

- Click **Test Connection** to test the data source connectivity.
- Once the test is successful, click **OK**.

Connecting to a GaussDB(DWS) Data Source Through a VPC Endpoint Service

VPCEP enables connections to data sources using the VPCEP service name, offering flexible data access and addressing issues related to cross-account access and self-built data source access for ECS. Furthermore, the same main account and its IAM users can share a single connection channel, streamlining connection management. The existing access method eliminates the need for permission delegation, further simplifying operations.

- Prerequisites**
 - Connection Approval** has been enabled on the basic information page of the VPCEP service. For details, see [Viewing a VPC Endpoint Service](#).
 - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see [Managing Whitelist Records of a VPC Endpoint Service](#). You can obtain the domain ID in the **Create Data Source** dialog box.

Figure 2-3 Obtaining the domain ID

The screenshot shows the 'Create Data Source' form. A tooltip is displayed over the 'VPC Endpoint Service' field, stating: 'To allow this service to create VPC endpoints, you need to add iam domain: 9e99...3703d293 of the current service to the whitelist. How do I...'. The form fields include: Source Database Type, Access Network Type (set to VPC Endpoint Service), Region, VPC Endpoint Service (with a red circle and '1' next to it), VPC Endpoint ID, Port, Database, Username, Password, and SASL_SSL (checked).

- **Procedure**

- Log in to the DataArts Insight console.
- Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
- On the top of the console, click **Projects** and click the name of the desired project.
- In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **GaussDB(DWS)** and **Access Network Type** to **VPC Endpoint Service**.
- Set other parameters based on [Table 2-4](#).

Figure 2-4 Connection through a VPC endpoint service

The screenshot shows the 'Create Data Source' form with the following fields: Source Database Type, Access Network Type (set to VPC Endpoint Service), Region, Name (placeholder: --Enter--), Description, VPC Endpoint Service (with a help icon), VPC Endpoint ID, Port, Database, Username (placeholder: Enter a username.), Password (placeholder: Enter a password.), and SASL_SSL (checked).

Table 2-4 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, GaussDB(DWS) is selected.
Access Network Type	Yes	Select VPC Endpoint Service for GaussDB(DWS) instances under different accounts. If the instances do not have public IP addresses, you need to manually configure the VPCEP information to establish the network environment before setting up the connection.
Region	Yes	Region where target instances are deployed. Currently, DataArts Insight only supports direct connection to GaussDB(DWS) instances within the same region. For cross-region scenarios, select another access network type.
Name	Yes	Name the current data connection for easier subsequent use and configuration.
Description	No	Supplementary information about the current data connection for future reference.
VPC Endpoint Service	Yes	Name of the VPCEP service to be connected. The prerequisites for connecting to a VPCEP service are as follows: - You have obtained the correct VPCEP service name. For details, see Checking a VPC Endpoint Service. - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see Managing Whitelist Records of a VPC Endpoint Service.

Parameter	Mandatory	Description
Verify	N/A	After entering the VPCEP service name, click Verify. If a green tick is displayed next to the VPC endpoint ID, the verification is successful. If a red exclamation mark (⚠) is displayed next to the VPC endpoint ID, the VPCEP service is connected to for the first time. In this case, you need to authorize the VPCEP service. To do so, log in to the VPCEP console. Under Network Console, choose VPC Endpoint > VPC Endpoint Services. On the displayed page, click the desired VPCEP service and click the Connection Management tab. On the tab page, authorize the VPCEP service. For details, see Managing Connections of a VPC Endpoint Service. Once the authorization is successful, click Verify again. The verification is successful. NOTE • All initial connections to the VPCEP service from different data sources require approval. • Only an administrator account or an account with administrator privileges can approve the connection. If your current account does not have approval privileges, contact an administrator account for approval.
VPC Endpoint ID	Yes	This parameter is automatically filled in once you entered the VPCEP name and clicked Verify .
Port	Yes	External port of the target data source on the corresponding node, which can be obtained from the port number in the Connection Information area on the GaussDB(DWS) instance details page.
Database	Yes	Select the database in the target data source based on service requirements.
Username	Yes	Username used for connection authentication.
Password	Yes	Password used for connection authentication.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

- f. Click **Test Connection** to test the data source connectivity.
- g. Once the test is successful, click **OK**.

2.2.2 Connecting to a GaussDB Data Source

DataArts Insight allows you to connect to a GaussDB data source. This section describes how to connect DataArts Insight to a GaussDB data source.

DataArts Insight can connect to GaussDB through the following methods:

- **Public network connection:** To connect to cloud service resources that do not belong to your current account, use this method. The data source must be bound to an EIP.
- **VPC network connection:** To connect to cloud service resources under your current account, use this method.
- **VPCEP service:** To connect to data sources that are not associated with your current account or for which you lack VPCEP permissions, as well as ECS self-built data sources, use this method.

Preparations

Do the following to check if an EIP or VPCEP security group is added:

1. Log in to the management console.
2. Choose **Service List > Databases > GaussDB** to go to the GaussDB console.
3. Select a region in the upper left corner.
4. Click **Instances** in the navigation pane on the left.
5. Click the name of the target instance to go to the basic information page.
6. Click the security group in the **Connection Information > Security Group** area. On the displayed page, click **Inbound Rules**. Then, check whether a public or private IP address is added.
 - If yes, return to the DataArts Insight data source editing page to connect to the data source.
 - If no, perform the following steps to add a security group:
 - i. Click **Add Rule**. In the displayed **Add Inbound Rule** dialog box, set the protocol, port, and source IP address.
 - ii. Confirm the parameter settings and click **OK** to return to the DataArts Insight page and connect to the data source.

NOTE

If the data source connection test fails after the security group is added, the possible cause is that SASL_SSL is not enabled for that data source.

Accessing a GaussDB Data Source Through a Public Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.

4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **GaussDB** and **Access Network Type** to **Public network**.
5. Set other parameters based on [Table 2-5](#).

Figure 2-5 Connecting to a GaussDB data source

Create Data Source

* Source Database Type	GaussDB
* Access Network Type	Public network
* Name	Enter a name.
* Domain Name	Enter a domain name.
* Username	Enter a username.
* Password	Enter a password.
* Port	Enter a port.
* Database	Enter a database name.
* SASL_SSL	☒

Table 2-5 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the data source to be connected.
Access Network Type	Yes	Select Public network for GaussDB(DWS) instances with public IP addresses, not restricted by account, region, or other limitations.
Name	Yes	Name the current data connection for easier subsequent use and configuration.
Domain Name	Yes	Public IP address or domain name bound to the target data source, which can be obtained from the public IP address in the Connection Information area on the GaussDB(DWS) instance details page.
Port	Yes	External port of the target data source on the corresponding node, which can be obtained from the port number in the Connection Information area on the GaussDB(DWS) instance details page.

Parameter	Mandatory	Description
Database	Yes	Select the database in the target data source based on service requirements.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.
Username	Yes	Username used for connection authentication.
Password	Yes	Password used for connection authentication.

6. Click **Test Connection** to test the data source connectivity.
7. After the test is successful, click **OK**.

Accessing a GaussDB Data Source Through a VPC Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **GaussDB** and **Access Network Type** to **GaussDB**.
5. Set other parameters based on [Table 2-6](#).

Figure 2-6 Parameters for connecting to a GaussDB cloud data source

Create Data Source

★ Source Database Type

GaussDB

★ Access Network Type

GaussDB

★ Region

★ Name

--Enter--

Description

★ Instance

--Select--

★ Servers

Enter the IP address of the GaussDB.

★ Database

★ Username

Enter a username.

★ Password

Enter a password.

★ SASL_SSL

☒

Table 2-6 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, GaussDB is selected.
Access Network Type	Yes	In this example, GaussDB is selected.
Region	Yes	Region where the GaussDB service host is located.
Name	Yes	Name of the data source displayed in the list.
Description	No	Description of the data source.
Instance	Yes	Role instance corresponding to the GaussDB service.
Servers	Yes	List of servers where GaussDB is located.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

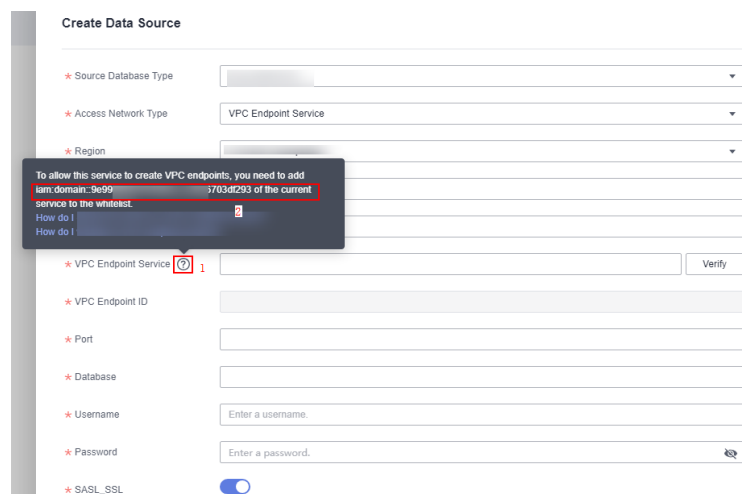
6. Click **Test Connection** to test the data source connectivity.
7. Once the test is successful, click **OK**.

Connecting to a GaussDB Data Source Through a VPC Endpoint Service

VPCEP enables connections to data sources using the VPCEP service name, offering flexible data access and addressing issues related to cross-account access and self-built data source access for ECS. Furthermore, the same main account and its IAM users can share a single connection channel, streamlining connection management. The existing access method eliminates the need for permission delegation, further simplifying operations.

- **Prerequisites**
 - **Connection Approval** has been enabled on the basic information page of the VPCEP service. For details, see [Viewing a VPC Endpoint Service](#).
 - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see [Managing Whitelist Records of a VPC Endpoint Service](#). You can obtain the domain ID in the **Create Data Source** dialog box.

Figure 2-7 Obtaining the domain ID



- **Procedure**
 - a. Log in to the DataArts Insight console.
 - b. Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
 - c. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
 - d. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **GaussDB** and **Access Network Type** to **VPC Endpoint Service**.

- e. Set other parameters based on [Table 2-7](#).

Figure 2-8 Connection through a VPC endpoint service

Create Data Source

* Source Database Type	
* Access Network Type	VPC Endpoint Service
* Region	
* Name	--Enter--
Description	
* VPC Endpoint Service ?	Verify
* VPC Endpoint ID	
* Port	
* Database	
* Username	Enter a username.
* Password	Enter a password. Show
* SASL_SSL	☒

Table 2-7 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, GaussDB is selected.
Access Network Type	Yes	Select VPC Endpoint Service .
Region	Yes	Region where the GaussDB service host is located.
Name	Yes	Name of the data source displayed in the list, which is user-defined.
Description	No	Description of the data source.
VPC Endpoint Service	Yes	Name of the VPCEP service to be connected. The prerequisites for connecting to a VPCEP service are as follows: - You have obtained the correct VPCEP service name. For details, see Checking a VPC Endpoint Service. - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see Managing Whitelist Records of a VPC Endpoint Service.

Parameter	Mandatory	Description
Verify	N/A	After entering the VPCEP service name, click Verify. If a green tick is displayed next to the VPC endpoint ID, the verification is successful. If a red exclamation mark (⚠) is displayed next to the VPC endpoint ID, the VPCEP service is connected to for the first time. In this case, you need to authorize the VPCEP service. To do so, log in to the VPCEP console. Under Network Console, choose VPC Endpoint > VPC Endpoint Services. On the displayed page, click the desired VPCEP service and click the Connection Management tab. On the tab page, authorize the VPCEP service. For details, see Managing Connections of a VPC Endpoint Service. Once the authorization is successful, click Verify again. The verification is successful. NOTE • All initial connections to the VPCEP service from different data sources require approval. • Only an administrator account or an account with administrator privileges can approve the connection. If your current account does not have approval privileges, contact an administrator account for approval.
VPC Endpoint ID	Yes	This parameter is automatically filled in once you entered the VPCEP name and clicked Verify .
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

- f. Click **Test Connection** to test the data source connectivity.
- g. Once the test is successful, click **OK**.

2.2.3 Connecting to a MySQL Data Source

DataArts Insight allows you to connect to a MySQL data source. This section describes how to connect DataArts Insight to a MySQL data source.

DataArts Insight can connect to MySQL through the following methods:

- **Public network connection:** To connect to cloud service resources that do not belong to your current account, use this method. The data source must be bound to an EIP.
- **VPC network connection:** To connect to cloud service resources under your current account, use this method.
- **VPCEP service:** To connect to data sources that are not associated with your current account or for which you lack VPCEP permissions, as well as ECS self-built data sources, use this method.

Preparations

Do the following to check if an EIP or VPCEP security group is added:

1. Log in to the management console.
2. Choose **Service List > Databases > RDS for MySQL**.
3. Select a region in the upper left corner.
4. Click **Instances** in the navigation pane on the left.
5. Click the name of the target instance to go to the basic information page.
6. Click the security group in the **Network Information > Security Group** area. On the displayed page, click **Inbound Rules**. Then, check whether a public or private IP address is added.
 - If yes, return to the DataArts Insight data source editing page to connect to the data source.
 - If no, perform the following steps to add a security group:
 - i. Click **Add Rule**. In the displayed **Add Inbound Rule** dialog box, set the protocol, port, and source IP address.
 - ii. Confirm the parameter settings and click **OK** to return to the DataArts Insight page and connect to the data source.

NOTE

If the data source connection test fails after the security group is added, the possible cause is that SASL_SSL is not enabled for that data source.

Accessing a MySQL Data Source Through a Public Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **MySQL** and **Access Network Type** to **Public network**.
5. Set other parameters based on [Table 2-8](#).

Figure 2-9 Connecting to a MySQL data source

Create Data Source

★ Source Database Type

★ Access Network Type

★ Name

★ Domain Name

★ Username

★ Password

★ Port

★ Database

★ SASL_SSL ☒

Table 2-8 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the data source to be connected.
Access Network Type	Yes	Select Public network for GaussDB(DWS) instances with public IP addresses, not restricted by account, region, or other limitations.
Name	Yes	Name the current data connection for easier subsequent use and configuration.
Domain Name	Yes	Public IP address or domain name bound to the target data source, which can be obtained from the public IP address in the Connection Information area on the GaussDB(DWS) instance details page.
Port	Yes	External port of the target data source on the corresponding node, which can be obtained from the port number in the Connection Information area on the GaussDB(DWS) instance details page.
Database	Yes	Select the database in the target data source based on service requirements.

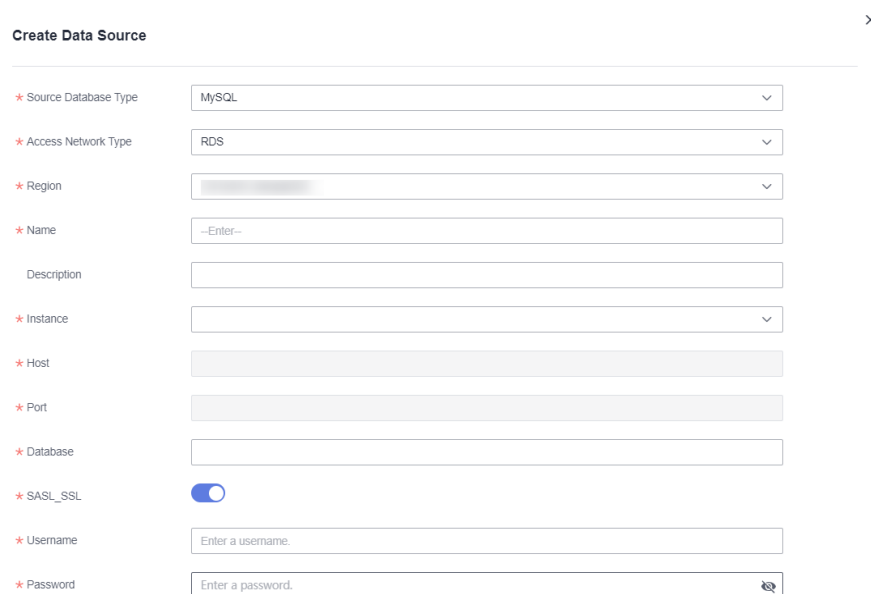
Parameter	Mandatory	Description
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.
Username	Yes	Username used for connection authentication.
Password	Yes	Password used for connection authentication.

6. Click **Test Connection** to test the data source connectivity.
7. Once the test is successful, click **OK**.

Accessing a MySQL Data Source Through a VPC Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **MySQL** and **Access Network Type** to **RDS**.
5. Set other parameters based on [Table 2-9](#).

Figure 2-10 MySQL cloud data source parameters



Create Data Source ×

★ Source Database Type: MySQL

★ Access Network Type: RDS

★ Region: 

★ Name: --Enter--

Description:

★ Instance: 

★ Host:

★ Port:

★ Database:

★ SASL_SSL: ☒

★ Username:

★ Password:

Table 2-9 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, MySQL is selected.
Access Network Type	Yes	In this example, RDS or GaussDB(for MySQL) is selected.
Region	Yes	Region where the MySQL service host is located.
Name	Yes	Name of the data source displayed in the list.
Description	No	Description of the data source.
Instance	Yes	Role instance corresponding to RDS or GaussDB(for MySQL).
Host	Yes	Host where RDS or GaussDB(for MySQL) is located.
Port	Yes	Port of the server where RDS or GaussDB(for MySQL) is located.
Database	Yes	Name of the database to be logged in to.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.

- Click **Test Connection** to test the data source connectivity.
- Once the test is successful, click **OK**.

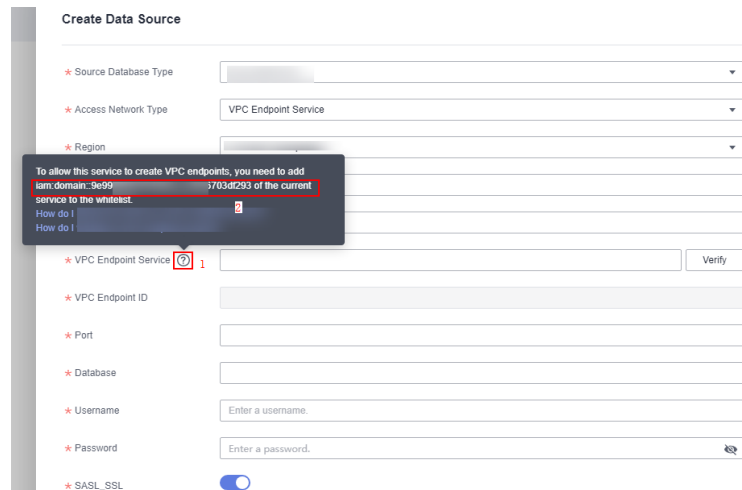
Connecting to a MySQL Data Source Through a VPC Endpoint Service

VPCEP enables connections to data sources using the VPCEP service name, offering flexible data access and addressing issues related to cross-account access and self-built data source access for ECS. Furthermore, the same main account and its IAM users can share a single connection channel, streamlining connection management. The existing access method eliminates the need for permission delegation, further simplifying operations.

- Prerequisites**
 - Connection Approval** has been enabled on the basic information page of the VPCEP service. For details, see [Viewing a VPC Endpoint Service](#).

- You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see [Managing Whitelist Records of a VPC Endpoint Service](#). You can obtain the domain ID in the **Create Data Source** dialog box.

Figure 2-11 Obtaining the domain ID



- **Procedure**
 - a. Log in to the DataArts Insight console.
 - b. Log in to the DataArts Insight management console.
 - c. Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
 - d. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
 - e. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **MySQL** and **Access Network Type** to **VPC Endpoint Service**.
 - f. Set other parameters based on [Table 2-10](#).

Figure 2-12 Connection through a VPCEP service

Create Data Source

* Source Database Type	
* Access Network Type	VPC Endpoint Service
* Region	
* Name	-Enter-
Description	
* VPC Endpoint Service ?	Verify
* VPC Endpoint ID	
* Port	
* Database	
* Username	Enter a username.
* Password	Enter a password.
* SASL_SSL	☒

Table 2-10 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, MySQL is selected.
Access Network Type	Yes	Select VPC Endpoint Service .
Region	Yes	Region where the MySQL service host is located.
Name	Yes	Name of the data source displayed in the list, which is user-defined.
Description	No	Description of the data source.
VPC Endpoint Service	Yes	Name of the VPCEP service to be connected. The prerequisites for connecting to a VPCEP service are as follows: - You have obtained the correct VPCEP service name. For details, see Checking a VPC Endpoint Service. - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see Managing Whitelist Records of a VPC Endpoint Service.

Parameter	Mandatory	Description
Verify	N/A	After entering the VPCEP service name, click Verify. If a green tick is displayed next to the VPC endpoint ID, the verification is successful. If a red exclamation mark (⚠) is displayed next to the VPC endpoint ID, the VPCEP service is connected to for the first time. In this case, you need to authorize the VPCEP service. To do so, log in to the VPCEP console. Under Network Console, choose VPC Endpoint > VPC Endpoint Services. On the displayed page, click the desired VPCEP service and click the Connection Management tab. On the tab page, authorize the VPCEP service. For details, see Managing Connections of a VPC Endpoint Service. Once the authorization is successful, click Verify again. The verification is successful. NOTE • All initial connections to the VPCEP service from different data sources require approval. • Only an administrator account or an account with administrator permissions can approve the connection. If your current account does not have approval permissions, contact an administrator account for approval.
VPC Endpoint ID	Yes	This parameter is automatically filled in once you entered the VPCEP name and clicked Verify .
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

- g. Click **Test Connection** to test the data source connectivity.
- h. Once the test is successful, click **OK**.

2.2.4 Connecting to a PostgreSQL Data Source

DataArts Insight allows you to connect to a PostgreSQL data source. This section describes how to connect DataArts Insight to a PostgreSQL data source.

DataArts Insight can connect to PostgreSQL through the following methods:

- **Public network connection:** To connect to cloud service resources that do not belong to your current account, use this method. The data source must be bound to an EIP.
- **VPC network connection:** To connect to cloud service resources under your current account, use this method.
- **VPCEP service:** To connect to data sources that are not associated with your current account or for which you lack VPCEP permissions, as well as ECS self-built data sources, use this method.

Preparations

Do the following to check if an EIP or VPCEP security group is added:

1. Log in to the management console.
2. Choose **Service List > Databases > RDS for PostgreSQL** to go to the RDS for PostgreSQL console.
3. Select a region in the upper left corner.
4. Click **Instances** in the navigation pane on the left.
5. Click the name of the target instance to go to the basic information page.
6. Click the security group in the **Connection Information > Security Group** area. On the displayed page, click **Inbound Rules**. Then, check whether a public or private IP address is added.
 - If yes, return to the DataArts Insight data source editing page to connect to the data source.
 - If no, perform the following steps to add a security group:
 - i. Click **Add Rule**. In the displayed **Add Inbound Rule** dialog box, set the protocol, port, and source IP address.
 - ii. Confirm the parameter settings and click **OK** to return to the DataArts Insight page and connect to the data source.

NOTE

If the data source connection test fails after the security group is added, the possible cause is that SASL_SSL is not enabled for that data source.

Accessing a PostgreSQL Data Source Through a Public Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **PostgreSQL** and **Access Network Type** to **Public network**.
5. Set other parameters based on [Table 2-11](#).

Figure 2-13 Connecting to a PostgreSQL data source

Create Data Source

★ Source Database Type

PostgreSQL

★ Access Network Type

Public network

★ Name

Enter a name.

★ Domain Name

Enter a domain name.

★ Username

Enter a username.

★ Password

Enter a password.

★ Port

Enter a port.

★ Database

Enter a database name.

★ SASL_SSL

☒

Table 2-11 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the data source to be connected.
Access Network Type	Yes	Select Public network for GaussDB(DWS) instances with public IP addresses, not restricted by account, region, or other limitations.
Name	Yes	Name the current data connection for easier subsequent use and configuration.
Domain Name	Yes	Public IP address or domain name bound to the target data source, which can be obtained from the public IP address in the Connection Information area on the GaussDB(DWS) instance details page.
Port	Yes	External port of the target data source on the corresponding node, which can be obtained from the port number in the Connection Information area on the GaussDB(DWS) instance details page.
Database	Yes	Select the database in the target data source based on service requirements.

Parameter	Mandatory	Description
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.
Username	Yes	Username used for connection authentication.
Password	Yes	Password used for connection authentication.

6. Click **Test Connection** to test the data source connectivity.
7. Once the test is successful, click **OK**.

Accessing a PostgreSQL Data Source Through a VPC Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **PostgreSQL** and **Access Network Type** to **RDS**.
5. Set other parameters based on [Table 2-12](#).

Figure 2-14 Parameters for connecting to a PostgreSQL cloud data source

Create Data Source

★ Source Database Type	PostgreSQL
★ Access Network Type	RDS
★ Region	
★ Name	—Enter—
Description	
★ Instance	—Select—
★ Host	
★ Port	
★ Database	
★ Username	Enter a username.
★ Password	Enter a password.
★ SASL_SSL	☒

Table 2-12 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, PostgreSQL is selected.
Access Network Type	Yes	In this example, RDS is selected.
Region	Yes	Region where the PostgreSQL service host is located.
Name	Yes	Name of the data source displayed in the list.
Description	No	Description of the data source.
Instance	Yes	Role instance corresponding to RDS for PostgreSQL.
Host	Yes	Host where RDS for PostgreSQL is located.
Port	Yes	Port of RDS for PostgreSQL.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.

Parameter	Mandatory	Description
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

- Click **Test Connection** to test the data source connectivity.
- Once the test is successful, click **OK**.

Connecting to a PostgreSQL Data Source Through a VPC Endpoint Service

VPCEP enables connections to data sources using the VPCEP service name, offering flexible data access and addressing issues related to cross-account access and self-built data source access for ECS. Furthermore, the same main account and its IAM users can share a single connection channel, streamlining connection management. The existing access method eliminates the need for permission delegation, further simplifying operations.

- Prerequisites**

- Connection Approval** has been enabled on the basic information page of the VPCEP service. For details, see [Viewing a VPC Endpoint Service](#).
- You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see [Managing Whitelist Records of a VPC Endpoint Service](#). You can obtain the domain ID in the **Create Data Source** dialog box.

Figure 2-15 Obtaining the domain ID

The screenshot shows the 'Create Data Source' dialog box. The 'Access Network Type' is set to 'VPC Endpoint Service'. The 'VPC Endpoint Service' field contains the text 'iam.domain-9e99-3743d293', which is highlighted by a red box. A red arrow points from the tooltip message to this text. The tooltip message reads: 'To allow this service to create VPC endpoints, you need to add iam.domain-9e99-3743d293 of the current service to the whitelist. How do I? How do I?'. Other fields include 'Source Database Type', 'Region', 'VPC Endpoint ID', 'Port', 'Database', 'Username', 'Password', and 'SASL_SSL' (which is checked).

- Procedure**

- Log in to the DataArts Insight console.
- Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.

- c. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- d. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **PostgreSQL** and **Access Network Type** to **VPC Endpoint Service**.
- e. Set other parameters based on [Table 2-13](#).

Figure 2-16 Connection through a VPCEP service

Create Data Source

* Source Database Type	
* Access Network Type	VPC Endpoint Service
* Region	
* Name	--Enter--
Description	
* VPC Endpoint Service ?	Verify
* VPC Endpoint ID	
* Port	
* Database	
* Username	Enter a username.
* Password	Enter a password. Show
* SASL_SSL	☒

Table 2-13 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, PostgreSQL is selected.
Access Network Type	Yes	Select VPC Endpoint Service .
Region	Yes	Region where the PostgreSQL service host is located.
Name	Yes	Name of the data source displayed in the list, which is user-defined.
Description	No	Description of the data source.

Parameter	Mandatory	Description
VPC Endpoint Service	Yes	Name of the VPCEP service to be connected. The prerequisites for connecting to a VPCEP service are as follows: - You have obtained the correct VPCEP service name. For details, see Checking a VPC Endpoint Service. - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see Managing Whitelist Records of a VPC Endpoint Service.
Verify	N/A	After entering the VPCEP service name, click Verify. If a green tick is displayed next to the VPC endpoint ID, the verification is successful. If a red exclamation mark (⚠) is displayed next to the VPC endpoint ID, the VPCEP service is connected to for the first time. In this case, you need to authorize the VPCEP service. To do so, log in to the VPCEP console. Under Network Console, choose VPC Endpoint > VPC Endpoint Services. On the displayed page, click the desired VPCEP service and click the Connection Management tab. On the tab page, authorize the VPCEP service. For details, see Managing Connections of a VPC Endpoint Service. Once the authorization is successful, click Verify again. The verification is successful. NOTE - All initial connections to the VPCEP service from different data sources require approval. - Only an administrator account or an account with administrator permissions can approve the connection. If your current account does not have approval permissions, contact an administrator account for approval.
VPC Endpoint ID	Yes	This parameter is automatically filled in once you entered the VPCEP name and clicked Verify .
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.

Parameter	Mandatory	Description
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

- f. Click **Test Connection** to test the data source connectivity.
- g. Once the test is successful, click **OK**.

2.2.5 Connecting to a Doris Data Source

DataArts Insight allows you to connect to a Doris data source. This section describes how to connect DataArts Insight to a Doris data source.

DataArts Insight can connect to Doris through the following methods:

- **Public network connection**: To connect to cloud service resources that do not belong to your current account, use this method. The data source must be bound to an EIP.
- **VPC network connection**: To connect to cloud service resources under your current account, use this method.
- **VPCEP service**: To connect to data sources that are not associated with your current account or for which you lack VPCEP permissions, as well as ECS self-built data sources, use this method.

Preparations

Do the following to check if an EIP or a VPCEP security group is added:

1. Log in to the management console.
2. In the service list, choose **Analytics > MapReduce Service** to access the MRS console.
3. Select a region in the upper left corner.
4. In the navigation pane on the left, choose **Clusters**. The cluster list is displayed.
5. Click the name of the cluster you want to connect to. The cluster overview page is displayed.
6. Locate the **Network Information** area. Click **Add Security Group Rule** next to **EIP**. In the **Add Security Group Rule** dialog box, click **Manage Security Group Rule**. Click the **Inbound Rules** tab and check whether a VPC endpoint security group or EIP is added.
 - If yes, return to the DataArts Insight data source editing page to connect to the data source.
 - If no, perform the following steps to add a security group:
 - i. Click **Add Rule**. In the displayed **Add Inbound Rule** dialog box, set the protocol, port, and source IP address. To add multiple rules, click **Fast-Add Rule**.

- ii. Confirm the parameter settings and click **OK** to return to the DataArts Insight page and connect to the data source.

NOTE

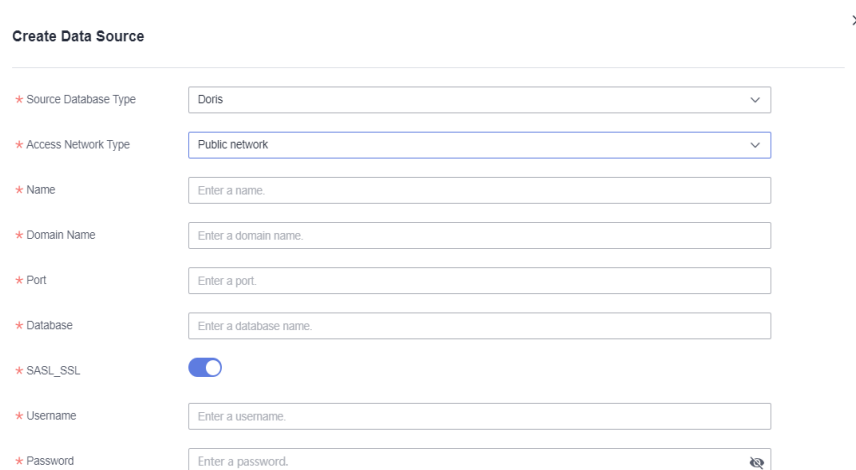
If no EIP is bound, locate the **Network Information** area and click **Bind** next to **EIP**. Click **Manage Security Group Rule** and then the **Inbound Rules** tab to check or add a security group.

If the data source connection test fails after the security group is added, the possible cause is that SASL_SSL is not enabled for that data source.

Accessing a Doris Data Source Through a Public Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **Doris** and **Access Network Type** to **Public network**.
5. Set other parameters based on [Table 2-14](#).

Figure 2-17 Connecting to a Doris data source



The screenshot shows the 'Create Data Source' dialog box. It has a title bar with a close button (X). The dialog contains the following fields:

- Source Database Type:** A dropdown menu with 'Doris' selected.
- Access Network Type:** A dropdown menu with 'Public network' selected.
- Name:** A text input field with placeholder text 'Enter a name.'
- Domain Name:** A text input field with placeholder text 'Enter a domain name.'
- Port:** A text input field with placeholder text 'Enter a port.'
- Database:** A text input field with placeholder text 'Enter a database name.'
- SASL_SSL:** A toggle switch that is currently turned on (blue).
- Username:** A text input field with placeholder text 'Enter a username.'
- Password:** A text input field with placeholder text 'Enter a password.' and a password icon (eye) on the right.

Table 2-14 Parameters

Parameter	Mandator y	Description
Source Database Type	Yes	Type of the data source to be connected.

Parameter	Mandatory	Description
Access Network Type	Yes	Select Public network for GaussDB(DWS) instances with public IP addresses, not restricted by account, region, or other limitations.
Name	Yes	Name the current data connection for easier subsequent use and configuration.
Domain Name	Yes	Public IP address or domain name bound to the target data source, which can be obtained from the public IP address in the Connection Information area on the GaussDB(DWS) instance details page.
Port	Yes	External port of the target data source on the corresponding node, which can be obtained from the port number in the Connection Information area on the GaussDB(DWS) instance details page.
Database	Yes	Select the database in the target data source based on service requirements.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.
Username	Yes	Username used for connection authentication.
Password	Yes	Password used for connection authentication.

6. Click **Test Connection** to test the data source connectivity.
7. Once the test is successful, click **OK**.

Accessing a Doris Data Source Through a VPC Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **Doris** and **Access Network Type** to **MRS Doris**.

5. Set other parameters based on [Table 2-15](#).

 NOTE

The selection of MRS instances only determines the VPC and subnet to be connected, and does not have any corresponding relationship with the server list.

Figure 2-18 Parameters for connecting to a Doris cloud data source

Create Data Source

★ Source Database Type

Doris

★ Access Network Type

MRS Doris

★ Region

★ Name

—Enter—

Description

★ Instance 

—Select—

★ Servers

Enter the IP address of the Doris.

★ Database

★ Username

Enter a username.

★ Password

Enter a password. 

★ SASL_SSL

☒

Table 2-15 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, Doris is selected.
Access Network Type	Yes	In this example, MRS Doris is selected.
Region	Yes	Region where the Doris service host is located.
Name	Yes	Name of the data source displayed in the list.
Description	No	Description of the data source.
Instance	Yes	Role instance corresponding to the Doris service.
Servers	Yes	List of servers where Doris is located.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.

Parameter	Mandatory	Description
Password	Yes	Password for logging in to the database.
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

- Click **Test Connection** to test the data source connectivity.
- Once the test is successful, click **OK**.

Connecting to a Doris Data Source Through a VPC Endpoint Service

VPCEP enables connections to data sources using the VPCEP service name, offering flexible data access and addressing issues related to cross-account access and self-built data source access for ECS. Furthermore, the same main account and its IAM users can share a single connection channel, streamlining connection management. The existing access method eliminates the need for permission delegation, further simplifying operations.

- Prerequisites**
 - Connection Approval** has been enabled on the basic information page of the VPCEP service. For details, see [Viewing a VPC Endpoint Service](#).
 - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see [Managing Whitelist Records of a VPC Endpoint Service](#). You can obtain the domain ID in the **Create Data Source** dialog box.

Figure 2-19 Obtaining the domain ID

The screenshot shows the 'Create Data Source' dialog box. The 'Access Network Type' is set to 'VPC Endpoint Service'. A tooltip is displayed over the 'VPC Endpoint Service' field, stating: 'To allow this service to create VPC endpoints, you need to add iam domain: 9e99-3743d293 of the current service to the whitelist. How do I? How do I?'. The 'SASL_SSL' checkbox is checked.

- Procedure**
 - Log in to the DataArts Insight console.

- b. Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
- c. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- d. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **Doris** and **Access Network Type** to **VPC Endpoint Service**.
- e. Set other parameters based on [Table 2-16](#).

Figure 2-20 Connection through a VPCEP service

Create Data Source

★ Source Database Type	
★ Access Network Type	VPC Endpoint Service
★ Region	
★ Name	--Enter--
Description	
★ VPC Endpoint Service ?	Verify
★ VPC Endpoint ID	
★ Port	
★ Database	
★ Username	Enter a username.
★ Password	Enter a password.
★ SASL_SSL	☒

Table 2-16 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, Doris is selected.
Access Network Type	Yes	Select VPC Endpoint Service .
Region	Yes	Region where the Doris service host is located.
Name	Yes	Name of the data source displayed in the list, which is user-defined.
Description	No	Description of the data source.

Parameter	Mandatory	Description
VPC Endpoint Service	Yes	Name of the VPCEP service to be connected. The prerequisites for connecting to a VPCEP service are as follows: - You have obtained the correct VPCEP service name. For details, see Checking a VPC Endpoint Service. - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see Managing Whitelist Records of a VPC Endpoint Service.
Verify	N/A	After entering the VPCEP service name, click Verify. If a green tick is displayed next to the VPC endpoint ID, the verification is successful. If a red exclamation mark (⚠) is displayed next to the VPC endpoint ID, the VPCEP service is connected to for the first time. In this case, you need to authorize the VPCEP service. To do so, log in to the VPCEP console. Under Network Console, choose VPC Endpoint > VPC Endpoint Services. On the displayed page, click the desired VPCEP service and click the Connection Management tab. On the tab page, authorize the VPCEP service. For details, see Managing Connections of a VPC Endpoint Service. Once the authorization is successful, click Verify again. The verification is successful. NOTE - All initial connections to the VPCEP service from different data sources require approval. - Only an administrator account or an account with administrator permissions can approve the connection. If your current account does not have approval permissions, contact an administrator account for approval.
VPC Endpoint ID	Yes	This parameter is automatically filled in once you entered the VPCEP name and clicked Verify .
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.

Parameter	Mandatory	Description
SASL_SSL	N/A	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default.

- f. Click **Test Connection** to test the data source connectivity.
- g. Once the test is successful, click **OK**.

2.2.6 Connecting to a ClickHouse Data Source

DataArts Insight allows you to connect to a ClickHouse data source. This section describes how to connect DataArts Insight to a ClickHouse data source.

DataArts Insight can connect to ClickHouse through the following methods:

- **Public network connection**: To connect to cloud service resources that do not belong to your current account, use this method. The data source must be bound to an EIP.
- **VPC network connection**: To connect to cloud service resources under your current account, use this method.
- **VPCEP service**: To connect to data sources that are not associated with your current account or for which you lack VPCEP permissions, as well as ECS self-built data sources, use this method.

Preparations

Before connecting to a data source, verify that a VPC endpoint security group or EIP is added. Check procedure:

1. Log in to the management console.
2. In the service list, choose **Analytics > MapReduce Service** to access the MRS console.
3. Select a region in the upper left corner.
4. In the navigation pane on the left, choose **Clusters**.
5. Click the name of the cluster you want to connect to. The cluster overview page is displayed.
6. Locate the **Network Information** area. Click **Add Security Group Rule** next to **EIP**. In the **Add Security Group Rule** dialog box, click **Manage Security Group Rule**. Click the **Inbound Rules** tab and check whether a VPC endpoint security group or EIP is added.
 - If yes, return to the DataArts Insight data source editing page to connect to the data source.
 - If no, perform the following steps to add a security group:
 - i. Click **Add Rule**. In the displayed **Add Inbound Rule** dialog box, set the protocol, port, and source IP address. To add multiple rules, click **Fast-Add Rule**.

- ii. Confirm the parameter settings and click **OK** to return to the DataArts Insight page and connect to the data source.

NOTE

If no EIP is bound, locate the **Network Information** area and click **Bind** next to **EIP**. Click **Manage Security Group Rule** and then the **Inbound Rules** tab to check or add a security group.

If the data source connection test fails after the security group is added, the possible cause is that SASL_SSL is not enabled for that data source.

Accessing a ClickHouse Data Source Through a Public Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **ClickHouse** and **Access Network Type** to **Public network**.
5. Set other parameters based on [Table 2-17](#).

Figure 2-21 Parameters for connecting to a ClickHouse data source

Create Data Source

* Source Database Type	ClickHouse
* Access Network Type	Public
* Name	Enter a name.
* Domain Name	Enter a domain name.
* Port	Enter a port.
* Database	Enter a database name.
* SASL_SSL	☒
* Username	Enter a username.
* Authentication Mode	password verification
* Password	Enter a password.

Table 2-17 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, ClickHouse is selected.
Access Network Type	Yes	In this example, Public network is selected.
Name	Yes	Name of the data source displayed in the list.
Domain Name	Yes	IP address of the data source.
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
SASL_SSL	-	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default. NOTE To connect to an MRS security cluster, enable SASL_SSL. For an MRS non-security cluster, disable SASL_SSL.
Username	Yes	Username for logging in to the database.
Authentication Mode	Yes	The options are Password authentication and Certificate authentication .
Password	Yes	Password for logging in to the database.

6. Click **Test Connection** to test the data source connectivity.
7. Once the test is successful, click **OK**.

Accessing a ClickHouse Data Source Through a VPC Network

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **ClickHouse** and **Access Network Type** to **MRS ClickHouse**.
5. Set other parameters based on [Table 2-18](#).

 NOTE

- The selection of MRS instances only determines the VPC and subnet to be connected, and does not have any corresponding relationship with the server list.
- Only the ClickHouse built in MRS is supported.

Figure 2-22 Parameters for connecting to a ClickHouse data source

Create Data Source

★ Source Database Type

ClickHouse

★ Access Network Type

MRS ClickHouse

★ Region

★ Name

-Enter-

Description

★ Instance ?

★ Servers

Enter the IP address of the ELB or ClickHouseBalancer.

★ Database

★ SASL_SSL

☒

★ Username

Enter a username.

★ Authentication Mode

password verification

★ Password

Enter a password.

Table 2-18 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, ClickHouse is selected.
Access Network Type	Yes	In this example, MRS ClickHouse is selected.
Region	Yes	Region where the ClickHouse service host is located.
Name	Yes	Name of the data source displayed in the list.
Description	No	Description of the data source.
Instance	Yes	Role instance corresponding to the ClickHouse service.
Servers	Yes	List of servers where ClickHouse is located.

Parameter	Mandatory	Description
Database	Yes	Name of the database to be logged in to.
SASL_SSL	-	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default. NOTE To connect to an MRS security cluster, enable SASL_SSL. For an MRS non-security cluster, disable SASL_SSL.
Username	Yes	Username for logging in to the database.
Authentication Mode	Yes	The options are Password authentication and Certificate authentication .
Password	Yes	Password for logging in to the database.

6. Click **Test Connection** to test the data source connectivity.
7. Once the test is successful, click **OK**.

Connecting to a ClickHouse Data Source Through a VPC Endpoint Service

VPCEP enables connections to data sources using the VPCEP service name, offering flexible data access and addressing issues related to cross-account access and self-built data source access for ECS. Furthermore, the same main account and its IAM users can share a single connection channel, streamlining connection management. The existing access method eliminates the need for permission delegation, further simplifying operations.

- **Prerequisites**
 - **Connection Approval** has been enabled on the basic information page of the VPCEP service. For details, see [Viewing a VPC Endpoint Service](#).
 - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see [Managing Whitelist Records of a VPC Endpoint Service](#). You can obtain the domain ID in the **Create Data Source** dialog box.

Figure 2-23 Obtaining the domain ID

Create Data Source

* Source Database Type

* Access Network Type

* Region

* Name

* Description

To allow this service to create VPC endpoints, you need to add iam:domain:9e99... service to the whitelist.

* VPC Endpoint Service

* VPC Endpoint ID

* Port

* Database

* Username

* Password

* SASL_SSL ☐

- **Procedure**

- Log in to the DataArts Insight console.
- Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
- On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **ClickHouse** and **Access Network Type** to **VPC Endpoint Service**.
- Set other parameters based on [Table 2-19](#).

Table 2-19 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, ClickHouse is selected.
Access Network Type	Yes	Select VPC Endpoint Service .
Region	Yes	Region where the ClickHouse service host is located.
Name	Yes	Name of the data source displayed in the list, which is user-defined.
Description	No	Description of the data source.

Parameter	Mandatory	Description
VPC Endpoint Service	Yes	Name of the VPCEP service to be connected. The prerequisites for connecting to a VPCEP service are as follows: - You have obtained the correct VPCEP service name. For details, see Checking a VPC Endpoint Service. - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see Managing Whitelist Records of a VPC Endpoint Service.
Verify	-	After entering the VPCEP service name, click Verify. If a green tick is displayed next to the VPC endpoint ID, the verification is successful. If a red exclamation mark (⚠) is displayed next to the VPC endpoint ID, the VPCEP service is connected to for the first time. In this case, you need to authorize the VPCEP service. To do so, log in to the VPCEP console. Under Network Console, choose VPC Endpoint > VPC Endpoint Services. On the displayed page, click the desired VPCEP service and click the Connection Management tab. On the tab page, authorize the VPCEP service. For details, see Managing Connections of a VPC Endpoint Service. Once the authorization is successful, click Verify again. The verification is successful. NOTE - All initial connections to the VPCEP service from different data sources require approval. - Only an administrator account or an account with administrator permissions can approve the connection. If your current account does not have approval permissions, contact an administrator account for approval.
VPC Endpoint ID	Yes	This parameter is automatically filled in once you entered the VPCEP name and clicked Verify .
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Authentication Mode	Yes	The options are Password authentication and Certificate authentication .

Parameter	Mandatory	Description
Password	Yes	Password for logging in to the database.
SASL_SSL	-	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default. NOTE To connect to an MRS security cluster, enable SASL_SSL. For an MRS non-security cluster, disable SASL_SSL.

- f. Click **Test Connection** to test the data source connectivity.
- g. Once the test is successful, click **OK**.

2.2.7 Connecting to an API Data Source

DataArts Insight can connect to API data sources to meet your data timeliness and scalability requirements. This section describes how to connect DataArts Insight to an API data source.

Notes and Constraints

API data sources are only applicable for dropdown lists in query controls and do not support building dashboards or large screens.

Prerequisites

You have obtained the API access permission.

Procedure

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the displayed slide-out panel, set **Source Database Type** to **API data**.
5. Set other parameters based on [Table 2-20](#).

Figure 2-24 API data configuration items

Create Data Source ✕

★ Source Database Type

API data

★ Name

-Enter-

★ URL

Paste the URL

★ Protocol

-Select-

★ Request Type

-Select-

★ Timeout (s)

Example Request

Parse

Provide an example and click "Parse". Your example requests will not be saved.

Request Parameters

Select Sensitive data for any parameter values that are sensitive to ensure data security.

Add

Delete

☐ ★ Parameter	Alias	★ Location	★ Type	★ Source	Value	Sensitive Data

Table 2-20 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, API data is selected.
Name	Yes	Name of the API data source displayed in the data source list.
URL	Yes	URL used to connect to API data.
Protocol	Yes	Protocol used to connect to API data.
Request Type	Yes	Type of the request used for connecting to the API data source. The options are GET and POST .
Timeout (s)	Yes	API connection timeout. The value ranges from 1 second to 999999 seconds.
Request Example	Yes	API request example. NOTE The API request example is parsed using either ? {query-string} or within the request body.
Request Parameters	Yes	Request parameters in the API request example. For details, see Table 2-21 .

Table 2-21 Request parameters

Parameter	Mandatory	Description
Parameter	Yes	Name of an API parameter.
Alias	No	Alias of an API parameter.
Location	Yes	Location of a parameter. The value can be Header , Body , or Parameter .
Type	Yes	Parameter type.
Source	Yes	Source of a parameter. The value can be a fixed value.
Value	No	Parameter value.
Sensitive Data	No	Indicates whether the parameter content involves sensitive data.

- Click **Test Connection** to test the data source connectivity.
- After the test is successful, click **Next** and select response parameters.
- Click **OK**.

2.2.8 Connecting to a DLI Data Source

DataArts Insight allows you to connect to a DLI data source. This section describes how to connect DataArts Insight to a DLI data source.

Procedure

- Log in to the DataArts Insight console.
- Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
- On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the displayed slide-out panel, set **Source Database Type** to **Data Lake Insight**.
- Set other parameters based on [Table 2-22](#).

Figure 2-25 Connecting to a DLI data source

Create Data Source

★ Source Database Type	Data Lake Insight
★ Name	--Enter--
Description	
★ Project ID	 Get
★ AK	Enter an AK.
★ SK	Enter an SK. Get
★ SQL Queue	Select a SQL queue. C
★ Data Directory	--Select--
★ Database	Select a database.

Table 2-22 Parameters

Parameter	Mandato ry	Description
Source Database Type	Yes	Type of the accessed data source. In this example, Data Lake Insight is selected.
Name	Yes	Name of the data source displayed in the list.
Description	No	Description of the data source, which is user-defined.
Project ID	Yes	The project ID of the current account is used by default. You can also enter a project ID of another account. To obtain the project ID, click Get and refer to the document.
AK	Yes	- Access key ID. It is the unique ID associated with the SK. An AK is used together with an SK to cryptographically sign requests. - To obtain the AK, click Get and refer to the document.
SK	Yes	- Secret access key used together with the access key ID to sign requests cryptographically. It identifies a request sender and prevents the request from being modified. - To obtain the SK, click Get and refer to the document.

Parameter	Mandatory	Description
SQL Queue	Yes	Queues serve as fundamental computing resources essential for using services. Every job executed by users depends on these computing resources. Specifically, SQL queues are designated for executing SQL jobs. If a job is added to or deleted from an SQL queue, click the refresh button next to SQL Queue to refresh the SQL queue.
Data Directory	Yes	Data directory of the SQL queue. NOTE If Data Directory is dli , DLI is not interconnected with LakeFormation and the file upload button is unavailable. If Data Directory is not dli , DLI is interconnected with LakeFormation and the file upload button is available.
Database	Yes	Name of the database to be logged in to.

- Click **Test Connection** to test the data source connectivity.
- Once the test is successful, click **OK**.

2.2.9 Connecting to a Hive Data Source

DataArts Insight allows you to connect to a Hive data source. This section describes how to connect DataArts Insight to a Hive data source.

DataArts Insight can connect to Hive through the following methods:

- Public network connection:** To connect to cloud service resources that do not belong to your current account, use this method. The data source must be bound to an EIP.
- VPC network connection:** To connect to cloud service resources under your current account, use this method.
- VPCEP service:** To connect to data sources that are not associated with your current account or for which you lack VPCEP permissions, as well as ECS self-built data sources, use this method.

Preparations

Do the following to check if an EIP or a VPCEP security group is added:

- Log in to the management console.
- In the service list, choose **Analytics > MapReduce Service** to access the MRS console.
- Select a region in the upper left corner.
- In the navigation pane on the left, choose **Clusters**.
- Click the name of the cluster you want to connect to. The cluster overview page is displayed.

6. Locate the **Network Information** area. Click **Add Security Group Rule** next to **EIP**. In the **Add Security Group Rule** dialog box, click **Manage Security Group Rule**. Click the **Inbound Rules** tab and check whether a VPC endpoint security group or EIP is added.
 - If yes, return to the DataArts Insight data source editing page to connect to the data source.
 - If no, perform the following steps to add a security group:
 - i. Click **Add Rule**. In the displayed **Add Inbound Rule** dialog box, set the protocol, port, and source IP address. To add multiple rules, click **Fast-Add Rule**.
 - ii. Confirm the parameter settings and click **OK** to return to the DataArts Insight page and connect to the data source.

 NOTE

If no EIP is bound, locate the **Network Information** area and click **Bind** next to **EIP**. Click **Manage Security Group Rule** and then the **Inbound Rules** tab to check or add a security group.

If the data source connection test fails after the security group is added, the possible cause is that SASL_SSL is not enabled for that data source.

Accessing a Hive Data Source Through a Public Network

1. Log in to the DataArts Insight console.
2. In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **Hive** and **Access Network Type** to **Public network**.
3. Set other parameters based on [Table 2-23](#).

Figure 2-26 Parameters for connecting to a Hive data source

Create Data Source

* Source Database Type	Hive
* Access Network Type	Public network
* Name	Enter a name.
* Domain Name	Enter a domain name.
* Port	Enter a port.
* Database	Enter a database name.
* SASL_SSL	☒
* Username	Enter a username.
* Authentication Mode	password verification
* Password	Enter a password. 

Table 2-23 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, Hive is selected.
Access Network Type	Yes	In this example, Public network is selected.
Name	Yes	Name of the data source displayed in the list.
Domain Name	Yes	IP address of the data source.
Username	Yes	Username for logging in to the database.
Password	Yes	Password for logging in to the database.
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
SASL_SSL	-	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default. NOTE To connect to an MRS security cluster, enable SASL_SSL. For an MRS non-security cluster, disable SASL_SSL.
Username	Yes	Username for logging in to the database.
Authentication Mode	Yes	The options are Password authentication and Certificate authentication .
Password	No	Mandatory when Authentication Mode is set to password verification Password for logging in to the database.

Parameter	Mandatory	Description
Security Certificate	No	Mandatory when Authentication Mode is set to certificate verification To download and upload a security certificate, perform the following steps: • Log in to FusionInsight Manager of the MRS cluster. Specifically, click an MRS cluster. On the displayed Dashboard tab, locate the O&M Management area, and click Access Manager next to MRS Manager. • Click System on the top menu bar. • Choose Permission > User. On the displayed page, locate a user, click More in the Operation column, and select Download Authentication Credential from the drop-down list. • Once the certificate is downloaded, return to the page for creating a data source and click Upload Certificate to upload the certificate. NOTE The certificate size for upload should not exceed 5 MB and must be in a file format ending with .tar.

Parameter	Mandatory	Description
principal	No	Mandatory when Authentication Mode is set to certificate verification How to obtain: - Log in to FusionInsight Manager of the MRS cluster. Specifically, click an MRS cluster. On the displayed Dashboard tab, locate the O&M Management area, and click Access Manager next to MRS Manager. - Click Homepage in the upper part of the page. - Click More and select Download Client. The Download Cluster Client page is displayed. - Set Select Client Type to Configuration Files Only and Select Platform Type to x86_64, and click OK. The client configuration file is successfully downloaded. - Decompress the client configuration file, open the Hive > config > hive-site.xml file, search for principal, and obtain the principal value. Figure 2-27 Obtaining the principal value  - Return to the page for creating a data source and enter the obtained principal value in the principal field box.

- Click **Test Connection** to test the data source connectivity.
- Once the test is successful, click **OK**.

Accessing a Hive Data Source Through a VPC Network

- Log in to the DataArts Insight console.
- Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
- On the top of the console, click **Projects** and click the name of the desired project.
- In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out

panel, set **Source Database Type** to **Hive** and **Access Network Type** to **MRS Hive**.

- Set other parameters based on [Table 2-24](#).

NOTE

The selection of MRS instances only determines the VPC and subnet to be connected, and does not have any corresponding relationship with the server list.

Figure 2-28 Parameters for connecting to a Hive cloud data source

Create Data Source

* Source Database Type	Hive
* Access Network Type	MRS Hive
* Region	
* Name	--Enter--
Description	
* Instance ?	
* Servers	Enter the IP address of the HiveServer or ZooKeeper.
* Database	
* SASL_SSL	☒
* Username	Enter a username.
* Authentication Mode	password verification
* Password	Enter a password.

Table 2-24 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, Hive is selected.
Access Network Type	Yes	In this example, MRS Hive is selected.
Region	Yes	Region where the Hive service host is located.
Name	Yes	Name of the data source displayed in the list, which is user-defined.
Description	No	Description of the data source.
Instance	Yes	Role instance corresponding to the Hive service.

Parameter	Mandatory	Description
Servers	Yes	Hive server list.
Database	Yes	Name of the database to be logged in to.
SASL_SSL	-	It is used for trusted identity authentication and secure data transmission when DataArts Insight retrieves data from the data source. This function is enabled by default. NOTE To connect to an MRS security cluster, enable SASL_SSL. For an MRS non-security cluster, disable SASL_SSL.
Username	Yes	Username for logging in to the database.
Authentication Mode	Yes	The options are Password authentication and Certificate authentication .
Password	Yes	Password for logging in to the database.

- Click **Test Connection** to test the data source connectivity.
- Once the test is successful, click **OK**.

Connecting to a Hive Data Source Through a VPC Endpoint Service

VPCEP enables connections to data sources using the VPCEP service name, offering flexible data access and addressing issues related to cross-account access and self-built data source access for ECS. Furthermore, the same main account and its IAM users can share a single connection channel, streamlining connection management. The existing access method eliminates the need for permission delegation, further simplifying operations.

- Prerequisites**
 - Connection Approval** has been enabled on the basic information page of the VPCEP service. For details, see [Viewing a VPC Endpoint Service](#).
 - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see [Managing Whitelist Records of a VPC Endpoint Service](#). You can obtain the domain ID in the **Create Data Source** dialog box.

Figure 2-29 Obtaining the domain ID

Create Data Source

* Source Database Type

* Access Network Type

* Region

To allow this service to create VPC endpoints, you need to add iam domain: 9e99...703d4293 of the current service to the whitelist.
How do I...
How do I...

* VPC Endpoint Service Verify

* VPC Endpoint ID

* Port

* Database

* Username

* Password

* SASL_SSL ☒

- **Procedure**

- Log in to the DataArts Insight console.
- Click  in the upper left corner of the management console to select a region and select an enterprise project from **Enterprise Project** in the upper right corner of the **Workspace** page.
- On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- In the navigation pane on the left, choose **Data Management > Data Sources**. On the displayed page, click **Create Data Source**. In the slide-out panel, set **Source Database Type** to **Hive** and **Access Network Type** to **VPC Endpoint Service**.
- Set other parameters based on [Table 2-25](#).

Figure 2-30 Connection through a VPCEP service

Create Data Source

★ Source Database Type

Hive

▼

★ Access Network Type

VPC Endpoint Service

▼

★ Region

▼

★ Name

--Enter--

Description

★ VPC Endpoint Service 

Verify

★ VPC Endpoint ID

★ Port

★ Database

★ SASL_SSL

☒

★ Username

Enter a username.

★ Authentication Mode

password verification

▼

★ Password

Enter a password.



Table 2-25 Parameters

Parameter	Mandatory	Description
Source Database Type	Yes	Type of the accessed data source. In this example, Hive is selected.
Access Network Type	Yes	Select VPC Endpoint Service .
Region	Yes	Region where the Hive service host is located.
Name	Yes	Name of the data source displayed in the list, which is user-defined.
Description	No	Description of the data source.

Parameter	Mandatory	Description
VPC Endpoint Service	Yes	Name of the VPCEP service to be connected. The prerequisites for connecting to a VPCEP service are as follows: - You have obtained the correct VPCEP service name. For details, see Checking a VPC Endpoint Service. - You have whitelisted the VPCEP service by adding its domain ID to the whitelist. For details, see Managing Whitelist Records of a VPC Endpoint Service.
Verify	-	After entering the VPCEP service name, click Verify. If a green tick is displayed next to the VPC endpoint ID, the verification is successful. If a red exclamation mark (⚠) is displayed next to the VPC endpoint ID, the VPCEP service is connected to for the first time. In this case, you need to authorize the VPCEP service. To do so, log in to the VPCEP console. Under Network Console, choose VPC Endpoint > VPC Endpoint Services. On the displayed page, click the desired VPCEP service and click the Connection Management tab. On the tab page, authorize the VPCEP service. For details, see Managing Connections of a VPC Endpoint Service. Once the authorization is successful, click Verify again. The verification is successful. NOTE - All initial connections to the VPCEP service from different data sources require approval. - Only an administrator account or an account with administrator permissions can approve the connection. If your current account does not have approval permissions, contact an administrator account for approval.
VPC Endpoint ID	Yes	This parameter is automatically filled in once you entered the VPCEP name and clicked Verify .
Port	Yes	Port number for logging in to the database.
Database	Yes	Name of the database to be logged in to.
Username	Yes	Username for logging in to the database.
Authentication Mode	Yes	The options are Password authentication and Certificate authentication .

Parameter	Mandatory	Description
Password	Yes	Password for logging in to the database.

- f. Click **Test Connection** to test the data source connectivity.
- g. Once the test is successful, click **OK**.

2.3 Uploading a File

DataArts Insight allows you to upload local XLSX, XLS, and CSV files to a connected data source database. This section describes how to upload files in DataArts Insight.

Prerequisites

- An OBS bucket has been configured to store data by referring to [Configuring an OBS Bucket](#).
- Static files must be uploaded to a connected data source. Before uploading static files, connect to a data source by referring to "Creating a Data Source". This is because you must have the edit permission on the data source.

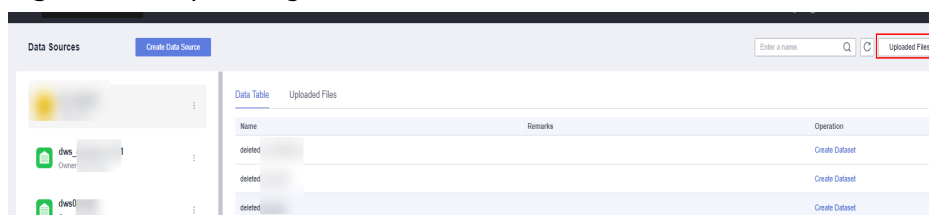
Notes and Constraints

- Only XLSX, XLS, and CSV files can be uploaded.
- The size of the file to be uploaded cannot exceed 50 MB.
- The fields in the file to be uploaded cannot be empty. The file must contain at least one column and a maximum of 1000 columns.

Procedure

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**.
5. In the **Data Sources** area, locate the desired data source, click the more icon next to it, and select **Uploaded Files**.

Figure 2-31 Uploading a file



6. In the dialog box that appears, click **Add File**, upload a file, and set the parameters based on [Table 2-26](#).

Figure 2-32 File parameters

Uploaded Files

★ Uploaded Files

Add File

You can only upload XLSX, XLS, and CSV files, and they must be under 50 MB in size.

order_info.csv

★ File Name

The value can contain a maximum of 50 characters.
Only letters, digits, underscores (`_`), slashes (`/`), periods (`.`), vertical bars (`|`), and brackets (`()`) are allowed.

★ Physical Table

The value can contain only letters, digits, and underscores (`_`), and must start with a letter. The length ranges from 2 to 151 characters.

★ Field Preview(8)

File Field Name	Database Field...	Field Type	Field Length
id	COL_0	Number	--
		..	.

OK

Cancel

Table 2-26 Parameters for uploading a file

Parameter	Description
Uploaded Files	You can upload XLSX, XLS, and CSV files, and they must be under 50 MB in size.
File Name	After a file is uploaded, the system automatically identifies the file name. You can also change the file name. NOTE The file name cannot be empty and can contain a maximum of 50 characters. Only letters, numbers, underscores (<code>_</code>), slashes (<code>/</code>), vertical bars (<code> </code>), and brackets (<code>()</code>) are allowed.

Parameter	Description
Physical Table	Name of the table that is automatically created in the database after the file is uploaded to the database. You can change the physical table name. The physical table name can contain a maximum of 150 characters, including letters, numbers, and underscores (_).
Field Preview	• Auto Fill: If the database field name is incorrect, click Auto Fill so that the system automatically fills in the default name in the correct format. • File Field Name: Name of a field automatically identified by DataArts Insight. This parameter cannot be empty. A field name can contain a maximum of 50 characters. Only letters, numbers, underscores (_), slashes (/), vertical bars (), and brackets are allowed. • Database Field Name: Database field name, which cannot be empty. A name can contain a maximum of 50 characters. Only letters, numbers, and underscores (_) are allowed. • Field Type: Field type, including text, number, and date. The field type is automatically identified after a file is uploaded. • Field Length: The value cannot be empty, must be a valid integer, and cannot exceed 1,000 characters.

7. Click **OK**. Once the file is uploaded, you can view it in the **Uploaded Files** dialog box.

 NOTE

- API data sources do not support file upload.
- If **Data Directory** is **dli** for DLI data sources, DLI is not interconnected with LakeFormation and the file upload button is unavailable. If **Data Directory** is not **dli**, DLI is interconnected with LakeFormation and the file upload button is available.

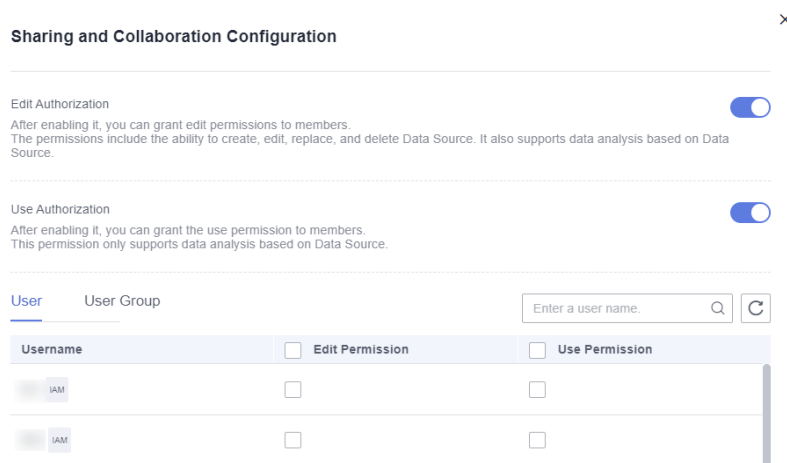
2.4 Sharing a Data Source

DataArts Insight allows you to share a data source with other users or user groups. The shared users or user groups will have editing and usage permissions for the data source. This section explains how to share a data source so that team members can collaborate quickly.

Procedure

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 upper right corner of the **Workspace** page.

3. On the top of the console, click **Projects** and click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**.
5. In the **Data Sources** area, locate the data source you want to authorize, click  next to it, and select **Share and Collaborate**.
6. Select the permissions that you want to grant.
 - **Edit Authorization:** Enabling this allows you to grant edit permissions to members, including editing and deleting data sources, as well as performing data analysis based on data sources.
Enabling edit permission on a data source will also enable use permission by default.
 - **Use authorization:** After enabling it, you can grant the use permission to members. This permission only supports data analysis based on the data source.
7. Select the objects that you want to authorize.
 - **User:** Grant a user the permission to edit the data source.
 - **User Group:** After a user group is authorized, all users of the group will have the chosen permissions on the data source.
8. Select the users and user groups that you want to authorize.

Figure 2-33 Sharing and collaboration configuration page

2.5 Managing Data Sources

After a data source is created, you can modify or delete the data source as needed. This section describes how to modify or delete a data source.

Prerequisites

You have been granted the permission to edit data sources. For details about data source authorization, see [Sharing a Data Source](#).

Editing a Data Source

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 upper right corner of the **Workspace** page.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**.
5. In the **Data Sources** area, locate the data source you want to edit, click  next to it, and select **Edit**.
6. In the **Edit Data Source** slide-out panel, edit the data source by setting parameters based on the data source configuration description in "Connecting to a Data Source".
7. After editing the parameters, click **Test Connection** to test the data source connectivity.
8. Once the test is successful, click **OK**.

Deleting a Data Source

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Data Sources**.
5. In the **Data Sources** area, locate the data source you want to delete, click  next to it, and select **Delete**.
6. In the displayed dialog box, click **OK**.

NOTE

A data source can only be deleted after all the datasets that are associated with it have been removed.

3 Creating a Dataset

3.1 Dataset Overview

Datasets serve as the intermediary between data sources and visual displays, receiving input from data sources and providing input for visual displays. After creating a data source, you can create a dataset based on the current data source and perform operations such as editing, deleting, associating, and analyzing datasets with secondary data processing. This section describes how to create and edit datasets, as well as other related operations.

Preparing Data

Figure 3-1 Data preparation flowchart



- Data table association: To analyze multiple data tables, data modeling is necessary.
- Secondary data processing: You can create indicators, dimensions, and hierarchies based on use cases.
- Visualized dataset editing: You can set fields in a data table to enhance dataset usability.
- Dataset permission setting: You can set column and row permissions for a dataset.

3.2 Creating a Dataset

3.2.1 Creating a Dataset Through Visual Configuration

Datasets are an essential component in the process of data visualization and serve as an intermediary between data sources and visual representations. In DataArts Insight, you can create datasets by either visually configuring them or using

custom SQL statements. This section describes how to create a dataset using the visual approach.

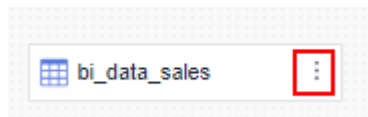
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).

Selecting a Data Table

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. Choose **Data Management > Datasets**. On the displayed page, click **Create Dataset**.
5. Double-click or drag a data table on the left to add it to the operation panel.
6. Click **Refresh Preview** on the **Data Preview** tab to view the table data.
7. Click  of the data table and select **Select Field**. In the **Edit Table** slide-out panel, select the fields you want to display and click **OK**. To associate other data tables, refer to [Creating a Model by Joining Multiple Tables](#).

Figure 3-2 Select Field



8. Enter the dataset name and click **Save**.

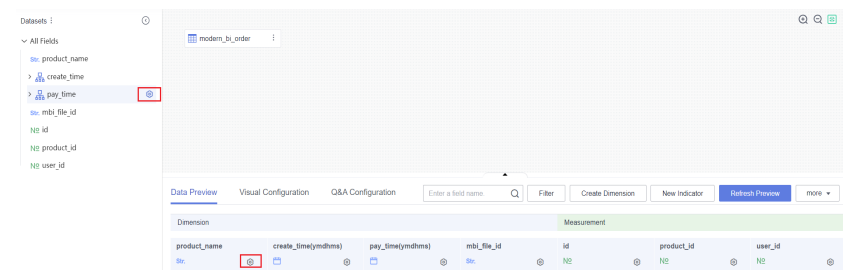
Configuring Fields

You can configure dataset fields as needed. This includes editing, cloning, hiding, copying as indicators, converting to dimensions or metrics, setting default aggregation methods, numerical display formats, and deleting.

NOTE

- If a data table contains more than 100 records, you can only preview the first 100. However, if the table has 100 records or less, you can preview all of them.
 - Once a field is used in calculation fields, grouping dimensions, or filter criteria, you cannot modify its type, perform dimension or metric conversions on it, or delete it.
 - Currently, the date field cannot be copied. You can convert the date field to the text type and then copy the field.
1. Access the field configuration page using either of the following methods:
 - In the field list area, click  next to a field to configure the field.
 - In the data preview area, click  next to a field to configure the field.

Figure 3-3 Configuring fields



2. Select required operations, as described in [Table 3-1](#).

Table 3-1 Configuration items

Function	Description
Edit	Edit the name and description of the field. • Original Field Name: You can edit the original field name. The name can contain up to 512 characters and cannot be empty or contain any of the following special characters: <>#=# +@; • Physical Field: field name corresponding to the physical table, which cannot be modified. • Description: Enter the field description. • dataset.boundCondition: The condition associated with this dimension will be applied only when a user utilizes it. For details about how to edit a condition, see Add Condition. • Default Filter: Set the default filter. For details about how to edit a condition, see Add Condition. When a default filter is applied to a field, such as Province = Shanghai, it affects the final filter condition in two ways: 1. If there is no filter for the province in the report or Q&A, then Province = Shanghai is included in the final filter. 2. If there is a province filter in the report or Q&A, Province = Shanghai is disregarded in the final filter condition. • Add Condition: Click Add Condition. - Select the filter field, filter type, fixed value filtering condition, and value. Filter Field: Filter the dataset fields for which rules need to be set. You can select only one dimension or metric field. To configure rules for other fields, add more conditions. Filter Type: Select Condition, Enumeration, Expression filtering, or Tag filtering. NOTE Only dimensions support Enumeration. Fixed value filtering condition: The options include Equal to, Not equal to, and more. Fixed Value: Enter the value of the filtering condition. For enumeration filtering, select a field value from the drop-down list box. - To set rules for other fields, click Create Rule. - If there are multiple condition rules, set the relationship between the rules. AND: You can view the field values that meet both rules A and B. OR: You can view the field values that meet either rule A or B. To create a rule parallel to rules A and B, click Add Relationship. This will create rule group C, which is on the same level as rules A and B.

Function	Description
Clone	Quickly copy a field. The new field contains the backup identifier. 1. On the data preview page, click  on the right of the target field. Then, choose Clone. 2. After you click Clone, the new field generated contains the backup identifier. In addition, the physical name of the field does not change, but the original name of the field changes. For example, if product_name is cloned, the new field is product_name1.
Hide	Hide a field. After a field is hidden, this field will not be displayed when you use this dataset to create a dashboard or large screen.
Copy as Indicator	Copy a metric and convert it to an indicator.
Convert to Metric/Dimension	Change the field type from dimension to metric or vice versa.
Convert Dimension Type	Convert a dimension or metric field to another type, such as a number, date, or text. You can configure the data format for a date field. NOTE • The date now includes second and millisecond timestamps. • Dimensions support the conversion of timestamps to time format.
Default Aggregation Mode	Select None, Sum, Average, Count, Distinct count, Maximum, Minimum, Population standard deviation, Sample standard deviation, Population variance, Sample variance, Range start value, or Range end value. NOTE You can only set either Range start value or Range end value, not both at the same time.
Numeric Display Format	Options: No format, Numeric, Currency, Object quantifier, Length, Weight, Energy, Capacity, Time, and Percentage.
Move To	Use this function only when the new hierarchy or dataset is a table view. For details, see Creating a Hierarchy.
Delete	Delete a field. To retrieve the field after it is deleted, click the table in the canvas and select and add the field in the right pane.

(Optional) Visual Configuration

The visualization configuration feature provided by DataArts Insight allows you to easily configure dataset fields. It offers various parameter settings, such as the

field name, field type, default aggregation method, numerical display format, field description, search permission, and analysis priority.

- 1. Click the **Visual Configuration** tab.
- 2. Select the field you want to modify and edit it as needed. For details, see [Table 3-2](#).

 NOTE

- Clicking  allows you to configure fields in batches, including converting dimensions to metrics in batches or vice versa, hiding or unhiding fields in batches, and deleting fields in batches.
- You can drag and drop fields to adjust their display order. After making adjustments, click **Save**. The field order is successfully set. Subsequent Q&A sessions with the intelligent analysis assistant will return field content based on the configured order.

Figure 3-4 Visual configuration

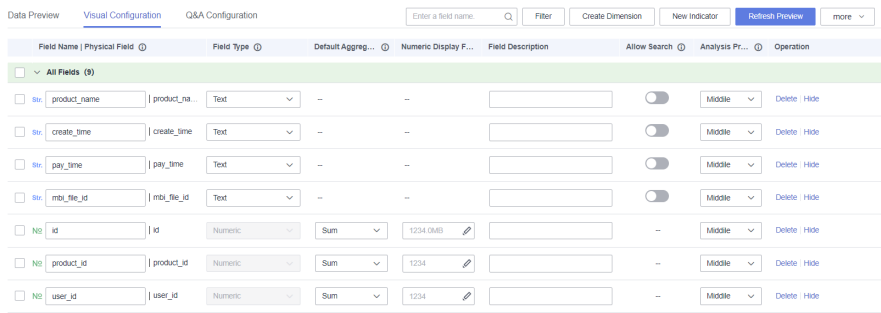


Table 3-2 Visual configuration parameters

Parameter	Description
Field Name Physical Field	• You can customize field names, which will be shown in charts on dashboards and large screens. • Physical fields cannot be modified.
Field Type	Type supported by a field, including date, text, and number. A date can be set in multiple formats.
Default Aggregation	The aggregation mode can be set only for metric fields. Select None, Sum, Average, Count, Distinct count, Maximum, Minimum, Population standard deviation, Sample standard deviation, Population variance, Sample variance, Range start value, or Range end value. NOTE You can only set either Range start value or Range end value, not both at the same time.
Numeric Display Format	Select No format , Numeric , Currency , Object quantifier , Length , Weight , Energy , Capacity , Time , or Percentage .

Parameter	Description
Field Description	Description of a field.
Allow Search	Determines whether the enumerated values used to label fields can be searched during synchronization with the intelligent analysis assistant. Currently, only a maximum of 1,000 enumerated values can be extracted. NOTE It is supported only by the text type.
Analysis Priority	Determines the priority of fields selected for analysis by the automatic insights feature of the intelligent analysis assistant. A maximum of 10 high-priority fields can be configured.
Operation	You can delete or hide a field. You can unhide a hidden field. NOTE Before deleting a field from a dataset, check whether the field is used in a large screen, report, or permission configuration.

(Optional) Q&A Configuration

When the newly created dataset is associated with the intelligent analysis assistant, you can perform Q&A configuration to optimize the Q&A experience of the assistant.

- **Synonym configuration**

The intelligent analysis assistant understands questions and data based on configured synonyms, which can improve the accuracy of Q&A.

- In the dataset list, click the name of the dataset for which you want to configure associated fields. On the displayed page, click the **Q&A Configuration** tab.
- Enter synonyms for fields in the synonym box and press **Enter** to save. For example, you can set the synonyms for **product_name** as product name and product ID.
- Click **Publish Synonyms** in the **Operation** column. The published synonym is saved to the public thesaurus. You can publish synonyms in batches by selecting them and clicking **Releasing Synonyms in Batches**.

NOTE

If **Releasing Synonyms in Batches** is grayed out after selecting multiple synonyms, you must first deselect the published ones before you can publish the rest in batches.

Figure 3-5 Synonym configuration



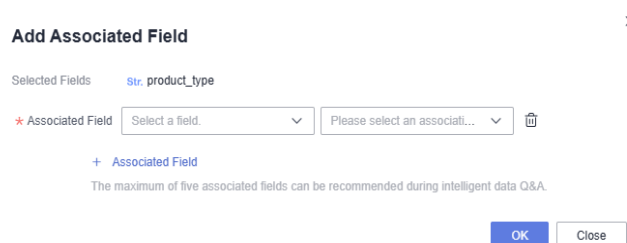
- d. Configure synonyms for enumerated values.
 - i. Click **Value synonym** in the **Operation** column.
 - ii. Enter enumerated values in the enumerated value box, then enter synonyms in the synonym box and press **Enter** to save.
 - iii. Click **Publish Synonyms** in the **Operation** column to publish the synonym. A published synonym cannot be deleted on the Q&A page but can be deleted on the synonym page.
 - e. Auto-associate synonym:
 - i. Select the fields you want to associate and click **Auto-Associate Synonym**. The synonyms of the fields and enumeration values in the public thesaurus will be matched. If there is no matching synonym in the public thesaurus for a field, it will not be matched.
- Associated field configuration

After configuring the associated fields, the intelligent analysis assistant will recommend related questions based on the dimension and metric associated fields, helping you better understand the data.

NOTE

- When the associated field of **Dimension** is **Metric**, associated questions will not be generated on the intelligent analysis assistant's Q&A page. You are advised to configure the associated field as **Dimension**.
 - When the associated field of **Metric** is only **Dimension**, associated questions will not be generated on the intelligent analysis assistant's Q&A page. You are advised to configure the associated field as **Metric** or to include both **Metric** and **Dimension**.
 - Generate associated questions based on three categories: **Indicator**, **Dimension**, and **Metric**. Each category generates a maximum of one associated question, with a total of no more than three associated questions.
- a. In the dataset list, click the name of the dataset for which you want to configure associated fields. On the displayed page, click the **Q&A Configuration** tab.
 - b. Click . In the dialog box that appears, select the fields you want to associate. In this example, the associated field of **product_name** is set to **product_type**.

Figure 3-6 Adding an associated field



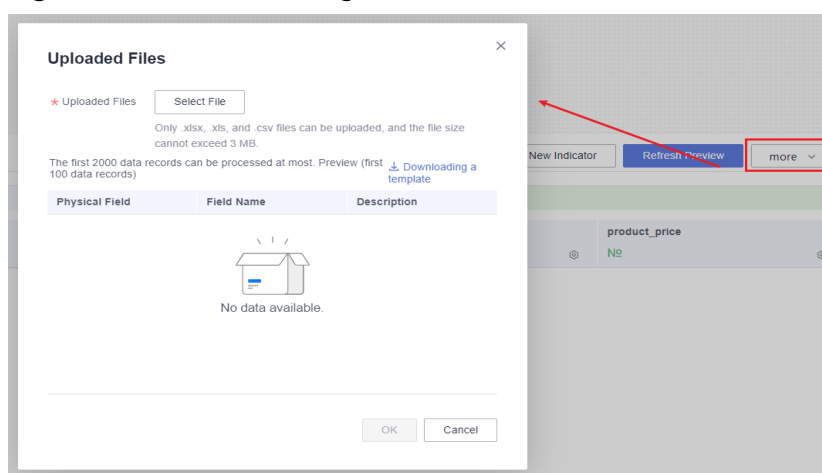
- c. Click **OK**. The associated fields are successfully configured. When asking questions related to **product_name** on the intelligent analysis assistant page, related questions about **product_type** will be automatically recommended.

Batch Changing Names

Batch renaming is a feature that allows you to batch upload physical fields, field names, and field descriptions of the data table you want to analyze. This improves efficiency and user experience by automatically populating the fields, and is mainly used in scenarios where a data table contains a large number of physical fields.

- **Restrictions:** You can only upload files in .xlsx, .xls, or .csv format, and the file size cannot exceed 3 MB.
- **Procedure:**
 - a. On the dataset editing page, click **More** and select **Batch Modify Names**.

Figure 3-7 Batch renaming



- b. In the displayed **Uploaded Files** dialog box, click **Download Template**. Fill in the template.
- c. Click **Select File** and upload the completed file.

NOTE

- Preview only displays up to 100 entries, but the actual data table contains 2,000 entries.
 - You can upload up to 2,000 entries per file upload, and any remaining entries will need to be uploaded again.
- d. Click **OK**.

3.2.2 Creating a Dataset Using SQL Statements

When analyzing data, you can create data tables using custom SQL statements for complex logic or models. These statements can be customized with variable settings to accommodate more complex and dynamic analysis scenarios.

Notes and Constraints

- A dataset can contain only one SQL statement.
- The SQL syntax for creating a custom dataset only supports SELECT, FROM, WHERE, GROUP BY, ORDER BY, SET, LIMIT, and more.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. Choose **Data Management > Datasets**. On the displayed page, click **Create Dataset**.
5. Click **Edit SQL Statement** in the upper right corner of the page.
6. Click  on the SQL editing page to name the custom data table. If the custom data table is not named, the default data table name **sql** is used.
7. Enter SQL statements based on service requirements. [SQL parameters](#) can be used for dynamic query. After the editing is complete, click **Run**.

Example: Sort **data1**, **data2**, and **data3** in the **data** table into a dataset.

```
SELECT
*
FROM
data
WHERE
city IN ('data1', 'data2', 'data3')
and date > ${param}
```

8. After the running is successful, view the running result on the **Running Results** tab.
9. Click **Finish and Exit** to save the custom dataset.

Setting SQL Parameters

During data analysis, if you need to upload parameters to SQL when viewing dashboards or large screens, you can set SQL parameters. This section describes how to set SQL parameters.

1. Use SQL parameters to dynamically edit SQL statements in a SQL script.
 - The parameter format is `${param}`, in which **param** indicates the parameter name. You can obtain the value of a specified parameter by sequence number. Example: `${params[0]}` can be used to obtain the first value in the **params** parameter list.
 - If a parameter is left empty, the related condition is set to `1=1` by default when the SQL statement is executed. In this way, data can be queried properly. You can also use `<if test="param != null">Dynamic statement</if>` to control the final SQL statement when the parameter is nonempty.
2. On the SQL editing page, click **Parameter Settings** in the upper right corner.

Figure 3-8 Parameter setting page

Set Parameter

Variable	Type	Default Value Range	Query Default Value
param	Text	Edit page only	

Table 3-3 Parameters

Parameter	Description
Variable	Variable name.
Type	Options: Text, Numeric, Date, and System variable. • Text: Common text type. When assembling and executing SQL, the input value is enclosed in single quotation marks, like 'value'. • Numeric: Integer or decimal type. When assembling and executing SQL, the input value is directly concatenated. • Date: Year, quarter, month, day, hour, minute, and second date type data. When assembling and executing SQL, the data is formatted as a string according to the specified date format and enclosed in single quotation marks. Supported types include: – YEARREGION: Year; – QUARTERREGION: Year and quarter; – MONTHREGION: Year and month; – DATEREGION: Year, month, and day; – YMDHMSREGION: Year, month, day, hour, minute, and second. • System variable: System-level variable. Specific values cannot be specified and are provided by the system backend, for example, the current access username is used as the value to assemble and execute SQL. NOTE System variables are not displayed in the query control of the dashboard.
Default Value Range	The value can take effect globally or only on the editing page. • Global: The query default value takes effect on the dashboard, large screen, and SQL editing page. • Edit page only: The query default value takes effect only on the SQL editing page.
Query Default Value	The parameter is optional. If the dataset is too large and cannot be saved, or if the dashboard query takes too long, it is recommended to adjust the default query value.

Modifying SQL Code

As the analysis scenario changes, there may be a need to make corresponding adjustments to the SQL code to accommodate new data requirements.

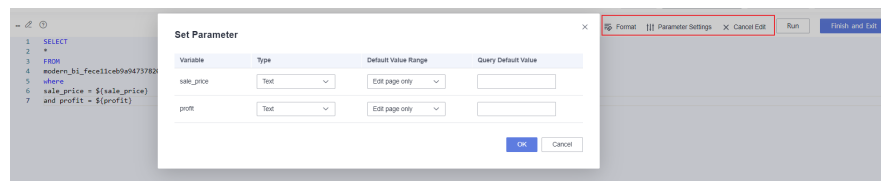
1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. Choose **Data Management > Datasets**.
5. Click the dataset name.

NOTE

If a dataset is created using a custom SQL statement, the dataset name is appended with **SQL**.

6. Click **Edit SQL Statement**. On the displayed page, edit the SQL statement.
 - The SQL editor provides a formatting tool to format the entered SQL statements.
 - You can set SQL parameters by referring to [Setting SQL Parameters](#).

Figure 3-9 Configuring fields



7. Click **Run**. Once the running is successful, view the running result on the **Running Results** tab.
8. Click **Finish and Exit** to save the changes made to the dataset.

3.3 Column Permissions

3.3.1 No Viewing Rule

By using the column-level permission feature in the dataset, you can restrict a user or user group from viewing specific field data. Once set, users will only be able to view data within the defined rules, ensuring data security.

Prerequisites

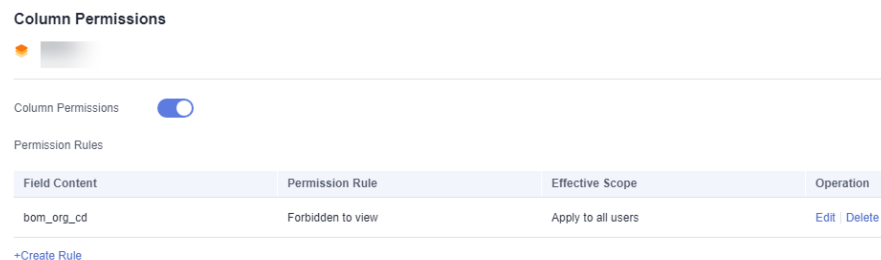
A dataset has been created by referring to [Creating a Dataset Through Visual Configuration](#).

Procedure

1. Log in to the DataArts Insight console.

2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, locate the dataset for which you want to configure deny rules, click **More** in the **Operation** column, and select **Column Permissions**.
6. In the slide-out panel, toggle **Column Permissions** on and click **Create Rule**.
 - a. In **Field**, select one or more dimension and metric fields you want to authorize.
 - b. Set **Permission Rules** to **No viewing** and set **Effective Scope**.
 - **Apply to all users:** All users are prohibited from viewing the field.
 - **Apply to specific users:** Selected users/user groups are prohibited from viewing this field, while other users outside of this selection are not restricted by this rule and can view the field.
 - **Exclude specific users:** Selected users/user groups are not restricted by this rule and can view this field, while other users outside of this selection are restricted by this rule and are prohibited from viewing the field.
7. Click **OK**.

Figure 3-10 Column permission configuration



3.3.2 Data Masking Rule

Scenario

After specifying the fields in a dataset that require masking, the system will apply obfuscation techniques to the sensitive data in those fields, ensuring it is displayed in a desensitized format to protect its security.

Prerequisites

A dataset has been created by referring to [Creating a Dataset Through Visual Configuration](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, locate the dataset for which you want to configure deny rules, click **More** in the **Operation** column, and select **Column Permissions**.
6. In the slide-out panel, toggle **Column Permissions** on and click **Create Rule**.
 - a. In **Field**, select one or more dimension and metric fields you want to authorize.
 - b. Set **Permission Rules** to **Data masking** and select a masking rule. For details about the masking rules, see [Table 3-4](#).

Table 3-4 Data masking rules

Rule	Description
*****	The masked fields are represented by six asterisks (*) and are fully concealed.
XXX***XXX	The first and last three characters are reserved, while the middle characters are concealed.
XXX	The three characters in the middle are reserved, and the other characters concealed.
Retain characters before N and after M	All characters except the specified ones are concealed.
Retain characters between N and M	All characters except the specified ones are concealed.
Keep special characters	All characters except the specified ones are concealed.
Mask characters before special characters	All characters except the specified ones are concealed.

Rule	Description
Mask characters after special characters	All characters except the specified ones are concealed.

- c. Set **Effective Scope**. The options are:
- **Apply to all users:** All users can view only the masked field values.
 - **Apply to specific users:**
 - The specified users or user groups can only view the masked field values.
 - Other users and user groups can view complete field values.
 - **Exclude specific users:**
 - The specified users and user groups can view complete field values.
 - Other users and user groups can view only the masked field values.

 NOTE

DataArts Insight allows users, regardless of their dataset permissions, to view the plaintext of desensitized columns by clicking  on the dashboard or by right-clicking on the large screen and choosing **View data** from the shortcut menu.

7. Click **OK**.

3.4 Row Permissions

The DataArts Insight dataset offers row-level authorization, which allows you to set viewing restrictions on field values, narrowing their visibility and granting authorization to specific values. If you need to limit the viewing scope of certain fields, you can use row-level permissions. This authorization mode includes two methods: authorization based on combined conditions and authorization based on user tags.

3.4.1 Authorization Based on Combined Conditions

You can use row-level permissions to limit the viewing scope of certain fields. This authorization mode includes two methods: authorization based on combined conditions and authorization based on user tags. Authorization based on combined conditions is suitable for organizations with a small number of members. This section describes how to perform authorization based on combined conditions.

Prerequisites

A dataset has been created by referring to [Creating a Dataset Through Visual Configuration](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, locate the dataset for which you want to configure deny rules, click **More** in the **Operation** column, and select **Row Permissions**.
6. In the slide-out panel, enable the **Row Permissions** toggle and select **Authorization Based on Combined Conditions**.
7. Set authorization rules for other users.
 - **Have all permissions**: Users or user groups not specified in the rules are granted permission to view all data.
 - **No permissions**: Users or user groups not specified in the rules cannot view any data.
8. Click **Create Rule**.
 - a. In the **Create Rule** slide-out panel, enter a rule name and select restricted users, that is, the users who are authorized to follow this rule. The options for **Restricted Users** are:
 - **All users**: All users can view only data within the rule.
 - **Specified user**: The selected users and user groups can view data within the rule.
 - b. Add a filter rule. Specifically, click **Add Condition** and set **Filter Field**, **Filter Type**, and **Fixed Value**.
 - **Filter Field**: Filter the dataset fields for which rules need to be set. You can select only one dimension or metric field. To configure rules for other fields, add more conditions.
 - **Filter Type**: The options are **Condition**, **All values**, and **Enumeration**. If a metric field is selected for **Filter Field**, **Enumeration** is unavailable.
 - **Fixed Value filter**: The options include **Equal to**, **Not equal to**, **Contain**, and more.
 - **Fixed Value value**: Enter a value if **Filter Type** is not **Enumeration**, or select a field value from the drop-down list.

NOTE

The **All values** option in the **Filter Type** refers to all values in the database, whereas the **All** option under **Enumeration** only selects the currently displayed enumerated values.

Figure 3-11 Creating row permission rules

- c. To set rules for other fields, click **Create Rule**.

NOTE

If there are multiple condition rules, set the relationship between the rules.

- **AND:** You can view the field values that meet both rules A and B.
- **OR:** You can view the field values that meet either rule A or B.

9. Click **Add Relationship** to add rule group C that is parallel to rule A and rule B.
10. Click **Add Condition** of rule group C to set filtering condition for rule group C. As shown in [Figure 3-12](#), the AND relationship is used between rule A, rule B, and rule group C. Two rules in rule group C are connected using the OR relationship. Authorized users can view the field values that meet rule A, rule B, rule C1, or rule C2 in the dataset. If rule C1 or C2 is met, rule C is met.

Figure 3-12 Examples of creating row permission rules

11. After completing the rule editing, click **OK**.
12. On the **Row Permissions** page, click **OK** to save the row permission rules.

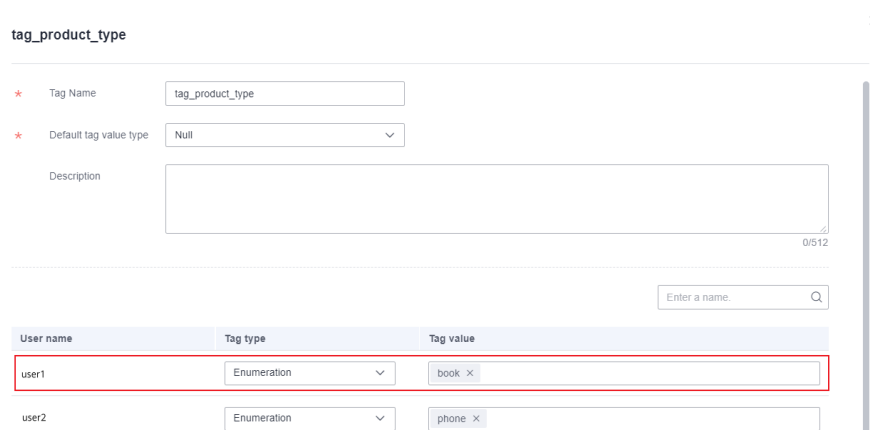
3.4.2 Authorization Based on User Tags

User tag-based authorization is ideal for organizations with many members. This approach lets you authorize all users with the same tag simultaneously, avoiding the need to grant permissions to individual users or groups. This simplifies the authorization process and improves efficiency. This section describes how to perform authorization based on user tags.

Step 1: Add a User or User Group Tag

1. Log in to the DataArts Insight console.

2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu, click **System Settings**. In the navigation pane of the displayed page, choose **Organization Management > Tag Management**. On the displayed **User Tags** tab, click **Add Tag**. In the dialog box that appears, enter the tag name, default tag value type, and description and click **Confirm**.
4. Click **Edit** to go access the tag details page and set tag values for users. For example, add user tag **tag_product_type** and assign a tag value to **user1**.

Figure 3-13 Adding a tag

tag_product_type

* Tag Name

* Default tag value type

Description

0/512

Enter a name.

User name	Tag type	Tag value
user1	Enumeration	book X
user2	Enumeration	phone X

Step 2: Use the Tag for Authorization

1. In the navigation pane on the left, choose **Data Management > Datasets**.
2. On the displayed page, locate the desired dataset, click **More** in the **Operation** column, and select **Row Permissions**. In the slide-out panel, enable the **Row Permissions** toggle and select **Authorization Based on User Tags**.
3. Set **Condition Relationship**. The options are:
 - **AND**: If multiple user/user group tag authorization rules are configured, user1 can view the data that falls under the intersection of country=A, industry=1, and segment=s1.
 - **OR**: If multiple user/user group tag authorization rules are configured, user1 can view the data that falls under the union set of country=A, industry=1, and segment=s1.
4. Click **Add** and select **Controlled Field** and **Tag Table Field**, as shown in [Figure 3-14](#).
5. After editing the rules, click **OK** to save them.

Figure 3-14 Example of user tag authorization rules

Row Permissions

fact_gdp_0727

Row Permissions ☒

☐ Authorization Based on Combined Conditions

☒ Authorization Based on User Tags

Condition Relationship ☒ AND ☐ OR

Controlled Field	Tag Table Field	Operation
country	Users	Delete
Industry	Users	Delete

+Add

3.5 Sharing a Dataset

DataArts Insight allows you to share a dataset with other users or user groups. The shared users or user groups will have editing and usage permissions for the dataset. This section explains how to share a dataset so that team members can collaborate quickly.

Prerequisites

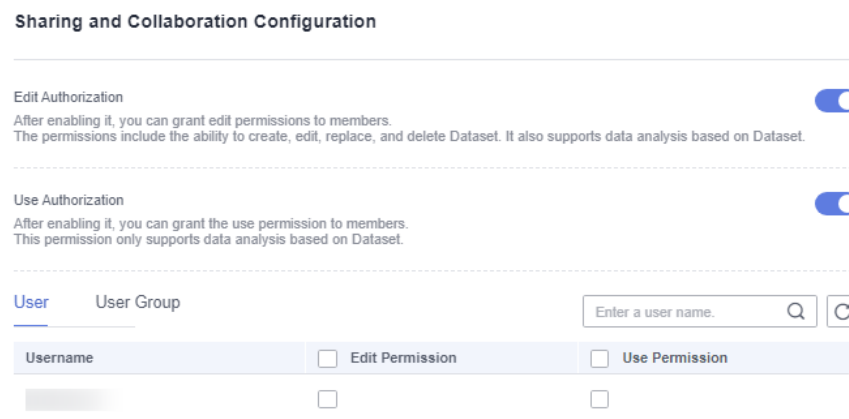
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- Sharing and collaboration have been enabled for the data source that is associated with the dataset by referring to [Sharing a Data Source](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, locate the dataset you want to share, click **More** in the **Operation** column, and select **Share & Collaborate**.
6. Select the permissions that you want to grant.
 - **Edit Authorization:** Enabling this allows you to grant edit permissions to members, including editing and deleting datasets, as well as performing data analysis based on datasets.
Enabling edit permission on a dataset will also enable use permission by default.
 - **Use authorization:** After enabling it, you can grant the use permission to members. This permission only supports data analysis.

7. Select the objects that you want to authorize.
 - **User:** Grant a user the permission to edit the dataset.
 - **User Group:** After a user group is authorized, all users of the group will have the chosen permissions on the data source.
8. Select the users and user groups that you want to authorize.

Figure 3-15 Sharing and collaboration configuration page



3.6 Managing a Dataset

After a dataset is created, you can edit or delete the dataset as needed. This section describes how to edit or delete a dataset.

Editing a Dataset

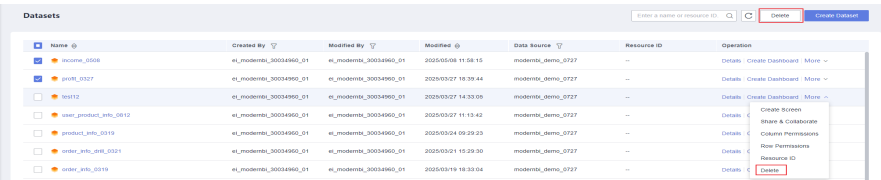
1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, click the name of the dataset you want to edit. On the editing page that appears, edit the dataset and click **Save**.

Deleting a Dataset

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. To delete a single dataset, locate the dataset you want to delete and click **More** in its **Operation** column. In the **Delete Dataset** dialog box that appears, click **OK**.

To delete multiple datasets in batches, select the datasets you want to delete and click **Delete** in the upper right corner of the page. In the displayed **Delete** dialog box, the references to the selected datasets (such as dashboards or large screens) will be shown. Check whether deleting the datasets will affect existing business operations. After confirming that there are no impacts, click **Confirm**. You can delete a maximum of 50 datasets in a batch.

Figure 3-16 Deleting datasets



4 Creating a Data Model

4.1 Creating a Model by Joining Multiple Tables

During the process of data analysis, you may come across the need to work with data scattered across different tables. By performing multi-table joins, you can connect these scattered tables and build a comprehensive data model for in-depth analysis. DataArts Insight supports **LEFT JOIN**, **INNER JOIN**, **RIGHT JOIN**, and **FULL JOIN**. This section walks you through how to perform multi-table join modeling.

Prerequisites

- You have subscribed to DataArts Insight.
- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).

Procedure

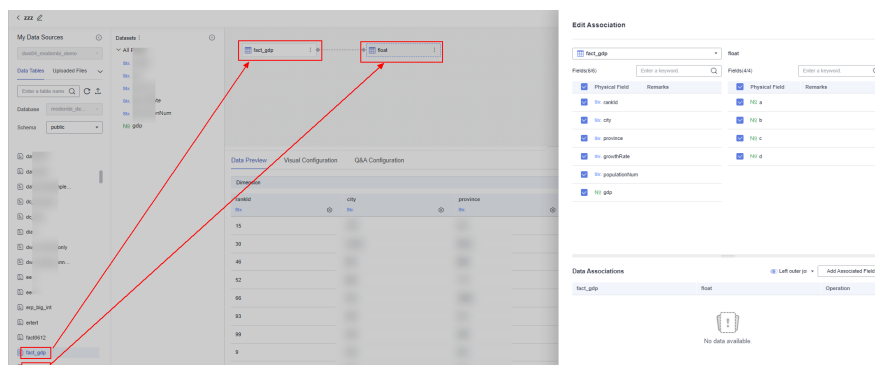
1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. Choose **Data Management** > **Datasets**. On the displayed page, click **Create Dataset**.
5. Select the required data source, database name, and schema.
6. Select or create associated tables, supporting options such as selecting a data table to associate with another data table, creating a table by associating it with SQL code, or creating a table by associating it with data from SQL code.

NOTE

For how to edit SQL code, see [Creating a Dataset Using SQL Statements](#). Only one SQL data table can be created in a dataset.

- a. To associate data tables, drag and drop the tables you want to link from the left side onto the operation panel. See [Figure 4-1](#).

Figure 4-1 Associating a data table with another data table



- b. To associate a data table with a table generated through SQL code, do as follows:
 - i. Drag and drop the table from the left side to the operation panel, and click **Edit SQL Statement** to access the SQL editing page.
 - ii. Once the SQL statement is edited, click **Run**. After the execution is successful, click **Finish and Exit**.
 - iii. On the dataset management page is displayed, check that the tables are associated.

Figure 4-2 Creating a table using sql code

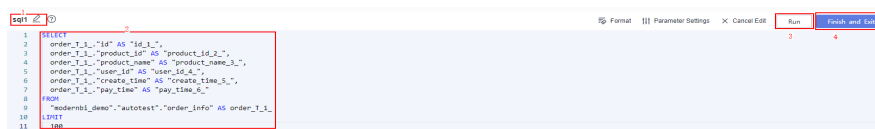
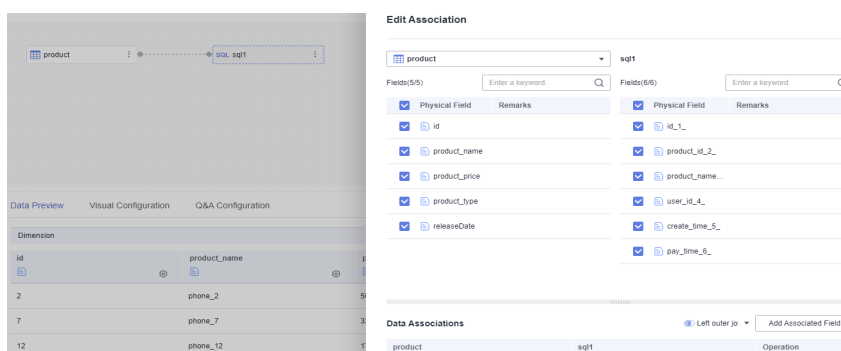


Figure 4-3 Associating a data table with a table generated through SQL code



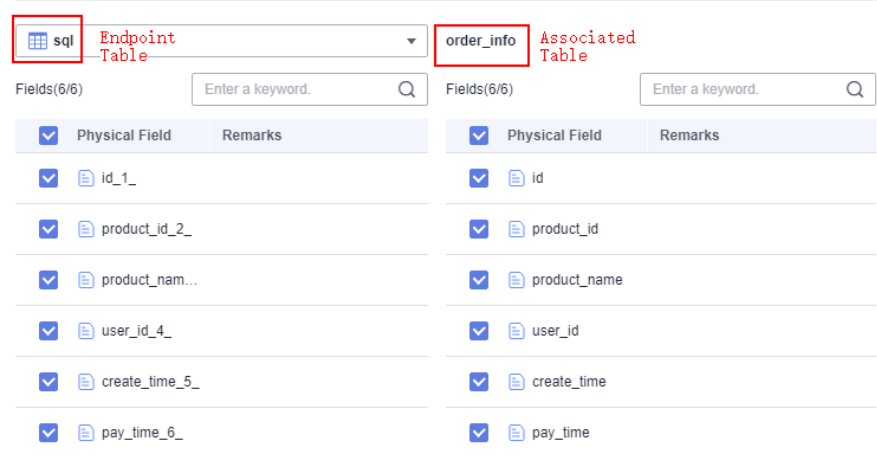
- c. To associate a table generated through SQL code with a data table, do as follows:
 - i. Click **Edit SQL Statement** to access the SQL editing page.
 - ii. Once the SQL statement is edited, click **Run**. After the execution is successful, click **Finish and Exit**.
 - iii. On the dataset management page, drag and drop a data table from the left to associate them.

Figure 4-4 Creating a SQL table



7. Edit the table association relationship.
 - a. If the data model to be analyzed is complex and multiple tables need to be associated, use an association relationship to select the endpoint table.

Figure 4-5 Selecting an endpoint table



- b. Select table fields as needed.
 - c. Select an association relationship.
 - **LEFT OUTER JOIN:** Returns all records from the left table, regardless of whether there is a matching record in the right table. For any records in the right table that do not have a match, the corresponding fields in the result will be displayed as **NULL**.
 - **INNER JOIN:** Returns the records that have matching values in both tables, essentially showing the common elements between the two tables.
 - **RIGHT OUTER JOIN:** Returns all records from the right table, regardless of whether there is a matching record in the left table. For any records in the left table that do not have a match, the corresponding fields in the result will be displayed as **NULL**.
 - **FULL JOIN:** Returns all records from both tables, regardless of whether they have a match. Any duplicate entries will be eliminated.
 - d. Configuring associated fields: When configuring data associations, the associated fields must be selected from the existing fields in the table being associated.
8. Click **OK** to complete data association. Click **Refresh Preview** to view the associated data.

4.2 Creating a Dimension

If the data you need to analyze cannot be directly obtained from the data table and requires processing based on raw data, you can create a dimension. By creating a dimension, you can transform raw data into more meaningful information. For example, you can create a dimension called **profit** based on the original data of sales prices and costs. This section describes how to create a dimension.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, click the name of the dataset you created.
6. On the displayed page, click **Create Dimension**.

Figure 4-6 Creating a dimension

Create Dimension

Indicator Name

Enter an indicator name.

Description

Enter a description.

Creation Method

Edit Formula

Visual editing

Data type

Numeric

Text

Date

Date Time

Condition

+ Add Condition

Default Filter

+ Add

Edit Formula

Click to reference a function.

Click the reference field

Field expression

Enter keywords.

Enter keywords.

All Functions

Dimension(1) Measurement(1)

CURRENT_DATE

CURRENT_TIME

NOW

UNIX_TIMESTAMP

UNIX_TIMESTAMP

FROM_UNIXTIME

MONTH

DAYOFWEEK

DAYOFYEAR

DAYOFMONTH

QUARTER

HOUR

MINUTE

SECOND

DATEDIFF

ADDDATE

ADDDATE

SUBDATE

SUBDATE

Str. date

1

Save and close

Save

Cancel

7. After setting the parameters, click **Confirm**.

a. **Creation Method:** Select **Edit Formula**. The options for **Data type** are **Numeric**, **Text**, **Date**, and **Date Time**. For details about the parameters, see [Table 4-1](#).

NOTE

- When using expressions, make sure to use parentheses in the English input method.
- Use functions supported by each data source.

Table 4-1 Parameter descriptions

Parameter	Description
Data type	Options: Numeric , Text , Date , and Date Time .

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97

Parameter	Description
Condition	This parameter is available only when Data type is set to Numeric or Text. • If you create or change a data type, you need to save the settings before setting this parameter. • This parameter is a field-level configuration item. It only takes effect for the field.
Default Filter	Default filters can be added only for numeric and text dimensions. • If you create or change a data type, you need to save the settings before setting this parameter. • After a default filter is added, the dataset applies the filter. If no other filter criteria are added in the intelligent Q&A and dashboard scenarios, the data filtered by the default filter is automatically returned.
Click to reference a function.	Functions used to process data. You can select date, text, and numeric functions.
Click the reference field	Dimensions and metrics of a dataset.
Field expression	Field expression that helps you understand the data processing process.

Table 4-2 Date functions

Function	Usage	Description
CURRENT_DATE	CURRENT_DATE()	Returns the current date.
CURRENT_TIME	CURRENT_TIME()	Returns the current time.
NOW	NOW()	Return system's current date and time.
UNIX_TIMESTAMP	UNIX_TIMESTAMP()	Returns the current time as a UNIX timestamp.
UNIX_TIMESTAMP	UNIX_TIMESTAMP(d)	Returns the time <i>d</i> as a UNIX timestamp.

Function	Usage	Description
FROM_UNIXTIME	FROM_UNIXTIME(<i>d</i>)	Converts the time in the UNIX timestamp format to the time in the common format.
MONTH	MONTH(<i>d</i>)	Returns the month value in the date <i>d</i> , ranging from 1 to 12.
DAYOFWEEK	DAYOFWEEK(<i>d</i>)	Calculates the day of the week corresponding to date <i>d</i> .
DAYOFYEAR	DAYOFYEAR(<i>d</i>)	Calculates the day of the year corresponding to date <i>d</i> .
DAYOFMONTH	DAYOFMONTH(<i>d</i>)	Calculates the day of the month corresponding to date <i>d</i> .
QUARTER	QUARTER(<i>d</i>)	Returns the season of date <i>d</i> as a value between 1 and 4.
HOUR	HOUR(<i>t</i>)	Returns the hour value in <i>t</i> .
MINUTE	MINUTE(<i>t</i>)	Returns the minute value in <i>t</i> .
SECOND	SECOND(<i>t</i>)	Returns the second value in <i>t</i> .
DATEDIFF	DATEDIFF(<i>d1</i> , <i>d2</i>)	Calculates the number of days between <i>d1</i> and <i>d2</i> .
ADDDATE	ADDDATE(<i>d</i> , <i>n</i>)	Calculates the date that is <i>n</i> days after the start date <i>d</i> .
ADDDATE	ADDDATE(<i>d</i> , INTERVAL <i>expr</i> type)	Calculates the date that is the result of adding a time segment to the start date <i>d</i> .
SUBDATE	SUBDATE(<i>d</i> , <i>n</i>)	The date <i>n</i> days before date <i>d</i> .
SUBDATE	SUBDATE(<i>d</i> , INTERVAL <i>expr</i> type)	The date resulting from subtracting a time segment from date <i>d</i> .
DATE_FORMAT	DATE_FORMAT(<i>d</i> , <i>f</i>)	Displays the date <i>d</i> as required by expression <i>f</i> .
TIME_FORMAT	TIME_FORMAT(<i>t</i> , <i>f</i>)	Displays the time <i>t</i> as required by expression <i>f</i> .

Table 4-3 Text functions

Function	Usage	Description
CHAR_LENGTH	CHAR_LENGTH(<i>s</i>)	Returns the number of characters in string <i>s</i> .
LENGTH	LENGTH(<i>s</i>)	Returns the length of string <i>s</i> .

Function	Usage	Description
CONCAT	CONCAT(s1,s2,...)	Combines multiple strings such as s1 and s2 into one string.
CONCAT_WS	CONCAT_WS(x,s1,s2,...)	Uses the first parameter as the separator, which is associated with all following parameters.
UPPER	UPPER(s)	Converts letters in string <i>s</i> into uppercase letters.
LOWER	LOWER(s)	Converts letters in string <i>s</i> into lowercase letters.
LEFT	LEFT(s,n)	Returns the first <i>n</i> characters of string <i>s</i> .
RIGHT	RIGHT(s,n)	Returns the last <i>n</i> characters of string <i>s</i> .
LPAD	LPAD(s1,len,s2)	Uses string <i>s2</i> to fill the beginning of <i>s1</i> so that the string length reaches <i>len</i> .
RPAD	RPAD(s1,len,s2)	Uses string <i>s2</i> to fill the end of <i>s1</i> so that the string length reaches <i>len</i> .
LTRIM	LTRIM(s)	Deletes the space at the beginning of the string <i>s</i> .
RTRIM	RTRIM(s)	Deletes the space at the end of the string <i>s</i> .
TRIM	TRIM(s1 FROM s)	Removes the string <i>s</i> and the string <i>s1</i> at the end.
REPEAT	REPEAT(s,n)	Repeats the string <i>s</i> for <i>n</i> times.
REPLACE	REPLACE(s,s1,s2)	Replaces the string <i>s1</i> in the string <i>s</i> with the string <i>s2</i> .
SUBSTRING	SUBSTRING(s,n,len)	Obtains a string whose length is <i>len</i> from the <i>n</i> th position in the string <i>s</i> .
LOCATE	LOCATE(s1,s)	Obtains the start position of <i>s1</i> from the string <i>s</i> .
INSTR	INSTR(s,s1)	Obtains the start position of <i>s1</i> from the string <i>s</i> .
REVERSE	REVERSE(s)	Reverses the sequence of the string <i>s</i> .

Function	Usage	Description
MD5	MD5(str)	You can hash the string <i>str</i> to encrypt data that does not require decryption.

Table 4-4 Numeric functions

Function	Usage	Description
ABS	ABS(x)	Returns the absolute value of <i>x</i> .
CEIL	CEIL(x)	Returns the smallest integer greater than or equal to <i>x</i> .
FLOOR	FLOOR(x)	Returns the largest integer less than or equal to <i>x</i> .
RANDOM	RANDOM()	Returns a random number ranging from 0.0 to 1.0.
SIGN	SIGN(x)	Returns the sign of <i>x</i> , which is either -1, 0, or 1 depending on whether <i>x</i> is negative, zero, or positive.
PI	PI()	Returns pi.
TRUNC	TRUNC(x, y)	Returns the value of <i>x</i> rounded to <i>y</i> decimal places.
ROUND	ROUND(x)	Returns the integer closest to <i>x</i> .
ROUND	ROUND(x, y)	Returns the value of <i>x</i> rounded to <i>y</i> decimal places, with any truncated part being rounded off.
POWER	POWER(x,y)	Returns the value of <i>x</i> raised to the power of <i>y</i> .
SQRT	SQRT(x)	Returns the square root of <i>x</i> .

Function	Usage	Description
EXP	EXP(x)	Returns the value of e raised to the power of x .
MOD	MOD(x,y)	Returns the remainder when x is divided by y .
LOG	LOG(x)	In the ORA- or TD-compatible mode, this operator means the logarithm with 10 as the base. In the MySQL-compatible mode, this operator means the natural logarithm.
RADIANS	RADIANS(x)	Converts the angle to a radian.
DEGREES	DEGREES(x)	Converts the radian to an angle.
SIN	SIN(x)	Calculates the sine value given in radians.
ASIN	ASIN(x)	Calculates the arc sine value given in radians.
COS	COS(x)	Calculates the cosine value given in radians.
ACOS	ACOS(x)	Calculates the arc cosine value given in radians.
TAN	TAN(x)	Calculates the tangent value given in radians.
ATAN	ATAN(x)	Calculates the arc tangent value given in radians.
COT	COT(x)	Calculates the cotangent value given in radians.

- b. **Visual editing:** You can only derive grouping dimensions based on a single dimension. If you need to derive more complex new dimensions based on multiple dimensions, use the formula editor.
- i. Select a grouping field.

- ii. Set the group and select the group field value.
- iii. Click **Refresh Preview** and then **Confirm**.

4.3 Creating a Hierarchy

Hierarchy is an effective way to organize data by categorizing dimension values. For example, grades can be divided into several different levels, such as "fail," "pass," "good," and "excellent". This grouping allows for a clear observation of the distribution of student numbers in each grade level. This section describes how to create a hierarchy.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).

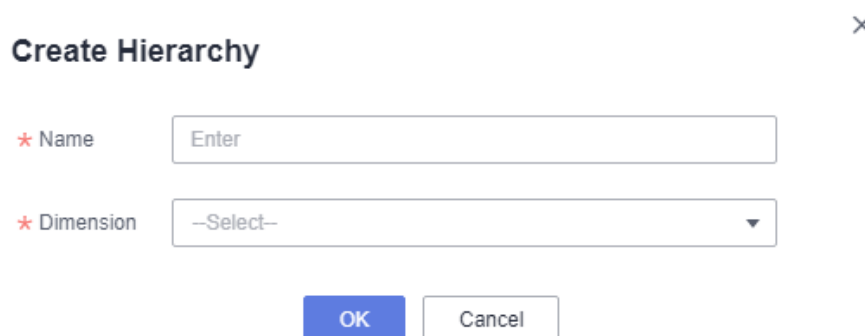
Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, click the name of the dataset you created.
6. On the **Data Preview** tab, click **More** and select **Create Hierarchy**.
7. In the dialog box that appears, enter a name, select one or multiple dimensions, and click **OK**.

NOTE

Date fields cannot be used to create a hierarchy.

Figure 4-7 Creating a hierarchy



Create Hierarchy ×

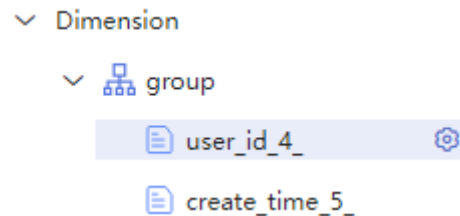
★ Name

★ Dimension

8. After saving the configuration, the dataset will add this hierarchy as a dimension field and fill in the grouping names in the corresponding column

according to the configuration. This hierarchy can then be used to create charts in subsequent chart-making processes.

Figure 4-8 New hierarchy



4.4 Setting SET Statements

Using SET statements to configure query hints is a method to manually optimize query performance. This approach can directly influence the decisions of the database query optimizer, thereby improving database query performance. Once SET statements are configured, query efficiency will be enhanced in scenarios such as dashboards and large screens. This section describes how to set SET statements.

Notes and Constraints

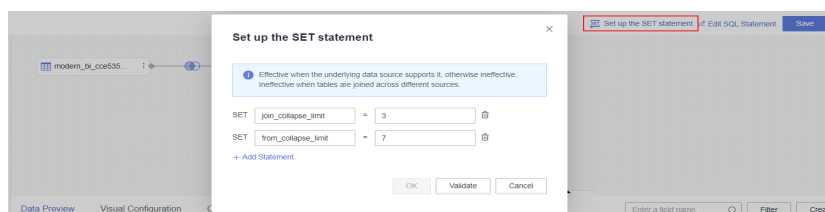
- The currently supported data sources for SET statements are: GaussDB(DWS) and PostgreSQL.
- The parameter name of the SET statement can only contain letters, numbers, periods (.), and underscores (_), with a maximum length of 50 characters.
- A maximum of 10 SET statements can be added.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Datasets**.
5. On the displayed page, click the name of the dataset you created.
6. On the dataset editing page, click **Set up the SET statement** ([Figure 4-9](#)).

Figure 4-9 Setting the SET statement

7. In the dialog box that appears, set the parameters, click **Validate**, and click **OK**. **Figure 4-9** lists the **join_collapse_limit** and **from_collapse_limit** parameters for the PostgreSQL database. For other parameters and their descriptions, refer to the [official documentation](#). After setting up, click **View SQL Statement** to view the configured SET statements (**Figure 4-10**).

Figure 4-10 Viewing SQL statements

NOTE

Once SET statements are configured, when performing data analysis on the dashboard, click in the upper right corner of the chart and select **View SQL Statement** to view the configured SET statements.

5 Creating an Indicator

5.1 Overview

When the data in a table does not directly meet the analysis requirements and requires processing, you can create indicators. Indicators serve as a quantitative statistical method for analyzing transactions from multiple perspectives. They are typically derived from metrics (such as sales revenue, number of users, etc.) and dimensions (such as time, region, etc.). For example, sales revenue is a metric, while monthly sales revenue is an indicator based on the time dimension. There are mainly three types of indicators:

- Atomic indicators are the smallest possible indicators that can be used to measure transaction attributes, such as the total amount.
- A derivative indicator is an indicator that is created from a single basic indicator and is typically used to extend indicators over time, such as for month-on-month comparisons or accumulated sales amounts. These metrics are indicators for conducting more complex data analysis.
- A composite indicator is an indicator that is calculated using one or more basic indicators. For example, the average unit price can be calculated by dividing the total amount by the number of sales. These indicators are useful for conducting complex data analysis.

Notes and Constraints

- You have the permission to edit required datasets.
- You can only create indicators for projects that are connected to any of the following data sources: GaussDB(DWS), ClickHouse, GaussDB, MySQL, PostgreSQL, and Doris.

NOTE

For MySQL, only version 8.0 or later is supported.

5.2 Creating an Indicator

Indicators are quantifiable measures used to assess the performance or achievement of business objectives. Common indicators include sales revenue,

number of users, growth rate, conversion rate, satisfaction rate, etc. These indicators provide decision-makers with powerful data support by intuitively reflecting the operations status of the business. This section describes how to create an indicator.

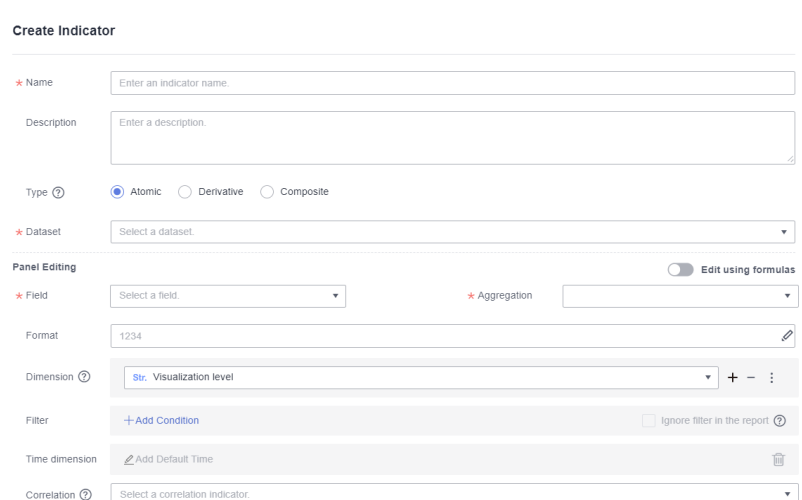
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Indicator**. On the displayed page, click **Create Indicator**.

Figure 5-1 Create Indicator



The screenshot shows the 'Create Indicator' form with the following fields and options:

- Name:** Text input field with placeholder 'Enter an indicator name.'
- Description:** Text input field with placeholder 'Enter a description.'
- Type:** Radio buttons for Atomic (selected), Derivative, and Composite.
- Dataset:** Dropdown menu with placeholder 'Select a dataset.'
- Panel Editing:** Section with a toggle for 'Edit using formulas'.
- Field:** Dropdown menu with placeholder 'Select a field.'
- Aggregation:** Dropdown menu with placeholder 'Select an aggregation.'
- Format:** Text input field with placeholder '1234' and a format icon.
- Dimension:** Dropdown menu with placeholder 'Str. Visualization level' and expand/collapse icons.
- Filter:** '+Add Condition' button and 'Ignore filter in the report' checkbox.
- Time dimension:** '+Add Default Time' button and a trash icon.
- Correlation:** Dropdown menu with placeholder 'Select a correlation indicator.'

5. Set the parameters based on [Table 5-1](#) and click **OK**.

Table 5-1 Parameters for creating an indicator

Parameter	Description
Name	Name of the indicator, which is user-defined. Enter a maximum of 512 characters. The following special characters are not supported: <>#=# +@
Description	Description of the indicator.

Parameter	Description
Type	Atomic indicators are quantitative measures of a product or business performance, such as sales revenue. Derivative indicators are extensions of a single indicator commonly used to expand indicators over time, such as the sales revenue compared to the previous month. Composite indicators are based on multiple indicators and defined by input expressions, such as profit = sales revenue – cost.
Dataset	Dataset you want to associate with the indicator.
Field	Dimensions and metrics.
Aggregation	The options include Sum, Average, Count, Distinct count, Maximum, Minimum, Population standard deviation, Sample standard deviation, Population variance, and Sample variance.
Derivative	The options include YoY and PoP growth rate, YoY and PoP growth, Period-to-date, Moving calculation, Cumulative calculation, Ranking, Difference, Difference percentage, and Total percentage.
Format	The options include No format, Numeric, Currency, Object quantifier, Length, Weight, Energy, Capacity, Time, and Percentage.
Dimension	You can select the dimensions from which indicator values are analyzed. NOTE If Dimension is set to Visualization level, all dimensions are associated by default.

Parameter	Description
Filter	It is used to add filter rules. 1. Click Add Condition. 2. Select the filter field, filter type, fixed value filtering condition, and value. • Filter Field: Filter the dataset fields for which rules need to be set. You can select only one dimension or metric field. To configure rules for other fields, add more conditions. • Filter Type: Select Condition, Enumeration, or Expression filtering. • Fixed value filtering condition: The options include Equal to, Not equal to, and more. • Fixed Value: Enter the value of the filtering condition. For enumeration filtering, select a field value from the drop-down list box. To set rules for other fields, click Add Condition. If there are multiple condition rules, set the relationship between the rules. 1. AND: You can view the field values that meet both rules A and B. 2. OR: You can view the field values that meet either rule A or B. 3. To add a rule that is parallel to rule A and rule B, click Add Relationship to create a new rule group, rule C. Rule group C is at the same level as rules A and B. NOTE Ignore filter in the report: If there are filters with the same column in the report, selecting this option will ignore filters at the report level. If not selected, it will intersect with filters at the report level.

Parameter	Description
Time Dimension	The default time filter is a filter that is specifically used to configure the default time for an indicator. Users expect a default time to be automatically displayed when asking about a certain indicator. If this parameter is set, the corresponding dataset must contain a time dimension, otherwise it cannot be set. NOTE • Composite and derivative indicators will inherit the time dimension of the atomic indicators. • The default time filter that is set will take effect in dashboards, large screens, and intelligent analysis Q&A. • If the time dimension is set for multiple filters at the same time, the priorities of the filters are as follows in descending order: dashboard filter time condition, indicator filter time condition, indicator default time filter, and dataset default filter time condition. • If a filter is set for the same field in both the dataset and the indicator, the indicator filter will override the dataset filter, meaning that the default filter for the indicator has a higher priority than the default filter for the dataset. • If filters are set in the dashboard and the intelligent analysis Q&A, the default filter set in the indicator will not take effect.
Correlation	Indicators associated with the new indicator. Once selected from the drop-down menu, the intelligent analysis assistant will recommend related metrics to you during the Q&A session.

Table 5-2 Date functions

Function	Usage	Description
CURRENT_DATE	CURRENT_DATE()	Returns the current date.
CURRENT_TIME	CURRENT_TIME()	Returns the current time.
NOW	NOW()	Return system's current date and time.
UNIX_TIMESTAMP	UNIX_TIMESTAMP()	Returns the current time as a UNIX timestamp.
FROM_UNIXTIME	FROM_UNIXTIME(d)	Converts the time in the UNIX timestamp format to the time in the common format.
MONTH	MONTH(d)	Returns the month value in the date <i>d</i> , ranging from 1 to 12.

Function	Usage	Description
DAYOFWEEK	DAYOFWEEK(<i>d</i>)	Calculates the day of the week corresponding to date <i>d</i> .
DAYOFYEAR	DAYOFYEAR(<i>d</i>)	Calculates the day of the year corresponding to date <i>d</i> .
DAYOFMONT H	DAYOFMONTH(<i>d</i>)	Calculates the day of the month corresponding to date <i>d</i> .
QUARTER	QUARTER(<i>d</i>)	Returns the season of date <i>d</i> as a value between 1 and 4.
HOUR	HOUR(<i>t</i>)	Returns the hour value in <i>t</i> .
MINUTE	MINUTE(<i>t</i>)	Returns the minute value in <i>t</i> .
SECOND	SECOND(<i>t</i>)	Returns the second value in <i>t</i> .
DATEDIFF	DATEDIFF(<i>d1</i> , <i>d2</i>)	Calculates the number of days between <i>d1</i> and <i>d2</i> .
ADDDATE	ADDDATE(<i>d</i> , <i>n</i>)	Calculates the date that is <i>n</i> days after the start date <i>d</i> .
SUBDATE	SUBDATE(<i>d</i> , <i>n</i>)	The date <i>n</i> days before date <i>d</i> .
DATE_FORMA T	DATE_FORMAT(<i>d</i> , <i>f</i>)	Displays the date <i>d</i> as required by expression <i>f</i> .
TIME_FORMAT	TIME_FORMAT(<i>t</i> , <i>f</i>)	Displays the time <i>t</i> as required by expression <i>f</i> .

Table 5-3 Text functions

Function	Usage	Description
CHAR_LENGTH	CHAR_LENGTH(<i>s</i>)	Returns the number of characters in string <i>s</i> .
LENGTH	LENGTH(<i>s</i>)	Returns the length of string <i>s</i> .
CONCAT	CONCAT(<i>s1</i> , <i>s2</i> ,...)	Combines multiple strings such as s1 and s2 into one string.
CONCAT_WS	CONCAT_WS(<i>x</i> , <i>s1</i> , <i>s2</i> ,...)	Uses the first parameter as the separator, which is associated with all following parameters.
UPPER	UPPER(<i>s</i>)	Converts letters in string <i>s</i> into uppercase letters.
LOWER	LOWER(<i>s</i>)	Converts letters in string <i>s</i> into lowercase letters.

Function	Usage	Description
LEFT	LEFT(<i>s</i> , <i>n</i>)	Returns the first <i>n</i> characters of string <i>s</i> .
RIGHT	RIGHT(<i>s</i> , <i>n</i>)	Returns the last <i>n</i> characters of string <i>s</i> .
LPAD	LPAD(<i>s1</i> , <i>len</i> , <i>s2</i>)	Uses string <i>s2</i> to fill the beginning of <i>s1</i> so that the string length reaches <i>len</i> .
RPAD	RPAD(<i>s1</i> , <i>len</i> , <i>s2</i>)	Uses string <i>s2</i> to fill the end of <i>s1</i> so that the string length reaches <i>len</i> .
LTRIM	LTRIM(<i>s</i>)	Deletes the space at the beginning of the string <i>s</i> .
RTRIM	RTRIM(<i>s</i>)	Deletes the space at the end of the string <i>s</i> .
TRIM	TRIM(<i>s1</i> FROM <i>s</i>)	Removes the string <i>s</i> and the string <i>s1</i> at the end.
REPEAT	REPEAT(<i>s</i> , <i>n</i>)	Repeats the string <i>s</i> for <i>n</i> times.
REPLACE	REPLACE(<i>s</i> , <i>s1</i> , <i>s2</i>)	Replaces the string <i>s1</i> in the string <i>s</i> with the string <i>s2</i> .
SUBSTRING	SUBSTRING(<i>s</i> , <i>n</i> , <i>len</i>)	Obtains a string whose length is <i>len</i> from the <i>n</i> th position in the string <i>s</i> .
LOCATE	LOCATE(<i>s1</i> , <i>s</i>)	Obtains the start position of <i>s1</i> from the string <i>s</i> .
INSTR	INSTR(<i>s</i> , <i>s1</i>)	Obtains the start position of <i>s1</i> from the string <i>s</i> .
REVERSE	REVERSE(<i>s</i>)	Reverses the sequence of the string <i>s</i> .
MD5	MD5(<i>str</i>)	You can hash the string <i>str</i> to encrypt data that does not require decryption.

Table 5-4 Numeric functions

Function	Usage	Description
ABS	ABS(<i>x</i>)	Returns the absolute value of <i>x</i> .

Function	Usage	Description
CEIL	CEIL(<i>x</i>)	Returns the smallest integer greater than or equal to <i>x</i> .
FLOOR	FLOOR(<i>x</i>)	Returns the largest integer less than or equal to <i>x</i> .
RANDOM	RANDOM()	Returns a random number ranging from 0.0 to 1.0.
SIGN	SIGN(<i>x</i>)	Returns the sign of <i>x</i> , which is either -1, 0, or 1 depending on whether <i>x</i> is negative, zero, or positive.
PI	PI()	Returns pi.
TRUNC	TRUNC(<i>x</i> , <i>y</i>)	Returns the value of <i>x</i> rounded to <i>y</i> decimal places.
ROUND	ROUND(<i>x</i>)	Returns the value of <i>x</i> rounded to <i>y</i> decimal places, with any truncated part being rounded off.
POWER	POWER(<i>x</i> , <i>y</i>)	Returns the value of <i>x</i> raised to the power of <i>y</i> .
SQRT	SQRT(<i>x</i>)	Returns the square root of <i>x</i> .
EXP	EXP(<i>x</i>)	Returns the value of <i>e</i> raised to the power of <i>x</i> .
MOD	MOD(<i>x</i> , <i>y</i>)	Returns the remainder when <i>x</i> is divided by <i>y</i> .
LOG	LOG(<i>x</i>)	In the ORA- or TD-compatible mode, this operator means the logarithm with 10 as the base. In the MySQL-compatible mode, this operator means the natural logarithm.

Function	Usage	Description
RADIANS	RADIANS(x)	Converts the angle to a radian.
DEGREES	DEGREES(x)	Converts the radian to an angle.
SIN	SIN(x)	Calculates the sine value given in radians.
ASIN	ASIN(x)	Calculates the arc sine value given in radians.
COS	COS(x)	Calculates the cosine value given in radians.
ACOS	ACOS(x)	Calculates the arc cosine value given in radians.
TAN	TAN(x)	Calculates the tangent value given in radians.
ATAN	ATAN(x)	Calculates the arc tangent value given in radians.
COT	COT(x)	Calculates the cotangent value given in radians.

Table 5-5 Window functions

Function	Usage	Description
RANK_WINDOWS	RANK() OVER (PARTITION BY expr1 ORDER BY expr2)	The RANK function is used for generating non-consecutive sequence numbers for the values in each group. The same values have the same sequence number.
ROW_NUMBER_WINDOWS	ROW_NUMBER() OVER(PARTITION BY expr1 ORDER BY expr2)	The ROW_NUMBER function is used for generating consecutive sequence numbers for the values in each group. The same values have different sequence numbers.

Function	Usage	Description
AGG_WINDOWS	agg_func(x) OVER(PARTITION BY expr1 ORDER BY expr2)	agg_fun(x) is an aggregate function, for example, sum(x) and arg(x).

Table 5-6 Aggregate functions

Function	Usage	Description
AVG	AVG(x)	Returns the average value in the column <i>x</i> .
COUNT	COUNT(x)	Returns the number of non-null values in the column <i>x</i> .
MAX	MAX(x)	Returns the largest value of the column <i>x</i> .
MIN	MIN(x)	Returns the smallest value of the column <i>x</i> .
SUM	SUM(x)	Returns the sum of the values in column <i>x</i> .
VAR_POP	VAR_POP(x)	Returns the population variance in the column <i>x</i> .
VAR_SAMP	VAR_SAMP(x)	Returns the sample variance in the column <i>x</i> .
STDDEV_SAMP	STDDEV_SAMP(x)	Returns the standard deviation of samples in the column <i>x</i> .
STDDEV_POP	STDDEV_POP(x)	Returns the population standard deviation in the column <i>x</i> .

5.3 Sharing an Indicator

DataArts Insight allows you to share an indicator with other users or user groups. The shared users or user groups will have editing permission for the indicator. This section explains how to share an indicator so that team members can collaborate quickly.

Prerequisites

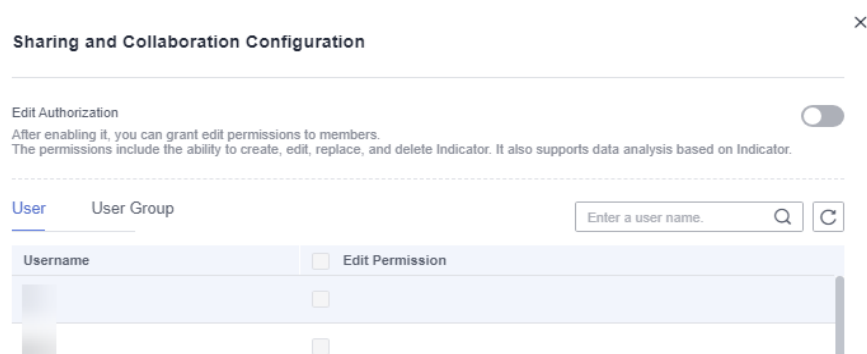
- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).

- A dataset has been created by referring to [Creating a Dataset](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Indicator**. On the displayed page, locate the indicator you want to share and click **Share and Collaborate** in the **Operation** column.
5. In this slide-out panel, enabling **Edit Authorization** allows you to grant edit permissions to members, including editing and deleting indicators, as well as performing data analysis based on the indicator.
6. Select the objects that you want to authorize.
 - **User**: Grant a user the permission to edit the indicator.
 - **User Group**: After a user group is authorized, all users in the group will have the chosen permissions on the indicator.
7. Select the users and user groups that you want to authorize.

Figure 5-2 Sharing and collaboration configuration page



5.4 Managing Indicators

Managing indicators involves viewing, editing, and deleting them, which is essential for maintaining data accuracy, updating business insights promptly, and optimizing decision-making processes. This section walks you through how to view, edit, and delete indicators, helping you better manage data.

Viewing an Indicator

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.

4. Choose **Data Management > Indicator**.
5. Click the target indicator name to go to the indicator details page and view the indicator details.

Editing an Indicator

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Indicator**.
5. On the displayed page, locate the indicator you want to edit and click **Edit** in the **Operation** column. In the slide-out panel, edit the parameters and click **OK**.

Deleting an Indicator

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Management > Indicator**.
5. On the displayed page, locate the indicator you want to delete and click **Delete** in the **Operation** column.
6. In the **Delete Indicator** dialog box that appears, confirm the information and click **OK**.

NOTE

Referenced atomic metrics, derivative metrics, and composite metrics cannot be deleted.

5.5 Example Typical Scenario

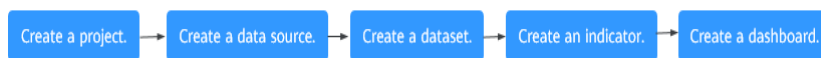
Scenario

If the data you need to analyze cannot be directly obtained from the data table and requires processing based on raw data, you can create an indicator.

This use case uses the sales data of a certain product in various provinces to demonstrate the usage of indicators. By utilizing the **province** dimension and **sales** metric, we can create indicators to obtain information such as **average_sales_of_each_province**, **sales_ranking_of_each_province**, **national_average_sales**, and **average_sales_areas_per_province_above_national_average**. These indicators can then be presented in a dashboard.

Procedure

Figure 5-3 Flowchart for creating an indicator



Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).

Step 1: Create an Indicator

1. Atomic indicators: using the average sales figures for each province and the national average sales figures for all provinces as examples.
 - a. Click **Create Indicator** in the upper right corner.
 - b. Edit basic information about an atomic indicator.

Figure 5-4 average_sales_of_each_province

The 'Edit Indicator' dialog for 'average_sales_of_each_province' shows the following configuration:

- Name:** average_sales_of_each_province
- Description:** Enter a description.
- Type:** Atomic (selected), Derivative, Composite
- Dataset:** sales_info_0802
- Panel Editing:** Edit using formulas (toggle on)
- Field:** No sales
- Aggregation:** Average
- Format:** 1234.00
- Dimension:** Str. Visualization level
- Filter:** + Add Condition, Ignore filter in the report (checkbox)
- Time dimension:** Add Default Time
- Correlation:** Select a correlation indicator.

Figure 5-5 national_average_sales

The 'Edit Indicator' dialog for 'national_average_sales' shows the following configuration:

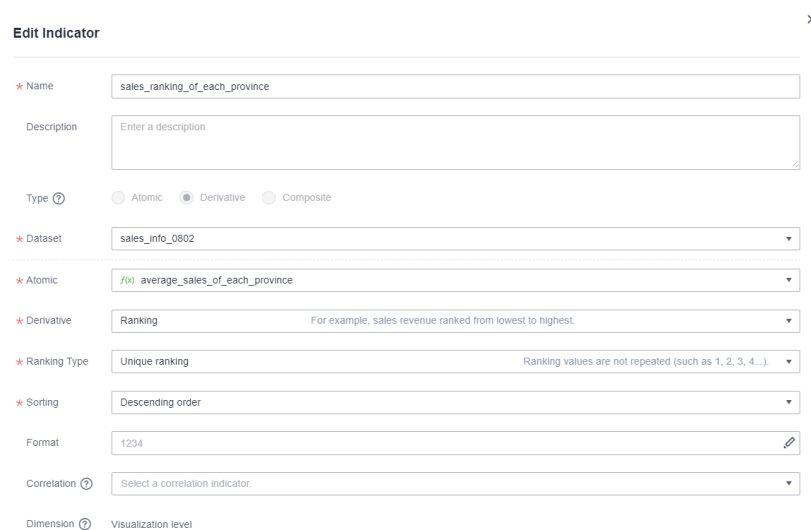
- Name:** national_average_sales
- Description:** Enter a description.
- Type:** Atomic (selected), Derivative, Composite
- Dataset:** sales_info_0802
- Panel Editing:** Edit using formulas (toggle on)
- Field:** No sales
- Aggregation:** Average
- Format:** 1234.00
- Dimension:** Str. Visualization level, province
- Filter:** + Add Condition, Ignore filter in the report (checkbox)
- Time dimension:** Add Default Time
- Correlation:** Select a correlation indicator.

The 'Dimension Option' sub-dialog is open, showing:

- Relationship with Report Filter:** Standard — metric only calculates the elements disp...
- Aggregate This Field:** No (selected)
- Buttons:** OK, Cancel

 NOTE

- Dimension selection: If **Dimension** is set to **Visualization level**, all dimensions are associated by default.
 - Dimension settings: Click  next the dimension box. The **Dimension Option** dialog box is displayed.
 - **Relationship with Report Filter:** If you select **Ignore — ignores the filtering conditions based on the selected level and its related entities**, the indicator will not be filtered in the report filter. For example, if you select **Ignore — ignores the filtering conditions based on the selected level and its related entities** for the **province** dimension of the **national_average_sales** indicator and drag **province** to the **Filter** area on the **Field** tab of a table created on the **Dashboard** page, average sales figures for all provinces will not be filtered.
 - **Aggregate This Field:** If you select **No**, the field will not be aggregated. For example, when calculating the average sales figures for all provinces, you need to set this parameter to **No** for the **province** dimension. Otherwise, the **province** field will be aggregated, and the calculation results will be the average sales figures for each province.
2. Derivative indicator: using the ranking of sales by province as an example.
 - a. Click **Create Indicator** in the upper right corner.
 - b. Edit basic information about the derivative indicator.

Figure 5-6 sales_ranking_of_each_province

Edit Indicator ×

★ Name: sales_ranking_of_each_province

Description: Enter a description.

Type: ☐ Atomic ☒ Derivative ☐ Composite

★ Dataset: sales_info_0802

★ Atomic: /average_sales_of_each_province

★ Derivative: Ranking For example, sales revenue ranked from lowest to highest.

★ Ranking Type: Unique ranking Ranking values are not repeated (such as 1, 2, 3, 4...).

★ Sorting: Descending order

Format: 1234 

Correlation: Select a correlation indicator.

Dimension: Visualization level

3. Composite indicator: using whether the average sales figures for each province higher than the national average as an example. This indicator is obtained by calculating the difference between the average sales figures for each province and the national average. If the value is positive, it means that the average sales figures for each province are higher than the national average.
 - a. Click **Create Indicator** in the upper right corner.
 - b. Edit basic information about the composite indicator.

Figure 5-7 average_sales_areas_per_province_above_national_average

Edit Indicator

★ Name: average_sales_areas_per_province_above_national_average

Description: Enter a description.

Type: ☐ Atomic ☐ Derivative ☒ Composite

★ Dataset: sales_info_0802

Formula: + - × ÷ () Verify Clear
[average_sales_of_each_province] - [national_average_sales]

Format: 1234.00

Correlation: Select a correlation indicator.

Step 2: Create a Dashboard to View Data

A dashboard visually presents data and allows for horizontal and vertical comparisons. This example shows the indicators created in [step 1](#).

1. Create a table in the dashboard. For details, see [Creating a Dashboard](#).
2. Select a dataset from the **Data** column drop-down list on the right. Double-click or drag **province**, **sales**, **average_sales_of_each_province**, **sales_ranking_of_each_province**, **national_average_sales**, and **average_sales_areas_per_province_above_national_average** to the **Column** area on the **Field** tab of the table.

Figure 5-8 Adding dimensions

Table

Field Style Advanced

Data: sales_info_0802

Column

- Str. province
- NQ sales(Sum)
- f(x) average_sal...
- f(x) sales_rankin...
- f(x) national_ave...

Filter

Sorting

3. Click **Update**. The updated data is presented in the table.

Figure 5-9 Sales figures comparison

Export Data		Export History			
province T1 ▾	sales T1 ▾	average_sales_of_each_province T1 ▾	sales_ranking_of_each_province T1 ▾	national_average_sales T1 ▾	average_sales_areas_per_province_above_national_average T1 ▾
Province_A	19965.62	6655.21	1	4766.42	1886.79
Province_B	38286.49	5469.90	2	4766.42	703.08
Province_C	13580.08	4526.69	4	4766.42	-239.73
Province_D	23781.35	4740.27	3	4766.42	-26.15
Province_E	9327.72	2331.93	5	4766.42	-2434.49

6 Creating a Dashboard

6.1 Dashboard Overview

A dashboard is a powerful tool for real-time data visualization, enabling you to collect complex data from various sources and convert it into easily comprehensible charts. You can interact with the data through clicking, filtering, and other actions to delve deeper into the analysis. Dashboards are ideal for both individuals and teams in daily tasks such as business monitoring, data analysis, and decision support. They help you quickly understand business trends and make more informed decisions.

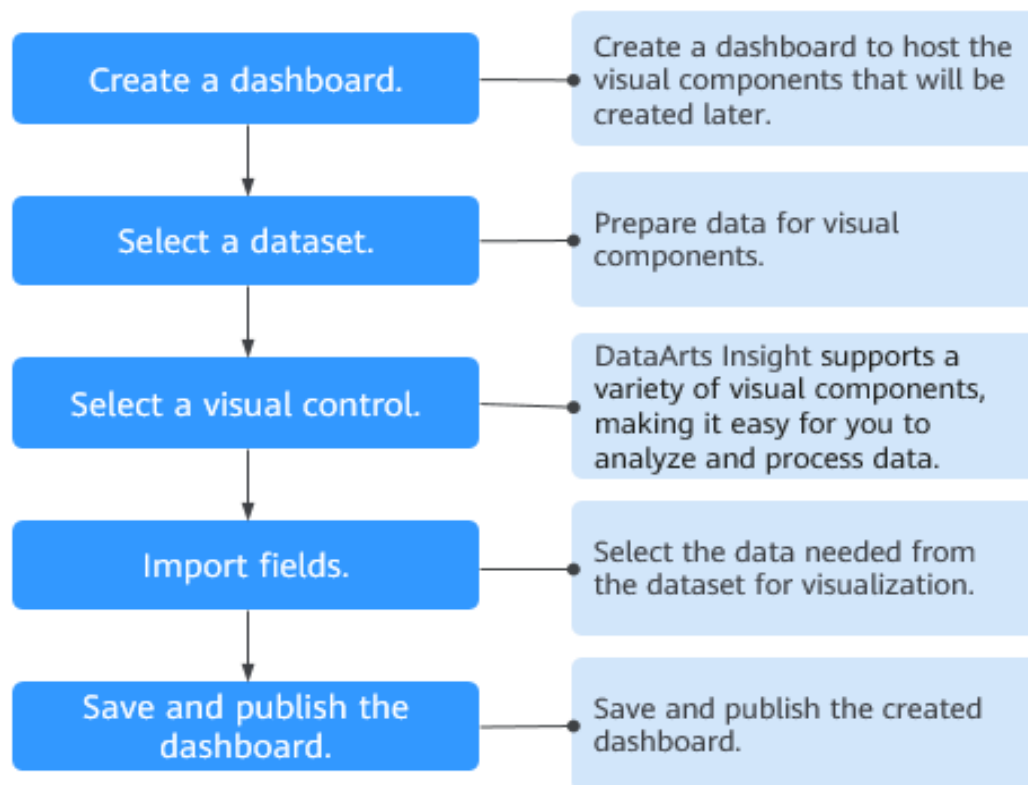
Notes and Constraints

You have the permission to use required datasets.

Creation Process

The process of creating a dashboard involves five steps: creating a dashboard, selecting a dataset, choosing visual controls, importing fields, and saving and publishing. For details, see [Creating a Dashboard](#).

Figure 6-1 Data analysis flowchart



6.2 Creating a Dashboard

Dashboards can help you intuitively and clearly display data analysis results. DataArts Insight offers various chart styles to meet your flexible and diverse visual analysis needs. This section describes how to create a dashboard.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).

Procedure

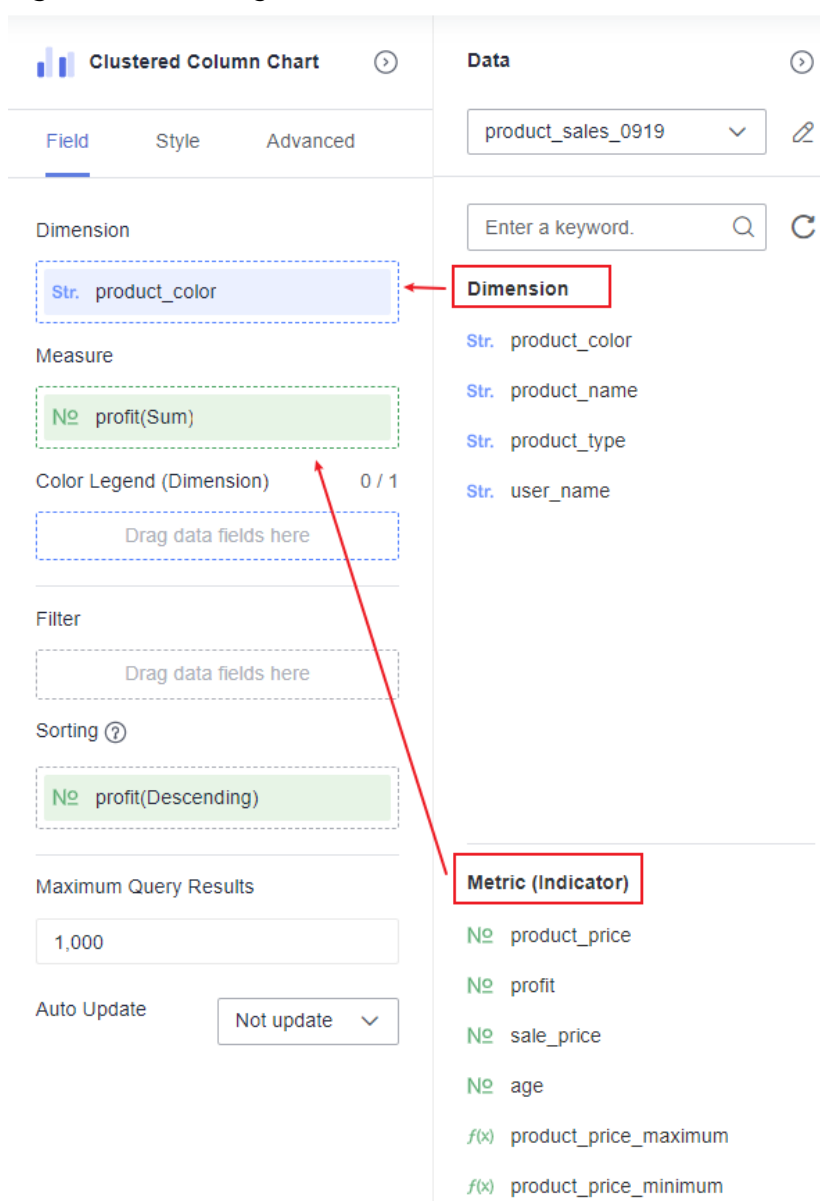
1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. You can create a dashboard in any of the following ways:
 - Method 1: Click **Workspace** in the top menu of the console and click **Create Dashboard**.
 - Method 2: Click **Project** on the top menu of the console. On the displayed page, click the name of the desired project. On the displayed **Dashboard** page, click **Create Dashboard** in the upper right corner.

Method 3: Click **Project** on the top menu of the console. On the displayed page, click the name of the desired project. In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, locate the desired dataset and click **Create Dashboard** in the **Operation** column.

Method 4: Click **Project** on the top menu of the console. On the displayed page, click the name of the desired project. In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, click the name of the desired dataset. On the displayed dataset editing page, click **Create Dashboard** in the upper right corner.

4. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
5. In the upper right corner of the page, select the desired **Visual Controls on a Dashboard** and drag the dimensions and metrics of the dataset from the **Data** area to the **Field** tab of the visual control.

Figure 6-2 Selecting fields



6. Click **Update** at the bottom of the **Field** tab. The chart data is automatically updated.
7. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.
8. In the displayed **Dashboard** dialog box, set **Name** and click **Confirm**.

NOTE

The differences between **Save** and **Save and Publish** are as follows:

- **Save**: The dashboard is saved. It cannot be viewed but can be deleted.
- **Save and Publish**: The dashboard is saved and published simultaneously, allowing it to be viewed. To delete the dashboard, you must first take it offline.

6.3 Visual Controls on a Dashboard

6.3.1 Query Control

You can use the query control to search and display the desired chart data on the dashboard. It supports searching for fields of date, text, and numeric types. This section describes how to create a query control.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a query control.
2. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
3. Click .
4. In the dialog box that appears, set the parameters based on [Table 6-1](#) and [Table 6-2](#).
5. Click **OK**. The system automatically updates the chart.
6. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.

Figure 6-3 Query control settings

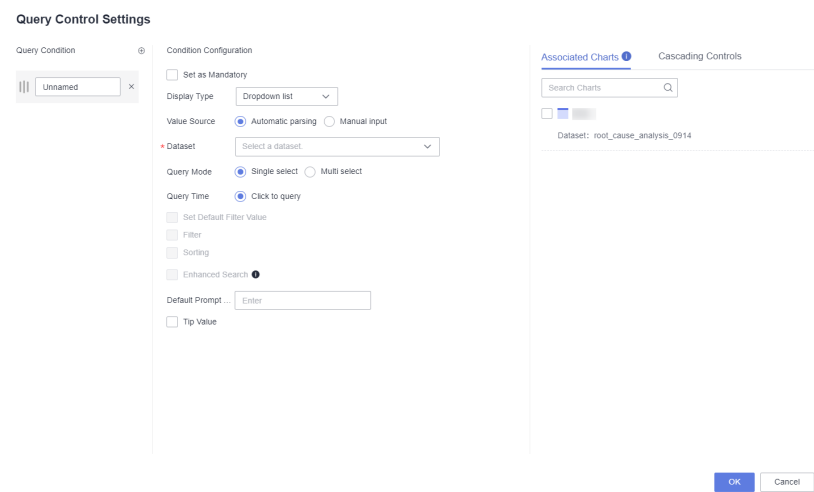


Table 6-1 Query condition parameters

Parameter	Description
Query Condition	Query condition name, which is displayed in the upper left corner of the control.
Condition Configuration	Set related parameters based on Table 6-2 .
Associated Charts	Charts associated with the query condition.
Cascading Controls	When you set Display Type to Dropdown list, Date selection, Time condition box, or Time range selection, filtered data is displayed in this area. To use the cascading feature of the query control, you need to establish a relationship between query condition A and query condition B. For example, if you select a province in query condition A, the city list in query condition B will only show the cities under the selected province. This requires configuring the association between query condition A and query condition B. NOTE • The time type component only supports cascading dropdown list controls. • When selecting associated fields for the cascading controls Time condition box, Time range selection, and Date selection, only the corresponding time type field can be selected. • Similar to cascading dropdown components, a time time component can support cascading multiple dropdown components.

Table 6-2 Condition configuration parameters

Parameter	Description
Set as Mandatory	If you select this parameter (☒) , the query will include the search criteria. If you do not select it (☐) , the search criteria will not be included. NOTE Condition A is marked with an asterisk (*) and is required, while condition B is optional and not marked with an asterisk (*). When querying a table, if condition A is not set and you try to set condition B by clicking Query button in the lower right corner of the control, condition A will turn red and data filtering will not be possible. To avoid errors, you must set condition A first, then set condition B before clicking Query. This will display the query results in the associated chart.
Display Type	Filter criteria support the following display types: dropdown list, text condition box, numeric condition box, numeric range selection, date selection, time condition box, time range selection, condition radio button, and column selector. NOTE A placeholder is added for selecting a time range. You can select a parameter of the range type.
Value Source	Two methods are supported: automatic parsing and manual input. This parameter is available only when Display Type is set to Dropdown list. • Automatic parsing: After selecting a dataset, you can set query fields and display fields. NOTE If the fields filtered by the associated data table contain the values of the query fields, the associated data table can display data only after the values are queried in the query control. Otherwise, the data table is empty. • Manual input: You can manually enter the query value and display name.
Dataset	When Display Type is Dropdown list, the fields need to be associated with the dataset fields.
Query Mode	The query mode can be single-select or multi-select. This parameter is available only when Display Type is set to Dropdown list.
Query Time	Click query time. This parameter is available only when Display Type is set to Dropdown list. NOTE Once the dataset fields are configured, you can then set default filter values, filtering, sorting, and enhanced search functions.

Parameter	Description
Set Default Filter Value	Dropdown list: By selecting Fixed as the initialization value and manually choosing the specific value of the query field, the query control will display this value as the default. Alternatively, selecting Default first value will display the first value in the dropdown list as the initial value, and other associated charts will also match this value. Text condition box: Set default filter values for the text, which can be exact match, contains, does not contain, does not match, start with, empty, or not empty. Numeric condition box: Set default filter values using the following conditions: >, ≥, <, ≤, =, ≠. Numeric Range Selection: Manually input the default filter values for a numeric range. Date selection and Time condition box: Set default filter values and support relative and absolute time settings. Select Time Range: Manually set the default filter values for a time range.
Default Prompt Text	Default text in the condition configuration box.
Tip Value	You can set the prompt information for each query criterion. After the setting,  appears on the right of the criterion name, and the prompt information will be displayed when the mouse hovers over  .
Filter Effect	This parameter is supported only when Display Type is set to Numeric condition box or Numeric range . There are two formats: Before aggregation and After aggregation .
Formatted Display	This parameter is supported only when Display Type is set to Numeric condition box or Numeric range . The default value is Automatic .
Date Type	This parameter can be set only when Display Type is set to Date . The options are Year , Quarter , Month , Week , and Day .
Time Type	This parameter can be set when Display Type is set to Time and Time Range is set to Year , Quarter , Month , Week , Day , Hour , Minute , or Second .
Condition Operator	This parameter can be set only when Display Type is set to Time . The options are <, ≤, >, ≥, and =.
Field Type	This parameter can be set when Display Type is set to Condition radio button . The value can be a numeric or text.
Filter Criteria	This parameter can be set when Display Type is set to Condition radio button . It can be set to <, ≤, >, ≥, =, or ≠ for numeric, and Exact match , Contains , Does not contain , Does not match , Start with , Empty , or Not empty for text.

6.3.2 Tab

The tab control of DataArts Insight allows you to display dashboard analysis results across multiple pages.

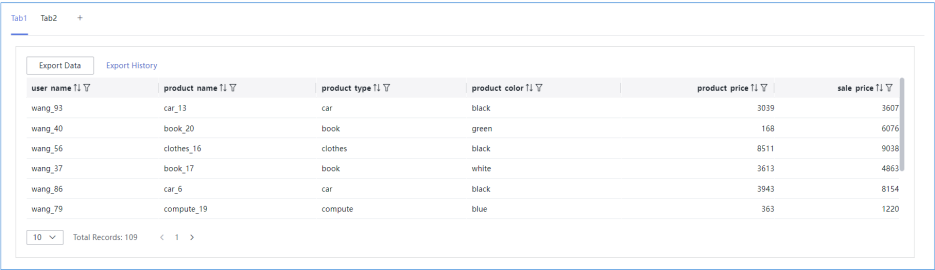
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a tab.
2. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
3. Select the desired visual control and click to place it inside the tab control.
4. Set the parameters based on [Table 6-4](#).
5. Click **OK**. The system automatically updates the chart.
6. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.

Figure 6-4 Tab



user name	product name	product type	product color	product price	sale price
wang_93	car_13	car	black	3039	3607
wang_40	book_20	book	green	168	6076
wang_56	clothes_16	clothes	black	8511	9038
wang_37	book_17	book	white	3613	4863
wang_96	car_6	car	black	3843	8154
wang_79	compute_19	compute	blue	363	1220

Table 6-3 Basic Settings

Paramete r	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.

Parameter	Description
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click ☐ to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-4 Tab style parameters

Parameter	Description
Card Title	Cards can be configured with or without a title. If a title is set, it will be displayed in the top left corner of the card. If the checkbox is not selected (☐), the card will have no title. If the checkbox is selected (☒), the card will have a title.
Text	You can adjust the font size and color of the text. To change the font size, you can either type in the desired size or use the  and  buttons.
Alignment	You can align the text in the card to the left or center.
Bottom Margin	The bottom margin of the card title can be set from 0 to 32.
Bottom Margin of Card Title	You can adjust the bottom margin of the card title by either inputting a specific value or using the  and  buttons.

Parameter	Description
Divider	• Cards can be configured with or without a divider line. – If the checkbox is not selected (☐), the card will have no divider line. – If the checkbox is selected (☒), the card will have a divider line. You can customize the style and bottom margin of the divider line. The style and bottom margin can be set by inputting values or using the and + buttons. • Style: You can customize the style of the divider line by selecting a color and size within the range of 0 to 8. • Bottom Margin: Set the bottom margin of the divider line by either inputting a specific value or using the and + buttons. The input value must be from 0 to 32.
Card Background	• Cards can be configured with or without a background. – If the checkbox is not selected (☐), the card will have no background. – If the checkbox is selected (☒), the card will have a background. The background color can be set.
Status Icon	You can customize the display style and color of the icon, which can be set to always show or show on hover. The card icon can be set to have a status or no status. If the checkbox is not selected (☐), the icon will have no status. If the checkbox is selected (☒), the icon will have a status. Status Icon: Set it to Hover display or Always display. The color is user-defined.
Tab Styles	You can use the default tab style settings or select Custom Tab Style to customize them. Custom Tab Style supports the following options: Underline and Selected Block. Default: If not selected (☐), the default settings are used. Custom Tab Style: If selected (☒), the settings can be customized.
Text Within Tab	Set the font size and color by either inputting a specific value or using the and + buttons.
Tab Position	The options are Left, Center, and Right.

Parameter	Description
Custom Tab Component Border	You can retain the default settings or customize them. Customize the component border and color by either inputting a specific value or using the  and  buttons. Default: If not selected (☐), the default settings are used. Custom: If selected (☒), the settings can be customized.
Tab Tags	You can add, delete, and rename tab tags.
Show Tabs During Preview	Not selected: If not selected (☐), the tab is not displayed. Selected: If selected (☒), the tab is displayed.

6.3.3 Composite Container

If you need multiple controls to display a set of data together and form a larger control for display, the composite container supports data analysis in this scenario.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a composite container.
2. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
3. Select the desired visual control and click to place it inside the composite container control.
4. Set the parameters based on [Table 6-6](#).
5. Click **OK**. The system automatically updates the chart.
6. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.

Figure 6-5 Composite container

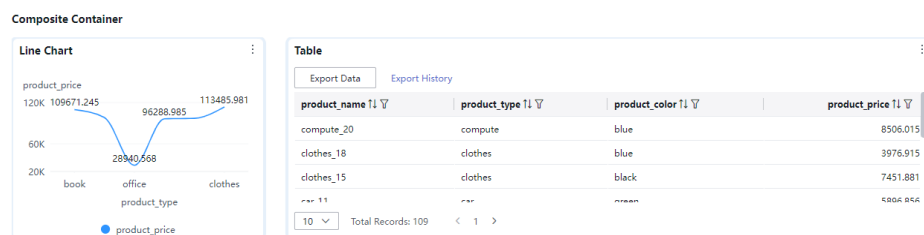


Table 6-5 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-6 Function configuration

Parameter	Description
Show Line	You can choose whether or not to display lines, and if displayed, whether to show a right arrow or no arrow. A line can act like flowchart lines, connecting the controls within the container. Do not display lines: When the checkbox is not selected () , lines are not displayed. Display lines: When the checkbox is selected () , lines are displayed.
Type	The following line types are supported: --, -----, and
Page Title	Set the font size and color of the page title.

Parameter	Description
Hide Subcomponent Border	You can customize whether to hide the borders of subcomponents in the composite container.

6.3.4 Rich Text

DataArts Insight allows you to set up rich text, which can include fixed text and dynamic indicators that display real-time changes. This section explains how to create a rich text component.

Notes and Constraints

Drag at least one data field into both the dimension or metric areas.

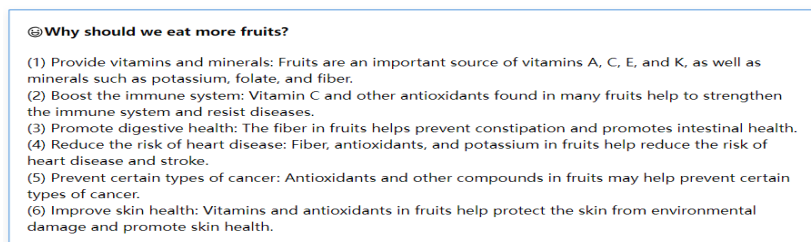
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been created by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a rich text component.
2. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
3. Set the parameters on the **Text**, **Field**, and **Advanced** tabs.
4. Click **OK**. The system automatically updates the chart.
5. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.

Figure 6-6 Rich text



Text

1. Setting the text content: Double-click the rich text control and enter the desired text. Then, set the text parameters based on [Table 6-7](#).
2. (Optional) Adding fields: Click  and select the desired fields from the available dimensions and metrics listed under the [Field](#) tab.

Table 6-7 Text parameters

Parameter	Description
Body	Set the font size of the fixed text.
Default Font Size	Set the font size of the fixed text.
Bold	Set whether the fixed text is in bold.
Italic	Set whether the fixed text is in italics.
Underline	Set whether the fixed text supports underlines (_).
Text Color	Set the text color of the fixed text.
Background Color	Set the background color of the fixed text.
Alignment	Set the alignment for the fixed text, which can be left, right, center, or justified.
Default Line Height	Set the height between lines of fixed text.
Nonsequenced	Set whether the fixed text is unsequenced.
Sequenced	Set whether the fixed text is sequenced.
Add Icon	Icons can be added to fixed text.
Divider	Set whether the fixed text has a divider.
Add Field	Add an indicator for the fixed text. NOTE Default indicator rule: Extract the first line of fields and metrics from the dataset and display them in rich text.
Undo	Fixed text can be undone.
Redo	Fixed text can be redone.

Field

1. In the **Data** area on the right, double-click or drag the required dimension and metric fields to the **Dimension** and **Measure** areas on the **Field** tab.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-8 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.

- a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
- b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
- c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set rich text parameters based on [Table 6-9](#) and [Table 6-10](#).

Table 6-9 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-10 Chart style

Parameter	Description
Value Settings	You can set the context and unit. The context supports Simplified Chinese and English. Units support automatic, none, hundred, thousand, ten thousand, hundred million, and trillion.
Scientific Notation	You can use scientific notation for units. If the checkbox is not selected (☐), scientific notation is disabled. If the checkbox is selected (☒), scientific notation is enabled.
Use thousands separator	You can use thousands separators for units. If the checkbox is not selected (☐), thousands separators are not used. If the checkbox is selected (☒), thousands separators are used.
Decimal	Whether or not to support displaying decimals. If the checkbox is not selected (☐), decimals cannot be displayed in rich text. If the checkbox is selected (☒), decimals can be displayed in rich text.

Series Settings: allows you to set metrics.

Table 6-11 Series Settings

Parameter	Description
Context	Set the context for the series, supporting Simplified Chinese and English.
Unit	Units support automatic, none, hundred, thousand, ten thousand, hundred million, ten billion, and trillion.
Scientific Notation	Support the use of scientific notation.
Use thousands separator	Whether to use thousands separators.
Decimal Places	Whether or not to support decimal places.

Table 6-12 Condition Format

Parameter	Description
Quick style	Select a quick icon from the existing styles. Color inversion: Turn on color inversion to swap the colors of the quick icon. Turn it off to restore the original colors.
Custom style	Text - Condition selection: Choose between comparing with a fixed value or a dynamic value. - Filter Condition Types: Includes greater than, greater than or equal to, equal to, less than or equal to, less than, not equal to, greater than A and less than or equal to B, greater than or equal to A and less than B, greater than A and less than B, greater than or equal to A and less than or equal to B. Fixed comparison values can be customized, while dynamic field comparison values are system-selected. - Color Scheme: After setting the filter conditions, click the color button to customize the color. - Add Rule: Click + to add a filter condition. - Delete: Click - to delete a filter condition.
	Icon - Condition selection: Choose between comparing with a fixed value or a dynamic value. - Icon Style: Choose from pre-selected icons or set a custom icon after the filter conditions. - Filter Condition Types: Includes greater than, greater than or equal to, equal to, less than or equal to, less than, not equal to, greater than A and less than or equal to B, greater than or equal to A and less than B, greater than A and less than B, greater than or equal to A and less than or equal to B. Fixed comparison values can be customized, while dynamic field comparison values are system-selected. - Add Rule: Click + to add a filter condition. - Delete: Click - to delete a filter condition.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-13 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

 NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.5 Intelligent Chart

Intelligent charts can help you present data analysis results in a clear and intuitive way. This section introduces different types of charts and their use cases, as well as the chart types supported by different editions, to assist you in quickly selecting the appropriate chart for data presentation and display.

DataArts Insight provides a variety of chart styles, such as tables, line and plane charts, bar and rank charts, and indicator charts, to meet your flexible and visual analysis requirements. The current report is displayed by default on the dashboard.

Use Cases

Each chart has its use cases and data elements (fields that form the chart). The following describes the use cases, data elements, and examples of various charts.

Table 6-14 Use cases

Type	Chart	Description	Data Element
Table	Table	Tables are primarily used to perform dimension-based metric data statistics or detailed data displays, and to merge and aggregate similar data.	Column

Type	Chart	Description	Data Element
Line/ Plane chart	Line chart	Line charts are used to display the trend of data over equal time intervals.	Dimension Metric Color legend
	Area chart	Area charts are used to display the trend of data over a certain period of time, as well as the proportion of each indicator's area.	Dimension Metric Color legend
	Stacked area chart	Similar to area charts, the difference with stacked area charts is that the starting point of each data set is based on the previous data set, showing the trend line of each value's size change over time or category, displaying the relationship between parts and the whole.	Dimension Metric Color legend
	Line chart and clustered column chart	Line and clustered column charts support dual-axis display of data with different magnitudes, and support data display scenarios for conventional line and column chart combinations. • In a combination chart, the line chart can display continuous data that changes over time (based on commonly used ratios), making it ideal for displaying the trend of data over equal time intervals. • In a combination chart, the clustered bar chart can compare the differences between various groups of data.	Dimension Metric Color legend
Column /Bar chart	Clustered column chart	Bar charts are useful for comparing differences between data groups and displaying changes in data over a period of time.	Dimension Metric Color legend
	Stacked column chart	A stacked column chart is an effective way to show data for each sub-class within a class, as well as the proportion of each sub-class. This helps to illustrate the relationship between a specific project and the overall data.	Dimension Metric Color legend
Indicator chart	Indicator dashboard	An indicator dashboard can display data in a clear and concise manner, allowing you to quickly grasp the current situation and make timely decisions to implement appropriate measures.	Dimension Metric

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

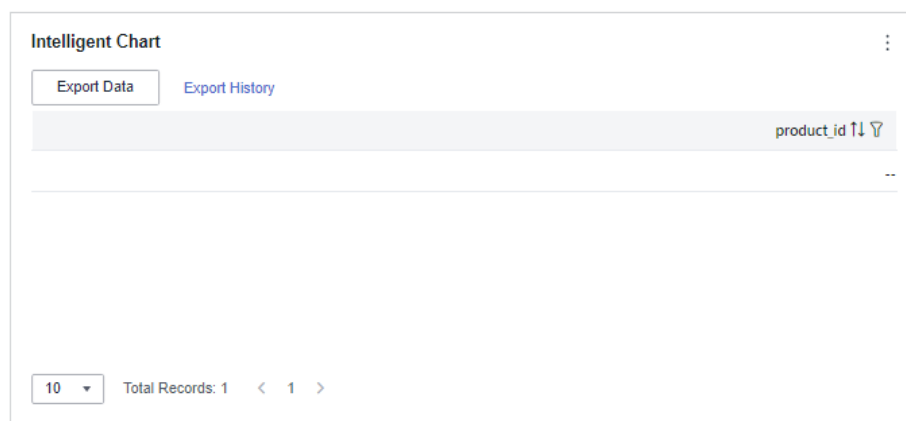
Notes and Constraints

- Select at least one data field for the **Column** area.

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create an intelligent chart.
2. Select a dataset in the **Data** area.
3. Set parameters on the [Field](#), [Style](#), and [Advanced](#) tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-7 Intelligent chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.
6. In the displayed **Dashboard** dialog box, set **Name** and click **Confirm**.

Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-15 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-16 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.
6. Set the metadata mode.
The metadata mode can be set or not set. You can select or deselect this parameter.

NOTE

Metadata mode refers to the raw data that has not been processed by DataArts Insight.

Style

This part explains how to set the style parameters of an intelligent graph. Set the parameters based on [Table 6-18](#), and the style will automatically adapt to the selected data.

Table 6-17 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-18 Other parameters

Parameter	Description
Column Width	You can either automatically set the table appearance or customize it. The column width can be set either by entering a specific value or using the  and  buttons. NOTE Note that the input cannot be empty and must be from 40 to 1200.
Pagination	You can set the number of data pages displayed on the intelligent chart, and this can be done within the chart itself. The supported options for the number of pages are: 10, 20, 30, 50, 80, and 100.
Functional Configuration	The following features can be configured: enabling quick filtering, specifying whether export is needed, and enabling multi-select operations.

Advanced

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.6 Table

6.3.6.1 Table

Tables are primarily used to perform dimension-based metric data statistics or detailed data displays, and to merge and aggregate similar data.

Notes and Constraints

Select at least one data field for the **Column** area.

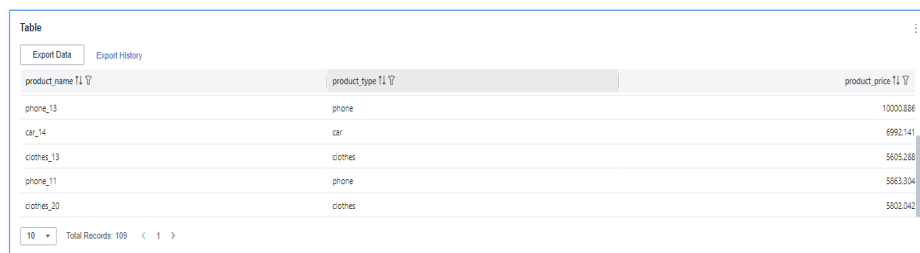
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a table.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-8 Table chart



product_name T1	product_type T1	product_price T1
phone_13	phone	10000.888
car_14	car	6992.141
clothes_13	clothes	5605.288
phone_11	phone	5863.304
clothes_20	clothes	5802.042

10 Total Records: 109 < 1 >

5. Click **Save** or **Save and Publish** in the upper right corner to save the table.

NOTE

Click **Save** in the upper right corner. In the displayed dialog box, enter the dashboard name, and click **Confirm**. The saved dashboard cannot be viewed but can be deleted.

Click **Save and Publish** to save and publish the dashboard. You can view the saved dashboard. To delete the dashboard, you need to take it offline first.

6. On the displayed dashboard page, enter a dashboard name. Click **OK**.

Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-19 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click 🔍 next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-20 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.

Type	Parameter	Description
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
4. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.
5. Set the metadata mode.

The metadata mode can be set or not set. You can select or deselect this parameter.

NOTE

Metadata mode refers to the raw data that has not been processed by DataArts Insight.

Style

This part explains how to set table style parameters. For details, see [Table 6-22](#).

Table 6-21 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-22 Other parameters

Parameter	Description
Column Width	You can either automatically set the table appearance or customize it. The column width can be set either by entering a specific value or using the  and  buttons.
Pagination	You can set the number of data pages displayed on the table, and this can be done within the table itself. The supported options for the number of pages are: 10, 20, 30, 50, 80, and 100. There are two display types: simple and regular. The simple type does not show page navigation.
Set Header Alignment	You can set the alignment of table headers, which can be left-aligned, centered, or right-aligned.
Functional Configuration	The following features can be configured: enabling quick filtering, specifying whether export is needed, and enabling multi-select operations.

Series Settings	You can configure the alignment of table headers and column content independently. • Select Series: Select a column item according to your needs. • Natural Alignment: Check this option to enable alignment settings for both table headers and content. • Header Alignment: Set the alignment of table headers. Alignment options include automatic, left-aligned, center-aligned, and right-aligned. • Content Alignment: Set the alignment of column content. Alignment options are Auto, Align Left, Center, and Align Right. You can set the description for each series. After the setting,  appears on the right of the criterion name, and the prompt information will be displayed when the mouse hovers over .
Condition Format	Quick style. • Select a quick icon from the existing styles. • Color inversion: Turn on color inversion to swap the colors of the quick icon. Turn it off to restore the original colors.

	Custom style: • Text – Condition selection: Choose between comparing with a fixed value or a dynamic value. – Filter Condition Types: Includes greater than, greater than or equal to, equal to, less than or equal to, less than, not equal to, greater than A and less than or equal to B, greater than or equal to A and less than B, greater than A and less than B, greater than or equal to A and less than or equal to B. Fixed comparison values can be customized, while dynamic field comparison values are system-selected. – Color Scheme: After setting the filter conditions, click the color button to customize the color. – Add Rule: Click + to add a filter condition. – Delete: Click - to delete a filter condition. • Icon – Condition selection: Choose between comparing with a fixed value or a dynamic value. – Icon Style: Choose from pre-selected icons or set a custom icon after the filter conditions. – Filter Condition Types: Includes greater than, greater than or equal to, equal to, less than or equal to, less than, not equal to, greater than A and less than or equal to B, greater than or equal to A and less than B, greater than A and less than B, greater than or equal to A and less than or equal to B. Fixed comparison values can be customized, while dynamic field comparison values are system-selected. – Add Rule: Click + to add a filter condition. – Delete: Click - to delete a filter condition.

Advanced

- **Linkage**

- Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Configuration** page is displayed. Set parameters.
- Click **OK**.

Table 6-23 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.

Parameter	Description
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Example scenario: Use the sales data of a product as an example.
 - Create a table and a clustered column chart.
 - 1) Set **user_name** and **age** as column fields of the table.
 - 2) The dimension and measure fields of the clustered column chart are **user_name** and **age**, respectively.
 - Associate the table with the cluster column chart.
 - 1) Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed.
 - 2) Bind the **user_name** field and associate the table with the clustered column chart. Set the bound field of the chart to **Follow bound field**.
 - 3) Click **OK**.
 - Click **wang_21** in the **user_name** column of the table. Data related to **wang_21** is displayed in the clustered column chart.

Figure 6-9 Data linkage result when selecting Follow bound field

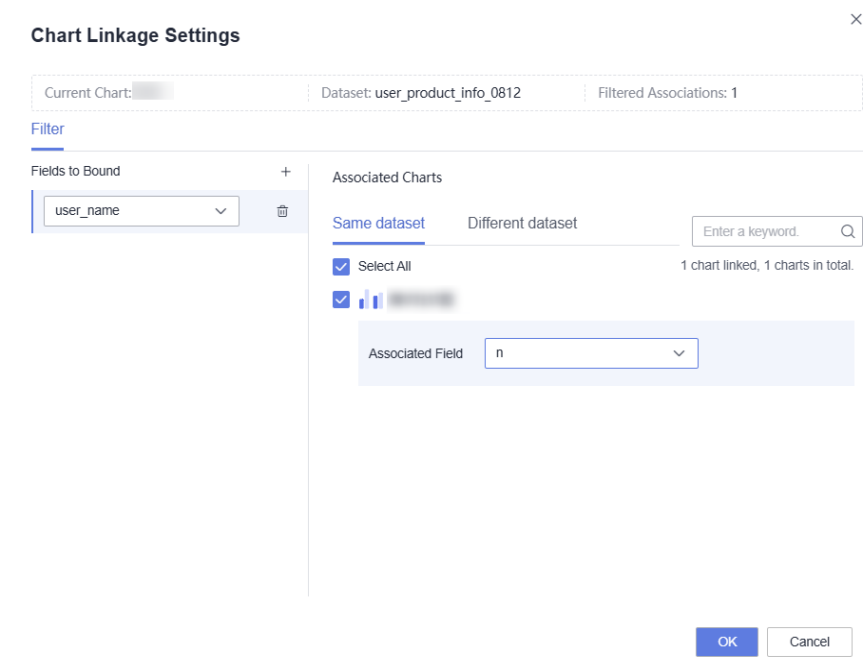


- Set the bound field of the associated chart to **SQL placeholder**.
 - 1) Set a SQL placeholder in the dataset.

```
SELECT
*
FROM
user_info
WHERE
user_name not in (${n})
```

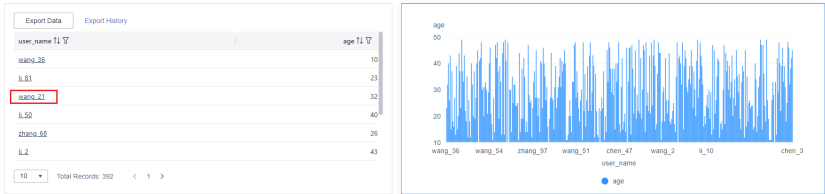
user_info indicates the data table name, and **user_name** indicates the bound field.
 - 2) Go to the **Chart Linkage Settings** page and set the bound field of the associated chart to **SQL placeholder**.

Figure 6-10 SQL placeholder



- 3) Click **zhang_87** in the **user_name** column of the table. Data except **zhang_87** is displayed in the clustered column chart.

Figure 6-11 Data filtered when selecting SQL placeholder



• **Redirect**

The text within the chart must have data before the redirect can be configured.

- a. Choose **Advanced > Redirect**. The **Chart Redirect** page is displayed. Set parameters.
- b. Select the fields to be bound and click **OK**.

Table 6-24 Chart redirect parameters

Parameter	Description
Redirect Type	Redirection type. You can choose to redirect internally within the system or externally through a link.
Open Mode	You can choose to open it in the current window, a new window, or a popup window.

Parameter	Description
Redirect to Reports/Screens	You can select the project, dashboard, or large screen you want to redirect to. NOTE When Redirect Type is set to Intra-system redirect, Redirect to Reports/Screens can be selected.
URL	Enter the URL when you choose to redirect externally through a link. NOTE When filling out a URL, you need to ensure its security. If the URL is insecure, it may pose a security risk to your data. Be cautious when filling out the URL.
Associated Parameters	Parameters that take effect in the current report can be selected as associated fields or fixed values. Global parameters for Redirect to Reports/Screens can be selected only after global parameters are set.
Carry Condition	When Redirect Type is Intra-system redirect, multiple rows of fields and empty values can be carried (only can be set for table and dashboard). When Redirect Type is External link, empty values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. ● Prerequisites: Set up two dashboards, A and B, with dashboard A linking to dashboard B. ● Procedure – Configure global parameters in dashboard B and ensure that the same fields exist in dashboard A. – Set the redirect parameters in dashboard A, select dashboard B as the target, and choose associated fields from the global variables. – Select Carry null value and click OK. – The bound field in dashboard A will be underlined. Click it to redirect to dashboard B and filter out rows with null fields. The URL of dashboard B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in dashboard A will be underlined. Click it to redirect to dashboard B and display all chart data. The URL of dashboard B will not display the param parameter. NOTE If this option is selected and the chart allows for multiple data selections, the parameter carried will be an array containing the selected data.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.6.2 Cross Table

A cross table displays summary values of a field in a table and merges similar data. One group of columns is displayed on the left side of the table, while the other group is displayed at the top. The intersection of rows and columns can be used to calculate summary values by adding them up. This section will show you how to add data and configure styles for a cross table.

Notes and Constraints

- Row headers generate left-side rows and allow for dimensions and metrics.
- Column headers generate top-side columns and allow for dimensions and metrics.
- Summary values generate the middle part of the cross table and allow for dimensions and metrics.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a cross table.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-12 Cross table chart

Cross Table							
product_id	42	1	32	60	2	4	1
product_na...	user_name	user_name	user_name	user_name	user_name	user_name	user_i
clothes_3	wang_93	-	-	-	-	-	-
office_11	-	li_87	-	-	-	-	-
book_13	-	-	li_21	-	-	-	-
compute_1	-	-	-	li_59	-	-	-
clothes_7	-	-	-	-	-	-	-
phone_8	-	-	-	-	-	-	-
office_16	-	-	-	-	-	-	chen_

- Click **Save** or **Save and Publish** in the upper right corner to save the cross table.

 NOTE

Click **Save** in the upper right corner. In the displayed dialog box, enter the dashboard name, and click **Confirm**. The saved dashboard cannot be viewed but can be deleted.

Click **Save and Publish** to save and publish the dashboard. You can view the saved dashboard. To delete the dashboard, you need to take it offline first.

- On the displayed dashboard page, enter a dashboard name. Click **OK**.

Field

Table 6-25 Table style parameters

Parameter	Description
Cross Table Rows	Used to generate left-side rows and allow for dimensions and metrics.
Column-Store Table Header	Used to generate top-side columns and allow for dimensions and metrics.
Summary	Used to generate the middle part of the cross table and allow for dimensions and metrics.

Parameter	Description
Filter	• Filter Settings: Click  next to the field you wish to filter and you will be directed to the filter settings page. • Filter Mode: When the field to be set is a dimension, it supports filtering by condition and filtering by enumeration. • Filter Form: When the field to be set is a dimension, under the filtering by condition method, it supports setting AND conditions and OR conditions. Under the filtering by enumeration method, it supports single selection and multiple selection. • Filter Criteria: – When the field to be set is a dimension, filtering by condition supports settings such as exact match, contains, starts with, ends with, not match, not contain, is empty, is not empty, etc. – When the field to be set is a dimension, filtering by enumeration method requires selecting the corresponding field. – When the field to be set is a metric, filtering conditions support settings such as >, ≥, <, ≤, =, ≠, is empty, is not empty, etc. It also supports settings before and after data aggregation. • Condition Form: When the field to be set is a metric, it supports setting AND conditions and OR conditions. It also supports settings before and after data aggregation.
Sorting	Sorts the dragged class axis/dimension fields in ascending or descending order. Sorting settings: Click  of the sorting field and choose the desired order. NOTE • Sorting by dimension: Drag and drop dimension fields into the sorting slots to display them in the chart. • Sorting by metric: Metric fields in the sorting slots are not displayed in the chart by default. To display them, drag and drop them into the metric slots.
Maximum Query Results	The value ranges from 1 to 10000.
Auto Refresh	Auto-refresh: Set the time for data refresh, which can be 1 minute, 5 minutes, 15 minutes, 30 minutes, or no refresh.
Update	Click Update to automatically update the chart.

Style

Set cross table style parameters based on the table below.

Table 6-26 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-27 Other parameters

Parameter	Description
Visualization Style	There are three display modes available: tiled display, tree display, and custom tree display.
Pagination	You can set the number of data pages displayed in the cross table, and this can be done within the chart itself. The supported options for the number of pages are: 10, 20, and 50.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Parameter	Description
Table Header	The table header includes Column Summary and Row Summary. • Column Summary – Display Mode: right and left. – Column Total and Column Subtotal: When the checkbox is selected (☒), you can customize their names. • Row Summary – Display Mode: bottom and top. – Column Total and Column Subtotal: When the checkbox is selected (☒), you can customize their names. • Indicator Display Grouping: Once enabled, the indicator sorting is based on the order of the indicators within the indicator group.
Series Settings	You can set the metrics. • Context: Set the context for the series, supporting Simplified Chinese and English. • Units: Units support automatic, none, hundred, thousand, ten thousand, hundred million, ten billion, and trillion. • Scientific notation: Supports the use of scientific notation. • Use thousand separators: Supports the use of thousand separators. • Decimal places: Supports setting decimal places, with a range of 0 to 10.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-28 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.

Parameter	Description
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. ● Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. ● SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Redirect
 - a. Choose **Advanced > Redirect**. The **Chart Redirect** page is displayed. Set parameters.
 - b. Select the fields to be bound and click **OK**.

Table 6-29 Chart redirect parameters

Parameter	Description
Redirect Type	Redirection type. You can choose to redirect internally within the system or externally through a link.
Open Mode	You can choose to open it in the current window, a new window, or a popup window.
Redirect to Reports/Screens	You can select the project, dashboard, or large screen you want to redirect to. NOTE When Redirect Type is set to Intra-system redirect, Redirect to Reports/Screens can be selected.
URL	Enter the URL when you choose to redirect externally through a link. NOTE When filling out a URL, you need to ensure its security. If the URL is insecure, it may pose a security risk to your data. Be cautious when filling out the URL.
Associated Parameters	Parameters that take effect in the current report can be selected as associated fields or fixed values. Global parameters for Redirect to Reports/Screens can be selected only after global parameters are set.

Parameter	Description
Carry Condition	When Redirect Type is Intra-system redirect, multiple rows of fields and empty values can be carried (only can be set for table and dashboard). When Redirect Type is External link, empty values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. - Prerequisites: Set up two dashboards, A and B, with dashboard A linking to dashboard B. - Procedure - Configure global parameters in dashboard B and ensure that the same fields exist in dashboard A. - Set the redirect parameters in dashboard A, select dashboard B as the target, and choose associated fields from the global variables. - Select Carry null value and click OK. - The bound field in dashboard A will be underlined. Click it to redirect to dashboard B and filter out rows with null fields. The URL of dashboard B will display the param parameter. - Deselect Carry null value and click OK. - The bound field in dashboard A will be underlined. Click it to redirect to dashboard B and display all chart data. The URL of dashboard B will not display the param parameter. NOTE If this option is selected and the chart allows for multiple data selections, the parameter carried will be an array containing the selected data.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

 NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.6.3 Heatmap

DataArts Insight allows you to create heatmaps, which are commonly used to display correlations between different dimensions. This section describes how to create a heatmap.

Notes and Constraints

- At least one field is required for a dimension.
- At least one field is required for the Y axis/dimension.
- At least one field is required for a metric.

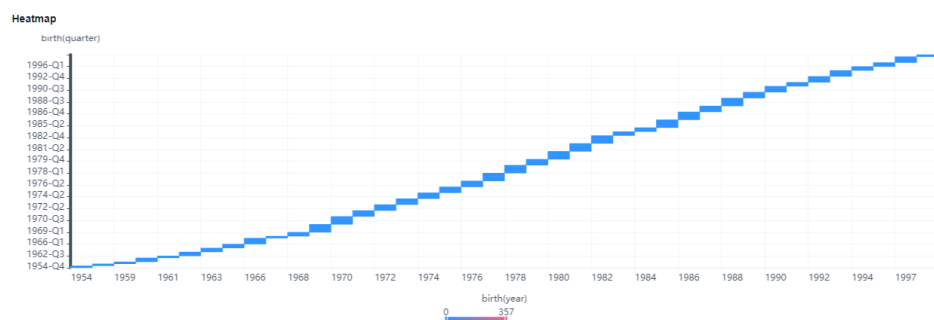
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a heatmap.
2. Select a dataset in the **Data** area.
3. Set parameters on the [Field](#), [Style](#), and [Advanced](#) tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-13 Heatmap



Field

Set the fields of the heatmap.

1. On the **Field** tab, double-click or drag and drop required fields to the **Dimension**, **Y Axis/Dimension**, and **Metric** areas in sequence.
2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-30 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set heatmap style parameters based on [Table 6-31](#), [Table 6-32](#), and [Table 6-33](#).

Table 6-31 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-32 Chart style parameters

Parameter	Description
Partitioning Rule	Set continuous intervals, equal intervals, or custom intervals, with the option to round off for equal intervals.
Color Scheme	Set the color scheme for the heatmap.
Transparency	Set the transparency for the heatmap.

Parameter	Description
Enable Tooltip	- When the checkbox is selected (☒), a tooltip is displayed when hovering over the heatmap. If the checkbox is not selected, no tooltip is displayed. - The background color is customizable. - The font size and color for dimension text, indicator text, and numerical text are customizable.
Show Legend	Set the legend text and position. You can adjust the font size and color of the text, and choose to display it either above or below the legend.

Table 6-33 Coordinate axis

Axis Type	Parameter	Description
X axis	Show Title and Unit	Set whether to display the title and unit of the X axis. If the checkbox is not selected (☐), the title and unit of the X axis will not be displayed. If the checkbox is selected (☒), the title of the X axis can be automatically generated or manually entered, and the unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the X-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis coordinate axis can be set.
	Show Axis Label	Set whether to display X-axis labels. If the checkbox is not selected (☐), the X-axis labels will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis label text, and even the angle of the X-axis labels can be set.

Axis Type	Parameter	Description
	Show Grid Line	Set whether to display the X-axis gridlines. If the checkbox is not selected (☐), the X-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the X-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Abbreviated Axis Label	Set the X-axis label abbreviation.
Y axis	Show Title and Unit	Set whether to display the title and unit of the Y axis. If the checkbox is not selected (☐), the title and unit of the Y axis will not be displayed. If the checkbox is selected (☒), the title, position, and text of the Y axis can be automatically generated or manually entered. The position of the title can be either above or left of the Y axis. The unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the Y-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the Y-axis coordinate axis can be set.
	Show Axis Label	Set whether to display Y-axis labels. If the checkbox is not selected (☐), the Y-axis labels will not be displayed. If the checkbox is selected (☒), the font size and color of the Y-axis labels can be set.

Axis Type	Parameter	Description
	Show Grid Line	Set whether to display the Y-axis gridlines. If the checkbox is not selected (☐), the Y-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the Y-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Abbreviated Axis Label	Set the Y-axis label abbreviation.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-34 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒), the control supports query initialization. If the checkbox is not selected (☐), the control does not support query initialization.

 NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.7 Line/Plane Chart

6.3.7.1 Line Chart

Line charts are useful for analyzing trends in data over time. For example, analyzing changes in product sales over time and predicting future sales. This section will show you how to add data and configure styles for line charts.

Notes and Constraints

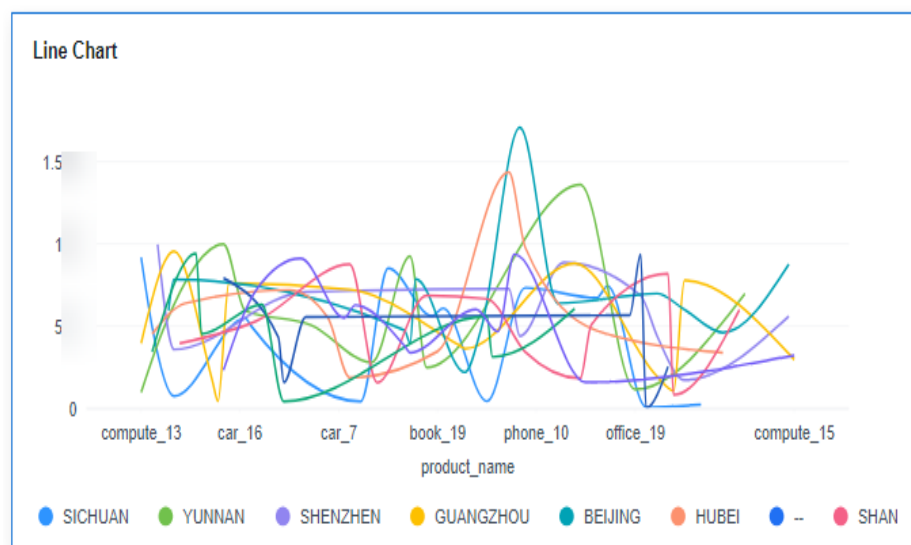
- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.
- The color legend can only be enabled when a metric field is selected on the value axis.
- The chart will display label values if the query limit is 14 or less, but not if it is greater than 14.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a line chart template.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-14 Line chart

5. Click **Save** or **Save and Publish** in the upper right corner to save the intelligent chart.

NOTE

Click **Save** in the upper right corner. In the displayed dialog box, enter the dashboard name, and click **Confirm**. The saved dashboard cannot be viewed but can be deleted.

Click **Save and Publish** to save and publish the dashboard. You can view the saved dashboard. To delete the dashboard, you need to take it offline first.

6. On the displayed dashboard page, enter a dashboard name. Click **OK**.

NOTE

The dashboard name can contain up to 64 characters. It must be specified and cannot start or end with a space. Only letters, numbers, spaces, underscores (_), and hyphens (-) are allowed.

Field

This part explains how to configure line chart fields.

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-35 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .

Parameter	Description
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field  in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set color legend (dimension).

Drag the required fields to the **Color Legend (Dimension)** area on the **Field** tab. Color legends also support drill-down.

3. Set a filter.

a. Drag dimension and metric fields to the **Filter** area.

b. Click  next to a field in the **Filter** area.

c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-36 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes how to set the style parameters of a line chart. For details, see [Table 6-37](#), [Table 6-38](#), and [Table 6-39](#).

Table 6-37 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-38 Chart style

Parameter	Description
Show Legend	You can customize whether to display the legend and set the size, color, and position of the legend text.

Parameter	Description
Color Palette	The color palette can be either the system default or custom settings.
Value Settings	The value supports setting the context, unit, and display format. The context supports Chinese (Simplified) and English, and the unit supports: none, hundred, thousand, ten thousand, hundred million, and trillion. The display format supports scientific notation, using a thousand separator, and decimal places.

Table 6-39 Coordinate axis

Axis Type	Parameter	Description
X axis	Show Title and Unit	Set whether to display the title and unit of the X axis. If the checkbox is not selected (☐) , the title and unit of the X axis will not be displayed. If the checkbox is selected (☒) , the title of the X axis can be automatically generated or manually entered, and the unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐) , the X-axis coordinate axis will not be displayed. If the checkbox is selected (☒) , the font size and color of the X-axis coordinate axis can be set.
	Show Axis Label	Set whether to display X-axis labels. If the checkbox is not selected (☐) , the X-axis labels will not be displayed. If the checkbox is selected (☒) , the font size and color of the X-axis label text, and even the angle of the X-axis labels can be set.
	Show Grid Line	Set whether to display X-axis gridlines. If the checkbox is not selected (☐) , the X-axis gridlines will not be displayed. If the checkbox is selected (☒) , the number of gridlines and their color on the X-axis can be set.

Axis Type	Parameter	Description
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Abbreviated Axis Label	Set the X-axis label abbreviation.
Y axis	Show Title and Unit	Set whether to display the title and unit of the Y axis. If the checkbox is not selected (☐), the title and unit of the Y axis will not be displayed. If the checkbox is selected (☒), the title, position, and text of the Y axis can be automatically generated or manually entered. The position of the title can be either above or left of the Y axis. The unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Auto Set Numeric Range	If the checkbox is not selected (☐), the numeric range needs to be manually set. If the checkbox is selected (☒), the numeric range can be automatically set by the chart.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the Y-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the Y-axis coordinate axis can be set.
	Show Axis Label	- Set whether to display Y-axis labels. - If the checkbox is not selected (☐), the Y-axis labels will not be displayed. - If the checkbox is selected (☒), the font size and color of the Y-axis labels can be set. - Customize the display format of axis labels. Once checked, you can customize the display format.

Axis Type	Parameter	Description
	Show Grid Line	Set whether to display the Y-axis gridlines. If the checkbox is not selected (☐), the Y-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the Y-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	To display data on a logarithmic scale, the data range must be either all greater than 0 or all less than 0. Supported types include linear and logarithmic.
	Abbreviated Axis Label	Set the Y-axis label abbreviation.

Table 6-40 Style configuration — functions

Function	Description
Abbreviated Axis	Set whether to enable the abbreviated axis.
Abbreviated Axis Background Data	Set the background data display for the abbreviated axis.
Null Value Processing	Set the rule for handling null values: Delete, intelligently delete, set to zero, or break on null.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-41 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. ● Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. ● SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.7.2 Area Chart

An area chart shows the trend of data over a specific time interval and the proportion of the area that the data occupies. This section will show you how to add data and configure styles for area charts.

An area chart can help draw conclusions about how data changes over time, such as whether it increases or decreases, exhibits cyclical patterns, or grows exponentially.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.
- The color legend can only be enabled when a metric field is selected on the value axis.
- The chart will display label values if the query limit is 14 or less, but not if it is greater than 14.

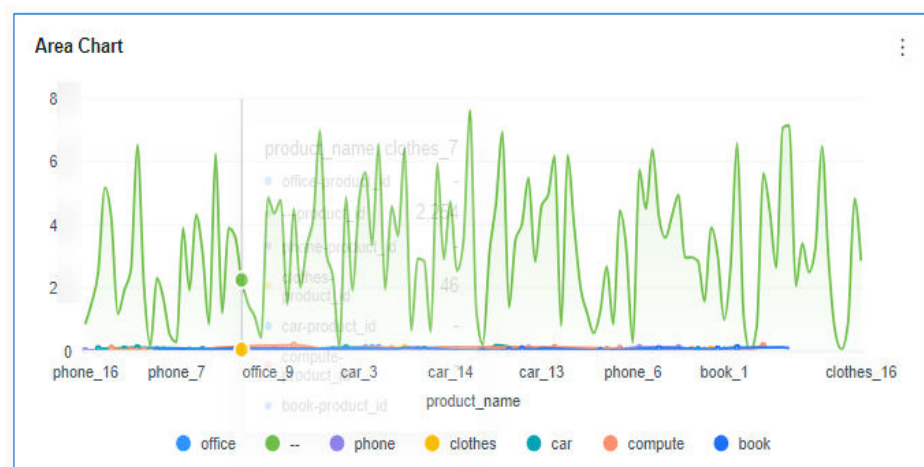
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create an area chart template.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-15 Area chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the chart.

NOTE

Click **Save** in the upper right corner. In the displayed dialog box, enter the dashboard name, and click **Confirm**. The saved dashboard cannot be viewed but can be deleted.

Click **Save and Publish** to save and publish the dashboard. You can view the saved dashboard. To delete the dashboard, you need to take it offline first.

6. On the displayed dashboard page, enter a dashboard name.

Field

This part explains how to configure area chart fields.

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-42 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set color legend (dimension).

Drag the required fields to the **Color Legend (Dimension)** area on the **Field** tab. The color legend also supports drill-down.

3. Set a filter.

a. Drag dimension and metric fields to the **Filter** area.

b. Click  next to a field in the **Filter** area.

c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-43 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part explains how to set area chart style parameters. For details, see [Table 6-44](#), [Table 6-45](#), [Table 6-46](#), and [Table 6-47](#).

Table 6-44 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-45 Chart style

Parameter	Description
Show Legend	Choose whether to display the legend. If the checkbox is not selected (), the legend will not be displayed. If the checkbox is selected (), the legend will be displayed.

Parameter	Description
Text	To change the text size, you can either type in the desired margin or use the  and  buttons. NOTE Note that the input cannot be empty and must be from 12 to 32.
Position	The position of the text can either be below or above the legend.
Color Palette	The color palette can be either the system default.
Value Settings	The value supports setting the context, unit, and display format. The context supports Chinese (Simplified) and English, and the unit supports: none, hundred, thousand, ten thousand, hundred million, and trillion. The display format supports scientific notation, using a thousand separator, and decimal places.

Table 6-46 Coordinate axis

Axis Type	Parameter	Description
X axis	Show Title and Unit	Set whether to display the title and unit of the X axis. If the checkbox is not selected (☐), the title and unit of the X axis will not be displayed. If the checkbox is selected (☒), the title of the X axis can be automatically generated or manually entered, and the unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the X-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis coordinate axis can be set.
	Show Axis Label	Set whether to display X-axis labels. If the checkbox is not selected (☐), the X-axis labels will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis label text, and even the angle of the X-axis labels can be set.

Axis Type	Parameter	Description
	Show Grid Line	Set whether to display X-axis gridlines. If the checkbox is not selected (☐), the X-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the X-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	You can set it to the ordinal type.
	Abbreviated Axis Label	Set the X-axis label abbreviation.
Y axis	Show Title and Unit	Set whether to display the title and unit of the Y axis. If the checkbox is not selected (☐), the title and unit of the Y axis will not be displayed. If the checkbox is selected (☒), the title, position, and text of the Y axis can be automatically generated or manually entered. The position of the title can be either above or left of the Y axis. The unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Auto Set Numeric Range	If the checkbox is not selected (☐), the numeric range needs to be manually set. If the checkbox is selected (☒), the numeric range can be automatically set by the chart.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the Y-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the Y-axis coordinate axis can be set.

Axis Type	Parameter	Description
	Show Axis Label	- Set whether to display Y-axis labels. - If the checkbox is not selected (☐), the Y-axis labels will not be displayed. - If the checkbox is selected (☒), the font size and color of the Y-axis labels can be set. - Customize the display format of axis labels. Once checked, you can customize the display format.
	Show Grid Line	Set whether to display the Y-axis gridlines. If the checkbox is not selected (☐), the Y-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the Y-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	To display the data range on a logarithmic scale, it must be greater than 0 or less than 0 for both. Supported types include linear.
	Abbreviated Axis Label	Set the Y-axis label abbreviation.

Table 6-47 Function configuration

Function	Description
Abbreviated Axis	Set whether to enable the abbreviated axis.
Abbreviated Axis Background Data	Set the background data display for the abbreviated axis.
Null Value Processing	Set the rule for handling null values: Delete, intelligently delete, set to zero, or break on null.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-48 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.7.3 Stacked Area Chart

A stacked area chart shows the trend of data over a specific time interval and the proportion of the area that the data occupies. This section will show you how to add data and configure styles for stacked area charts.

Similar to area charts, the difference with stacked area charts is that the starting point of each data set is based on the previous data set, showing the trend line of each value's size change over time or category, displaying the relationship between parts and the whole.

Notes and Constraints

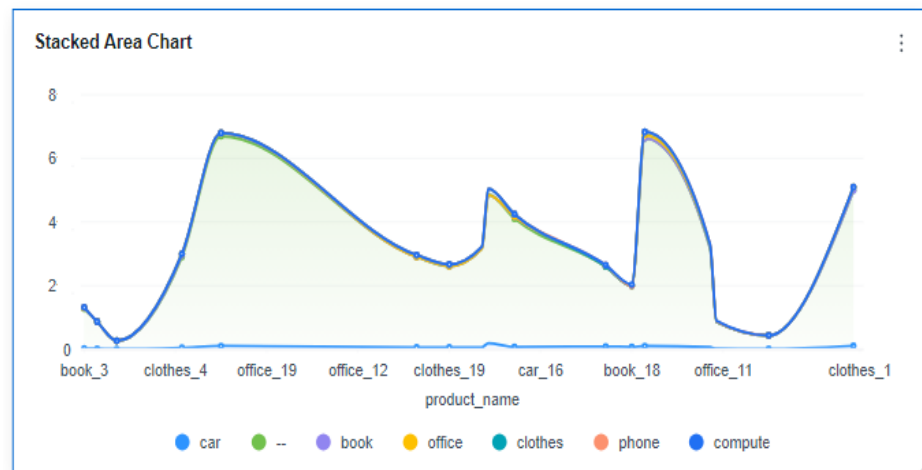
- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.

- The color legend can only be enabled when a metric field is selected on the value axis.
- The chart will display label values if the query limit is 14 or less, but not if it is greater than 14.

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a stacked area chart template.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-16 Stacked area chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the intelligent chart.

NOTE

Click **Save** in the upper right corner. In the displayed dialog box, enter the dashboard name, and click **Confirm**. The saved dashboard cannot be viewed but can be deleted.

Click **Save and Publish** to save and publish the dashboard. You can view the saved dashboard. To delete the dashboard, you need to take it offline first.

6. On the displayed dashboard page, enter a dashboard name.

Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-49 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set color legend (dimension).

Drag the required fields to the **Color Legend (Dimension)** area on the **Field** tab. The color legend also supports drill-down.

3. Set a filter.

a. Drag dimension and metric fields to the **Filter** area.

b. Click  next to a field in the **Filter** area.

c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-50 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set stacked area chart style parameters based on [Table 6-51](#), [Table 6-52](#), [Table 6-53](#), and [Table 6-54](#).

Table 6-51 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-52 Chart style

Parameter	Description
Show Legend	Choose whether to display the legend. If the checkbox is not selected (), the legend will not be displayed. If the checkbox is selected (), the legend will be displayed.

Parameter	Description
Text	Set the font size for text when the legend is displayed.
Position	Choose to display the legend below or above the chart.
Color Palette	Set the color palette for the legend.
Context	Specify the language context for numerical values, with support for Simplified Chinese and English.
Unit	Choose the unit of measurement for numerical values, including options for none, automatic, hundred, thousand, ten thousand, hundred million, and billion.
Scientific Notation	Set whether to support scientific notation for numerical values.
Use thousands separator	Set whether to use thousands separators for numerical values.
Decimal Places	Set whether to display decimal places for numerical values.

Table 6-53 Coordinate axis

Axis Type	Parameter	Description
X axis	Show Title and Unit	Set whether to display the title and unit of the X axis. If the checkbox is not selected (☐), the title and unit of the X axis will not be displayed. If the checkbox is selected (☒), the title of the X axis can be automatically generated or manually entered, and the unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the X-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis coordinate axis can be set.

Axis Type	Parameter	Description
	Show Axis Label	Set whether to display X-axis labels. If the checkbox is not selected (☐), the X-axis labels will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis label text, and even the angle of the X-axis labels can be set.
	Show Grid Line	Set whether to display X-axis gridlines. If the checkbox is not selected (☐), the X-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the X-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	You can set it to the ordinal type.
	Abbreviated Axis Label	Set the X-axis label abbreviation.
Y axis	Show Title and Unit	Set whether to display the title and unit of the Y axis. If the checkbox is not selected (☐), the title and unit of the Y axis will not be displayed. If the checkbox is selected (☒), the title, position, and text of the Y axis can be automatically generated or manually entered. The position of the title can be either above or left of the Y axis. The unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Auto Set Numeric Range	If the checkbox is not selected (☐), the numeric range needs to be manually set. If the checkbox is selected (☒), the numeric range can be automatically set by the chart.

Axis Type	Parameter	Description
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the Y-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the Y-axis coordinate axis can be set.
	Show Axis Label	- Set whether to display Y-axis labels. - If the checkbox is not selected (☐), the Y-axis labels will not be displayed. - If the checkbox is selected (☒), the font size and color of the Y-axis labels can be set. - Customize the display format of axis labels. Once checked, you can customize the display format.
	Show Grid Line	Set whether to display the Y-axis gridlines. If the checkbox is not selected (☐), the Y-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the Y-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	To display the data range on a logarithmic scale, it must be greater than 0 or less than 0 for both. Supported types include linear.
	Abbreviated Axis Label	Set the Y-axis label abbreviation.

Table 6-54 Function configuration

Function	Description
Abbreviated Axis	Set whether to enable the abbreviated axis.

Function	Description
Abbreviated Axis Background Data	Set the background data display for the abbreviated axis.
Null Value Processing	Set the rule for handling null values: Delete, intelligently delete, set to zero, or break on null.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-55 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.7.4 Line Chart and Clustered Column Chart

Line and clustered column charts are used to display data in scenarios that combine regular line and bar charts.

- In a combination chart, the line chart can display continuous data that changes over time (based on commonly used ratios), making it ideal for displaying the trend of data over equal time intervals.

- In a combination chart, the clustered bar chart can compare the differences between various groups of data.

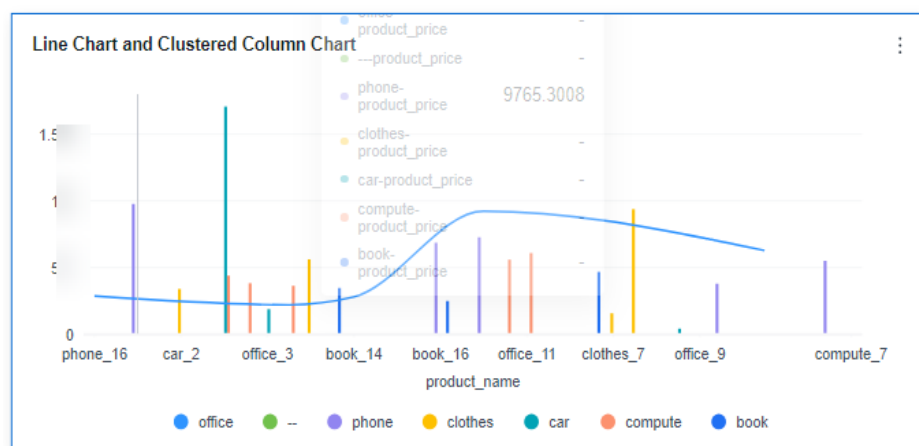
Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.
- The color legend can only be enabled when a metric field is selected on the value axis.
- The chart will display label values if the query limit is 14 or less, but not if it is greater than 14.

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a line chart and clustered column chart template.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-17 Line chart and clustered column chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the chart.

NOTE

Click **Save** in the upper right corner. In the displayed dialog box, enter the dashboard name, and click **Confirm**. The saved dashboard cannot be viewed but can be deleted.

Click **Save and Publish** to save and publish the dashboard. You can view the saved dashboard. To delete the dashboard, you need to take it offline first.

6. On the displayed dashboard page, enter a dashboard name.

Field

- In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-56 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

Style

- Set the style.

Table 6-57 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-58 Chart style

Parameter	Description
Show Legend	Choose whether to display the legend. If the checkbox is not selected (), the legend will not be displayed. If the checkbox is selected (), the legend will be displayed.
Text	Set the font size for text when the legend is displayed.
Position	Choose to display the legend below or above the chart.
Color Palette	Set the color palette for the legend, with the option to use system defaults and customize ones.
Context	Specify the language context for numerical values, with support for Simplified Chinese and English.

Parameter	Description
Unit	Choose the unit of measurement for numerical values, including options for none, automatic, hundred, thousand, ten thousand, hundred million, and billion.
Scientific Notation	Set whether to support scientific notation for numerical values.
Use thousands separator	Set whether to use thousands separators for numerical values.
Decimal Places	Set whether to display decimal places for numerical values.

Table 6-59 Coordinate axis

Parameter	Description
Show Title and Unit	Customize whether to show the title and unit. You can set the axis title, unit, position, and text.
Auto Set Numeric Range	You can control the data display range of the chart by setting minimum and maximum values.
Show Axis	Customize whether to show the coordinate axis. You can set the font size and color of coordinate lines.
Show Axis Label	Customize whether to show axis labels. You can set the font size, color, and display format of axis labels.
Show Grid Line	Customize whether to show gridlines. You can set the weight and color of gridlines.
Show Scale Line	Customize whether to show gridlines' scale lines.
Scale Type	The X-axis supports ordinal scale type, while the Y-axis supports ordinal scale type.
Abbreviated Axis Label	Set the X-axis label abbreviation.

Table 6-60 Function configuration

Function	Description
Abbreviated Axis	Set whether to enable the abbreviated axis.
Abbreviated Axis Background Data	Set the background data display for the abbreviated axis.
Null Value Processing	Set the rule for handling null values: Delete, intelligently delete, set to zero, or break on null.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-61 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.7.5 Combination Chart

A combination chart integrates bar and line charts, supporting dual axes to display data of different magnitudes. If you need to simultaneously display sales volume (represented by a bar chart) and sales revenue (represented by a line chart) using

a chart, the combination chart can clearly display this information through two different axes, even if the data magnitudes vary greatly. This allows you to easily observe the trend of sales volume and the fluctuations in sales revenue.

This section will show you how to add data and configure styles for combination charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and only one dimension can be selected, which is mandatory.
- The main value axis/metric is determined by the data metrics and can have up to one metric.
- The secondary value axis/metric is also determined by the data metrics and can have up to one metric.
- At least one metric must be selected for the main value axis/metric and the secondary value axis/metric.

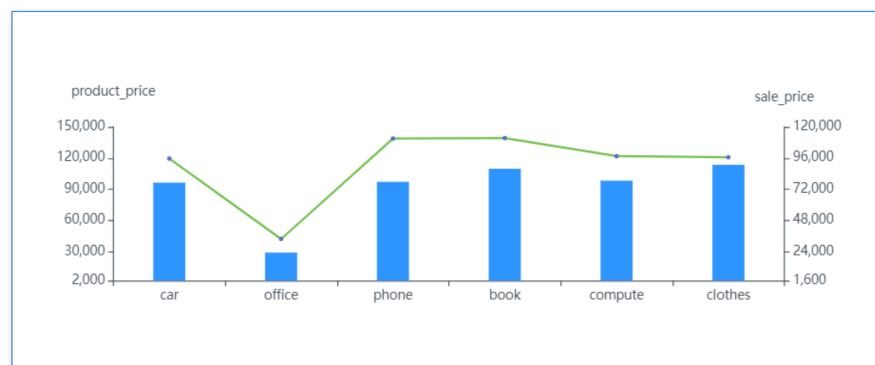
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the tool bar on the top, click **Add Chart** and select **Combination Chart** to create a combination chart template.
2. Select a dataset in the **Data** area.
3. Set the parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-18 Combination chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.
6. In the displayed **Dashboard** dialog box, set **Name** and click **Confirm**.

Field

1. In the **Data** area on the right, double-click or drag the required dimension and metric fields to the **Dimension** and **Measure** areas on the **Field** tab.
2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-62 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.

Type	Parameter	Description
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

For how to set the style of a combination chart, see [Table 6-63](#), [Table 6-64](#), [Table 6-66](#), and [Table 6-65](#).

Table 6-63 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.

Parameter	Description
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-64 Chart style

Parameter	Description
Visualization Style	Set the color of the combination chart by choosing from the system's preset color options or creating your own custom color scheme. Additionally, you can set the chart display direction.
Line	Set the line type, style, and weight. Customize whether to display marker points. You can set the marker point type.
Bar	Set the bar width.
Tooltips	Set the display mode, background color, text size, and text color for the tooltip. Once enabled, a message will appear when you hover over the chart.

Table 6-65 Coordinate axis

Parameter	Description
Show Double Y Axis	Set the tick quantity and value consistency for the left and right Y-axes.
X Axis	Customize whether to show the X-axis. You can set the axis type, line size, and line color. Customize whether to show the title and unit. You can set the axis title, unit, content, position, and text. Customize whether to show axis labels. You can set the display rules, text, and angle. Customize whether to show gridlines. You can set the grid line type, size, and color. Customize whether to show tick marks.

Parameter	Description
Left Y-Axis	If the checkbox is selected (), the numeric range can be automatically set. If unchecked, you can manually input maximum and minimum values to set the range. Other settings are consistent with the X-axis.
Right Y-Axis	Consistent with the left Y-axis.

Table 6-66 Other parameters

Parameter	Description
Legend	Customize whether to show the legend. You can set Text , Position , and Alignment .
Label	Customize whether to show data labels. You can set the data label text size and color.
Series settings	Select a series from the drop-down list. You can set whether to display data labels for the series, as well as label text and position. You can set whether to display extremum values for the series.
Function Configuration	Set whether to display the thumbnail axis and thumbnail axis background data. Set how to handle null values.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-67 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.

Parameter	Description
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

 NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.8 Column/Bar Chart

6.3.8.1 Clustered Column Chart

A clustered column chart can display the trend of each data point over a period of time and compare the data between them. The length of the columns indicates the value, making it easy to compare the differences and trends between different groups of data. This section will show you how to add data and configure styles for clustered column charts.

Notes and Constraints

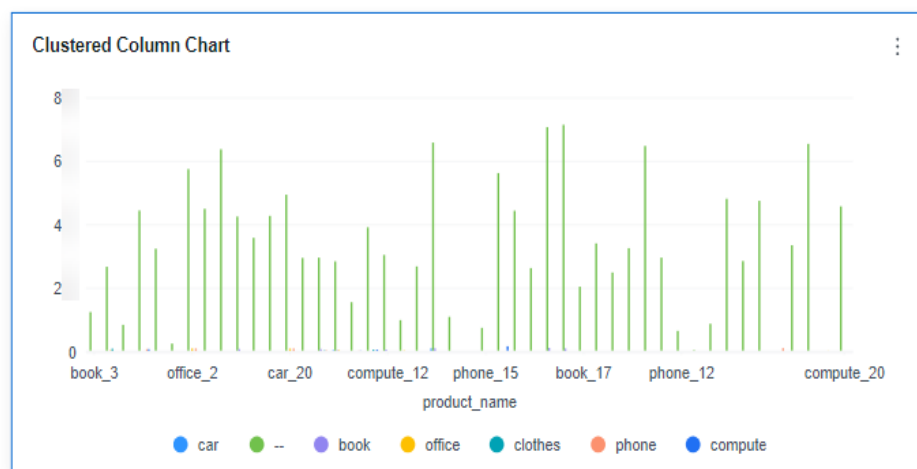
- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected.
- The metric axis is determined by the metrics of the data and at least one metric must be selected.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.
- The color legend can only be enabled when a metric field is selected on the value axis.

Procedure

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**. On the displayed page, click the name of the dashboard you created. On the top menu bar, click **Add Chart** and select **Clustered column** under **Column/Bar Chart**.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.

- Click **Update**. The system automatically updates the chart.

Figure 6-19 Clustered column chart



- Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.
- In the displayed **Dashboard** dialog box, set **Name** and click **Confirm**.

Field

- In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-68 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend (dimension). Specifically, drag the required field to **Color Legend (Dimension)**. Color legends also support drill-down.
3. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click 🔍 next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-69 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.

Type	Parameter	Description
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

For how to set the style of a clustered column chart, see [Table 6-70](#), [Table 6-71](#), [Table 6-72](#), [Table 6-73](#), and [Table 6-74](#).

Table 6-70 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-71 Chart style

Parameter	Description
Show Legend	Choose whether to display the legend. If the checkbox is not selected (), the legend will not be displayed. If the checkbox is selected (), the legend will be displayed.
Text	Set the font size for text when the legend is displayed.
Position	Choose to display the legend below or above the chart.
Color Palette	Set the color palette for the legend, with the option to use system defaults and customize ones.
Context	Specify the language context for numerical values, with support for Simplified Chinese and English.

Parameter	Description
Unit	Choose the unit of measurement for numerical values, including options for none, automatic, hundred, thousand, ten thousand, hundred million, and billion.
Scientific Notation	Set whether to support scientific notation for numerical values.
Use thousands separator	Set whether to use thousands separators for numerical values.
Decimal Places	Set whether to display decimal places for numerical values.

Table 6-72 Coordinate axis

Parameter	Description
Show Title and Unit	Customize whether to show the title and unit. You can set the axis title, unit, position, and text.
Auto Set Numeric Range	You can control the data display range of the chart by setting minimum and maximum values.
Show Axis	Customize whether to show the coordinate axis. You can set the font size and color of coordinate lines.
Show Axis Label	Customize whether to show axis labels. You can set the font size, color, and display format of axis labels.
Show Grid Line	Customize whether to show gridlines. You can set the weight and color of gridlines.
Show Scale Line	Customize whether to show gridlines' scale lines.
Scale Type	The X-axis supports ordinal scale type, while the Y-axis supports ordinal scale type.
Abbreviated Axis Label	Set the X-axis label abbreviation.

Table 6-73 Function configuration

Parameter	Description
Abbreviated Axis	Set whether to enable the abbreviated axis.

Parameter	Description
Abbreviated Axis Background Data	Set the background data display for the abbreviated axis.
Null Value Processing	Set null value handling rules: delete, intelligently delete, set to zero, or break on null.

Table 6-74 Condition format

Parameter	Description
Select Series	Choose the metric to be highlighted. Subsequent text settings will enable highlighting of specific values within the metric, typically used to individually display certain data points, such as highlighting outliers below a certain threshold.
Text	Set the value range for the highlight effect, highlight color, halo flashing frequency, maximum halo transparency, and halo size. Refer to Example Scenario for details.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-75 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

 NOTE

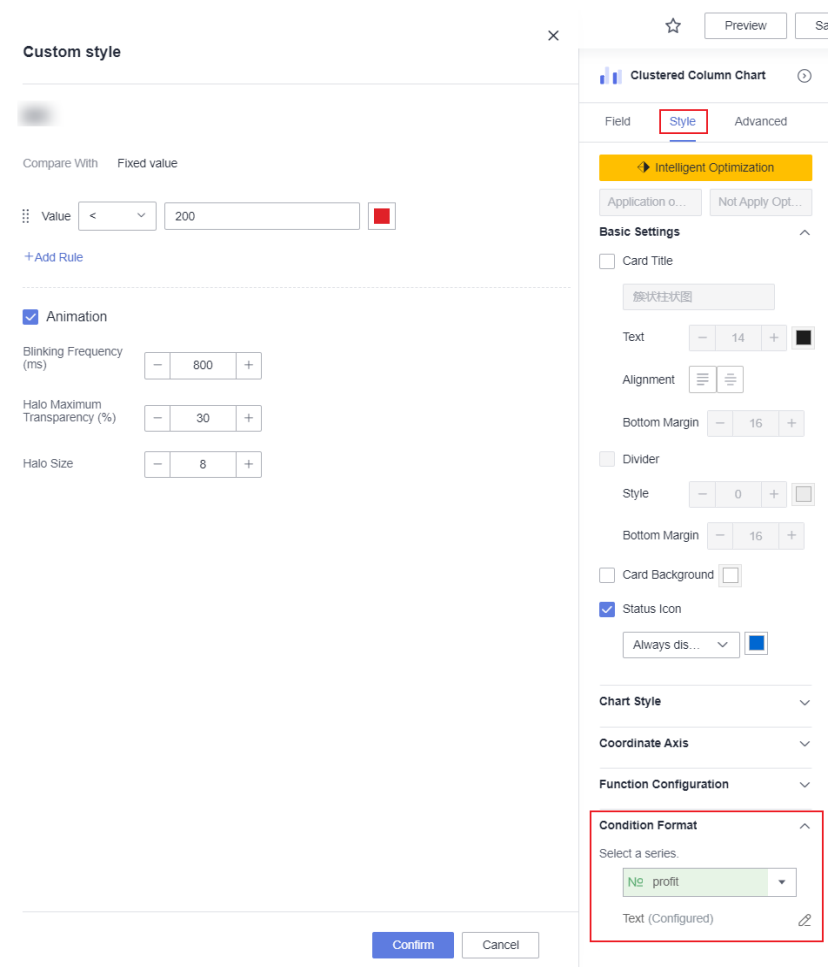
If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

Example Scenario

In this example, a clustered column chart is used to display the sales data of a certain product. The data with a profit below 200 is highlighted to make it easier to identify data points that do not meet expected profit levels, thus allowing for targeted analysis of anomalous data.

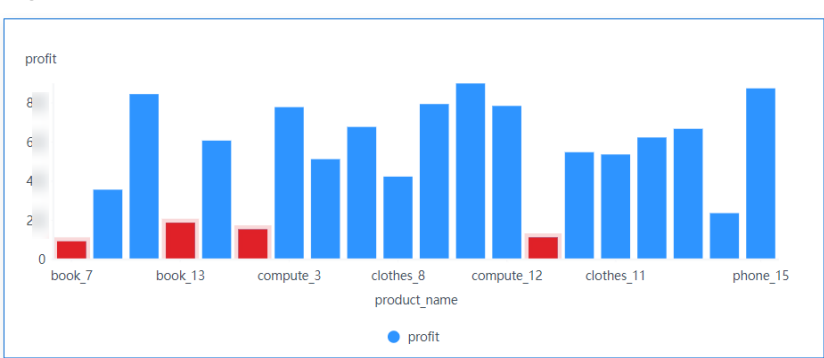
1. In the navigation pane on the left, choose **Data Analytics > Dashboard**. On the displayed page, click the name of the dashboard you created. On the top menu bar, click **Add Chart** and select **Clustered column** under **Column/Bar Chart**.
2. In the data columns, select the dataset to be analyzed, and double-click or drag the **product_name** dimension and **profit** metric into the fields.
3. Click the **Style** tab, click **Condition Format**, and select the **profit** field in the **Select a series** dropdown.
4. Click  on the right side of the text to enter the custom style page, set the parameters, and click **Confirm**. Parameter settings are shown in [Figure 6-20](#).

Figure 6-20 Setting custom parameters



5. On the **Field** tab page, click **Update** to complete the creation of a clustered column chart, as shown in [Figure 6-21](#).

Figure 6-21 Clustered column chart



6.3.8.2 Stacked Column Chart

A stacked column chart can display the trend of each data item over a period of time and the comparison between data items. It can visually display the data of

each sub-category contained in a large category, as well as the proportion of each sub-category, showing the relationship between individual items and the overall picture.

This section will show you how to add data and configure styles for stacked column charts.

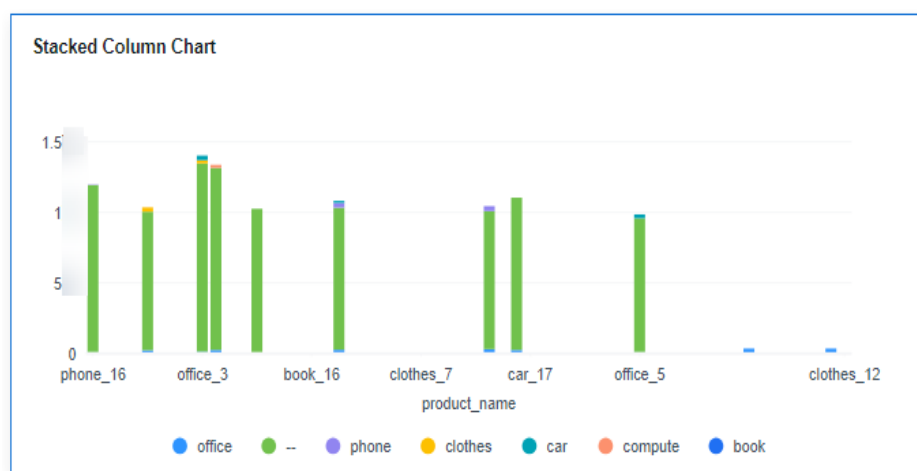
Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.
- The color legend can only be enabled when a metric field is selected on the value axis.
- The chart will display label values if the query limit is 14 or less, but not if it is greater than 14.

Procedure

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**. On the displayed page, click the name of the dashboard you created. On the top menu bar, click **Add Chart** and select **Stacked column** under **Column/Bar Chart**.
2. Select a dataset in the **Data** area.
3. Set the parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-22 Stacked column chart



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-76 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

- Set the color legend (dimension). Specifically, drag the required field to **Color Legend (Dimension)**. Color legends also support drill-down.
- Set a filter.
 - Drag dimension and metric fields to the **Filter** area.
 - Click  next to a field in the **Filter** area.
 - In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-77 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

For how to set the style of a stacked column chart, see [Table 6-78](#), [Table 6-79](#), [Table 6-80](#), [Table 6-81](#), and [Table 6-82](#).

Table 6-78 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-79 Chart style

Parameter	Description
Show Legend	Choose to display or hide the legend. If you choose to hide it, the following parameters cannot be set.
Text	Set the font size of the text.

Parameter	Description
Position	Set the position of the legend, either below or above the chart.
Color Palette	Choose to use the system color palette.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Table 6-80 Coordinate axis

Parameter	Description
Show Title and Unit	Customize whether to show the title and unit. You can set the axis title, unit, position, and text.
Auto Set Numeric Range	You can control the data display range of the chart by setting minimum and maximum values.
Show Axis	Customize whether to show the coordinate axis. You can set the font size and color of coordinate lines.
Show Axis Label	Customize whether to show axis labels. You can set the font size, color, and display format of axis labels.
Show Grid Line	Customize whether to show gridlines. You can set the weight and color of gridlines.
Show Scale Line	Customize whether to show gridlines' scale lines.
Scale Type	The X-axis supports ordinal scale type, while the Y-axis supports ordinal scale type.
Abbreviated Axis Label	Set the X-axis label abbreviation.

Table 6-81 Function configuration

Parameter	Description
Abbreviated Axis	Set whether to enable the abbreviated axis.
Abbreviated Axis Background Data	Set the background data display for the abbreviated axis.
Null Value Processing	Set null value handling rules: delete, intelligently delete, set to zero, or break on null.

Table 6-82 Condition format

Parameter	Description
Select Series	Choose the metric to be highlighted. Subsequent text settings will enable highlighting of specific values within the metric, typically used to individually display certain data points, such as highlighting outliers below a certain threshold.
Text	Set the value range for the highlight effect, highlight color, halo flashing frequency, maximum halo transparency, and halo size. Refer to Example Scenario for details.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-83 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.8.3 Stacked Bar Chart

A stacked bar chart can display the trend of each data item over a period of time and the comparison between data items. It can visually display the data of each sub-category contained in a large category, as well as the proportion of each sub-category, showing the relationship between individual items and the overall value.

This section will show you how to add data and configure styles for stacked bar charts.

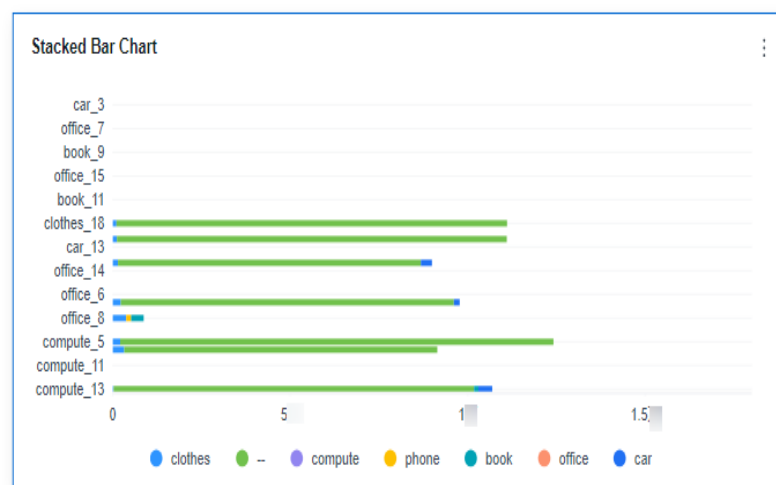
Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.
- The chart will display label values if the query limit is 14 or less, but not if it is greater than 14.

Procedure

1. In the navigation pane on the left, choose **Data Analytics** > **Dashboard**. On the displayed page, click the name of the dashboard you created. On the top menu bar, click **Add Chart** and select **Stacked bar** under **Column/Bar Chart**.
2. Select a dataset in the **Data** area.
3. Set the parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-23 Stacked bar chart



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-84 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend (dimension). Specifically, drag the required field to **Color Legend (Dimension)**. Color legends also support drill-down.
3. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-85 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

For how to set the style of a stacked bar chart, see [Table 6-86](#), [Table 6-87](#), [Table 6-88](#), [Table 6-89](#), and [Table 6-90](#).

Table 6-86 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-87 Chart style

Parameter	Description
Show Legend	Choose to display or hide the legend. If you choose to hide it, the following parameters cannot be set.
Text	Set the font size of the text.

Parameter	Description
Position	Set the position of the legend, either below or above the chart.
Color Palette	Choose to use the system color palette.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Table 6-88 Coordinate axis

Parameter	Description
Show Title and Unit	Customize whether to show the title and unit. You can set the axis title, unit, position, and text.
Auto Set Numeric Range	You can control the data display range of the chart by setting minimum and maximum values.
Show Axis	Customize whether to show the coordinate axis. You can set the font size and color of coordinate lines.
Show Axis Label	Customize whether to show axis labels. You can set the font size, color, angle, and display format of axis labels.
Show Grid Line	Customize whether to show gridlines. You can set the weight and color of gridlines.
Show Scale Line	Customize whether to show gridlines' scale lines.
Scale Type	The X-axis supports ordinal scale type, while the Y-axis supports ordinal scale type.
Abbreviated Axis Label	Set the X-axis label abbreviation.

Table 6-89 Function configuration

Parameter	Description
Abbreviated Axis	Set whether to enable the abbreviated axis.
Abbreviated Axis Background Data	Set the background data display for the abbreviated axis.
Null Value Processing	Set null value handling rules: delete, intelligently delete, set to zero, or break on null.

Table 6-90 Condition format

Parameter	Description
Select Series	Choose the metric to be highlighted. Subsequent text settings will enable highlighting of specific values within the metric, typically used to individually display certain data points, such as highlighting outliers below a certain threshold.
Text	Set the value range for the highlight effect, highlight color, halo flashing frequency, maximum halo transparency, and halo size. Refer to Example Scenario for details.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-91 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.8.4 Gantt Chart

A Gantt chart is a tool used to display the project progress and timelines. It uses bar graphs to visually represent the start and end times of tasks, making it suitable for long-term and multi-phase project planning. With a Gantt chart, you

can easily understand the overall structure of a project, monitor the task progress, and make timely adjustments to plans in response to changes.

This section will show you how to add data and configure styles for Gantt charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and only one dimension can be selected.
- **Status/Dimension** is optional, and other areas are mandatory.

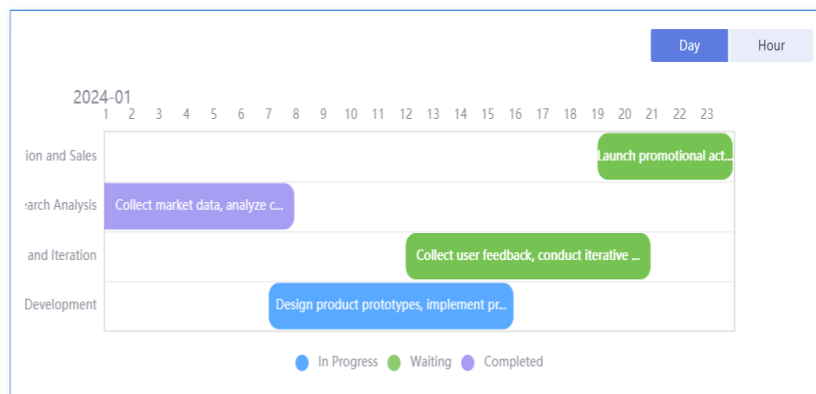
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the tool bar on the top, click **Add Chart** and select **Gantt Chart** to create a Gantt chart template.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-24 Gantt chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the chart.

Field

1. In the **Data** area on the right, double-click or drag required dimension and metric fields.
2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.

- c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-92 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

- Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
- Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set Gantt chart style parameters based on [Table 6-93](#) and [Table 6-94](#).

Table 6-93 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-94 Chart style

Parameter	Description
Chart style	• Visualization Style: Set the color of the Gantt chart by choosing from the system's preset color options or creating your own custom color scheme. • Bar: Set the width and spacing of the bars in the Gantt chart.

Parameter	Description
Coordinate Axis	X Axis - Set whether to display the X-axis, title and units, axis labels, and gridlines. - Set the style of the X-axis, title and units, axis labels, and gridlines. Y Axis - Set whether to display the Y-axis, title, axis labels, and gridlines. - Set the style of the Y-axis, title, axis labels, and gridlines.
Legend	Set whether to display legends in your chart by adjusting their text size, color, position, and alignment.
Label	Set whether to display data labels in your chart and customize their content, text size, and position. Select the desired field from the dropdown menu and the corresponding data will be displayed within the chart bars.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-95 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

 NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.9 Indicator

6.3.9.1 Indicator Dashboard

An indicator dashboard can display data in a clear and concise manner, allowing you to quickly grasp the current situation and make timely decisions to implement appropriate measures. Therefore, an indicator dashboard is one of the effective ways to discover and solve problems. This section will show you how to add data and configure styles for indicator dashboards.

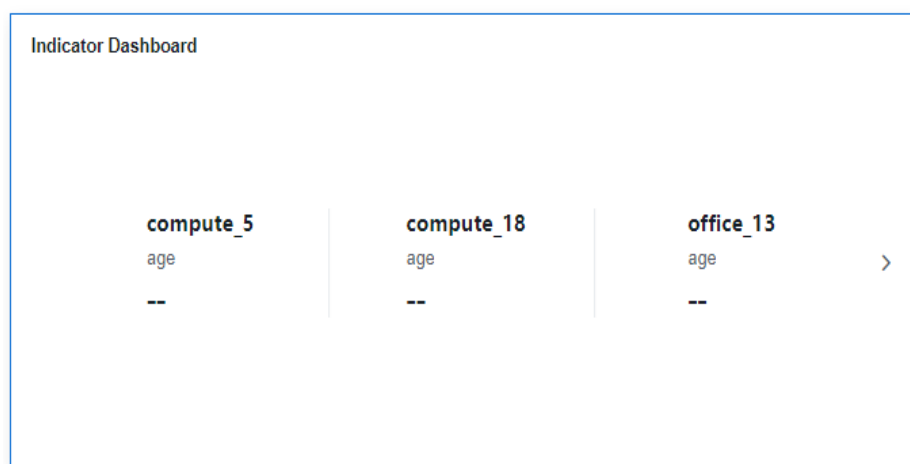
Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create an indicator dashboard.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-25 Indicator dashboard



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-96 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. • Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. • Click Update to test whether the drilldown function is set successfully. NOTE • Drill-down is only supported for dimension fields, not for metric fields. • You can only select one field as the starting point for drill-down. • When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). • Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-97 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

- Set sorting and find the data field you need in the dimension and metric lists within the data column.
In the dimension list, drag and drop the product type and product name to the **Filter** area.
In the metric list, drag and drop the product price to the **Filter** area.
 - Set sorting.

Click  of the sorting field and choose the desired order. The following sorting settings are supported: no sorting, ascending, descending, and custom. You can also click the no sorting icon () , ascending icon () , or descending icon () in the intelligent chart.

4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

- Set the style.
Set the style parameters of an indicator dashboard.

Table 6-98 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-99 Indicator content

Parameter	Description
Indicator Relationship	Set the relationship between indicators as parallel or primary-secondary.
Indicator Location	You can choose to align indicators to the left or center.
Content Alignment Mode	You can choose to align content to the left or center.
Show Dimension Name	You can choose whether to display the name of the dimension in the indicator dashboard.
Value Settings	Set the context, unit, whether to use scientific notation, thousand separator, and decimal places for displaying data.
Text Settings	Set whether to display the indicator decorative chart and the location, color, type and style of the chart.

Table 6-100 Indicator layout

Parameter	Description
Indicator Display Mode	You can choose between sliding indicators left and right or displaying them in a wrap format.
Maximum Records in Each Line	You can choose how many indicator blocks to display per row on your indicator dashboard.
Indicator Separation	You can choose to have dividers between your indicators or not.
Divider Color	You can set the color of the divider.

Table 6-101 Series settings

Parameter	Description
Prefix	Add a prefix to the displayed field in the indicator dashboard, such as ¥.
Suffix	Add a suffix to the displayed field in the indicator dashboard, such as CNY.
Context	Set the context for the series, supporting Simplified Chinese and English.

Parameter	Description
Unit	Units support automatic, none, hundred, thousand, ten thousand, hundred million, ten billion, and trillion.
Scientific Notation	Support the use of scientific notation.
Use thousands separator	Whether or not to use thousands separators.
Decimal Places	Whether or not to support decimal places.

Table 6-102 Condition format

Parameter	Description
YoY	You can set the year-on-year comparison for data on the indicator dashboard.
PoP	You can set the period-over-period data on the indicator dashboard.
Color Inversion	Set the display color for year-on-year and period-over-period data.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-103 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.9.2 Dashboard

DataArts Insight allows you to set dashboards. This section describes how to create a dashboard.

Notes and Constraints

- The metric axis is determined by the metrics of the data and at least one metric must be selected.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a dashboard.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-26 Dashboard



Field

Set dashboard fields.

1. In the right pane of the dashboard creation page, click **Field**. Select the required metrics.
In the metric list, select the field and drag it to the dashboard metric area.
2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-104 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.

Type	Parameter	Description
	Condition	You can select And condition or Or condition as the condition type and select filter condition like $>$, $\geq$, $<$, $\leq$, and $=$. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set dashboard style parameters based on [Table 6-105](#) and [Table 6-106](#).

Table 6-105 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.

Parameter	Description
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-106 Chart style

Parameter	Description
Visualization Style	Set the coordinate line and color of the coordinate axis.
Value Settings	Set the text and text color of axis labels.
Data Label	Set the thickness and color of grid lines.
Measurement Axis Color Configuration	Set the scale type, which can be linear or logarithmic.
Scale Partition	Set the intervals of dashboard's tick marks.
Start Point	Set the start point to a fixed or dynamic value.
End Point	Set the end point to a fixed or dynamic value.

Table 6-107 Coordinate axis

Parameter	Description
Axis Label	You can set the font size for axis labels.

Table 6-108 Series settings

Parameter	Description
Select Metric	Select metrics based on the metrics selected on the Field tab.
Context	Set the context for the series, supporting Simplified Chinese and English.
Unit	Units support automatic, none, hundred, thousand, ten thousand, hundred million, ten billion, and trillion.

Parameter	Description
Scientific Notation	Support the use of scientific notation.
Use thousands separator	Whether or not to use thousands separators.
Decimal Places	Whether or not to support decimal places.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-109 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.9.3 Treemap Chart

A treemap chart is a visualization tool that shows the relative proportions of data indicators between objects being examined. The dimensions are displayed based on the proportion of the indicators, with effects such as highlighting and zooming used to express the data results. Treemap charts are commonly used to display the

distribution of dimension values. This section will show you how to add data and configure styles for treemap charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.

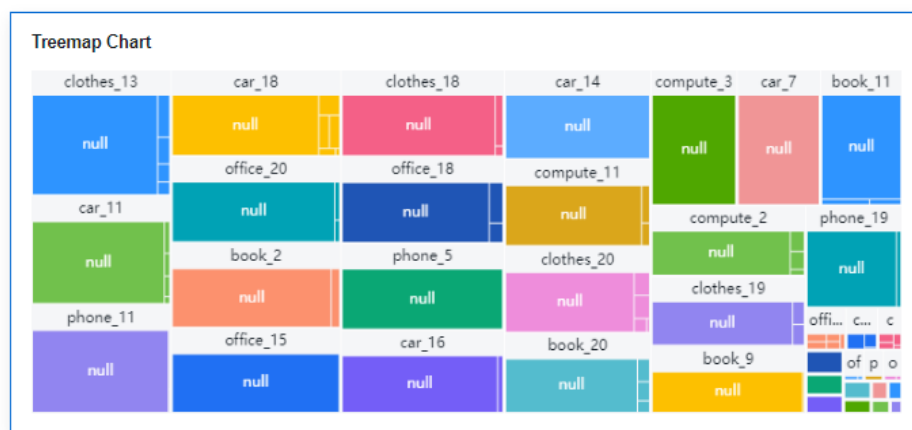
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a treemap chart.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-27 Treemap chart



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-110 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-111 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set the style parameters of a treemap chart.

Table 6-112 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Advanced

- Linkage
Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-113 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.10 Pie/Ring Chart

6.3.10.1 Pie Chart

Pie charts are used to analyze simple proportions of data. With a pie chart, you can easily see the percentage of each part in relation to the whole. This section will show you how to add data and configure styles for pie charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.

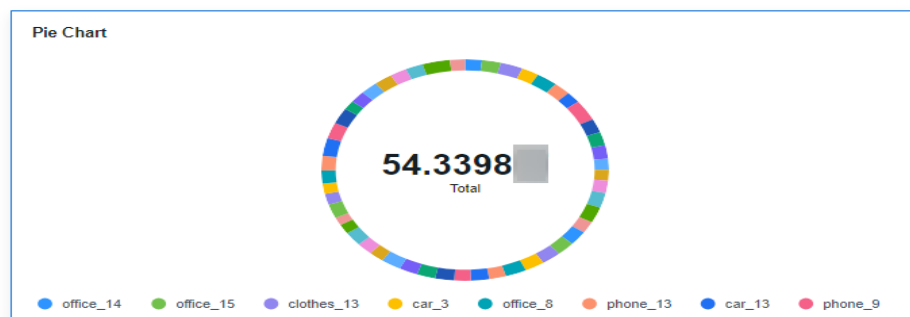
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a pie chart.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-28 Pie chart



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-114 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click 🔍 next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-115 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.

Type	Parameter	Description
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

For how to set the pie chart style, see [Table 6-116](#), [Table 6-117](#), [Table 6-118](#), and [Table 6-119](#).

Table 6-116 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-117 Chart style

Parameter	Description
Visualization Style	The options include ring and pie charts.
Show Legend	Choose to display or hide the legend. If you choose to hide it, the following parameters cannot be set.
Text	Set the font size of the text.
Position	Set the position of the legend, either below or above the chart.
Color Palette	Choose to use the system color palette or customize your own.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
Pie Proportion	Set the pie size.

Parameter	Description
Inner Diameter Proportion	Set the size of the inner radius of the pie.
Merge Data into Other	When the checkbox is not selected (☐) , data cannot be merged. When the checkbox is selected (☒) , data can be merged, and the proportion of other data can be adjusted by setting the number of categories.
Show Total	When the checkbox is selected (☒) , the total is displayed. When the checkbox is not selected (☐) , the total is not displayed. You can set the name, text, and value of the total.
Enable Tooltip	When the checkbox is not selected (☐) , the tooltip is not displayed. When the checkbox is selected (☒) , the tooltip is displayed.

Table 6-118 Series settings

Parameter	Description
Series Value	Select the series value based on the dimension. You can customize the series field name.
Metric	Select metrics based on the metrics selected on the Field tab.
Context	Set the context for the series, supporting Simplified Chinese and English.
Unit	Units support automatic, none, hundred, thousand, ten thousand, hundred million, ten billion, and trillion.
Scientific Notation	Support the use of scientific notation.
Use thousands separator	Whether or not to use thousands separators.
Decimal Places	Whether or not to support decimal places.

Table 6-119 Condition format

Parameter	Description
Select Series	Choose the metric to be highlighted. Subsequent text settings will enable highlighting of specific values within the metric, typically used to individually display certain data points, such as highlighting outliers below a certain threshold.
Text	Set the value range for the highlight effect, highlight color, halo flashing frequency, maximum halo transparency, and halo size. Refer to Example Scenario for details.

NOTE

The numerical display format set for metrics in the dataset will not be reflected in the pie chart.

Function settings: When the checkbox is not selected (☐) , the indicator filter will not be displayed. When the checkbox is selected (☒) , the indicator filter will be displayed and can be operated in the upper right corner of the chart canvas.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-120 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

 NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.10.2 Radar Chart

Radar charts can display analyzed numbers or ratios, allowing you to easily view various data indicators and trends. This section will show you how to add data and configure styles for radar charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least one metric must be selected, such as order quantity.

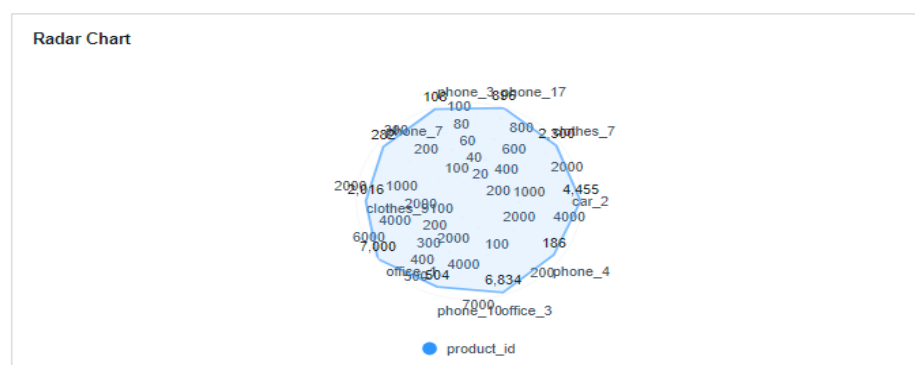
Prerequisites

- A project has been created by referring to **Creating a Project**.
- A data source has been connected by referring to **Creating a Data Source**.
- A dataset has been created by referring to **Creating a Dataset**.
- A dashboard has been created by referring to **Creating a Dashboard**.

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a radar chart.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-29 Radar chart



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-121 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. • Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. • Click Update to test whether the drilldown function is set successfully. NOTE • Drill-down is only supported for dimension fields, not for metric fields. • You can only select one field as the starting point for drill-down. • When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). • Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set branch display rules.
You can choose to branch by dimension or by metric.
3. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.

- b. Click  next to a field in the **Filter** area.
- c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-122 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.

- b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set the style parameters of a radar chart.

Table 6-123 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-124 Chart style

Parameter	Description
Show Legend	Choose to display or hide the legend. If you choose to hide it, the following parameters cannot be set.
Text	Set the font size of the text.
Position	Set the position of the legend, either below or above the chart.
Color Palette	Choose to use the system color palette or customize your own.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Table 6-125 Coordinate axis

Parameter	Description
Show Axis	Set the coordinate line and color of the coordinate axis.
Show Axis Label	Set the text and text color of axis labels.
Show Grid Line	Set the thickness and color of grid lines.
Show Scale Line	Set whether to display the scale line.
Scale Type	Set the scale type of the data. The value can be Linear or Logarithmic .

Table 6-126 Function configuration

Parameter	Description
Null Value Processing	Null values can be deleted, intelligently deleted, and set to zero.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-127 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.11 Scatter/Bubble Chart

6.3.11.1 Scatter Chart

A scatter chart is a visual representation of the correlation and distribution of data, consisting of two variables on the X and Y axes. It shows the general trend of the data by presenting how the dependent variable (Y-axis value) changes with the independent variable (X-axis value), while also allowing for observation of the distribution of data from both categorical and color dimensions. By using two sets of data to create multiple coordinate points, the distribution of the points can be examined to determine whether there is a correlation between multiple variables or to summarize the distribution pattern of the coordinate points. This section will show you how to add data and configure styles for scatter charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least two metrics must be selected, such as order quantity and product price.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.

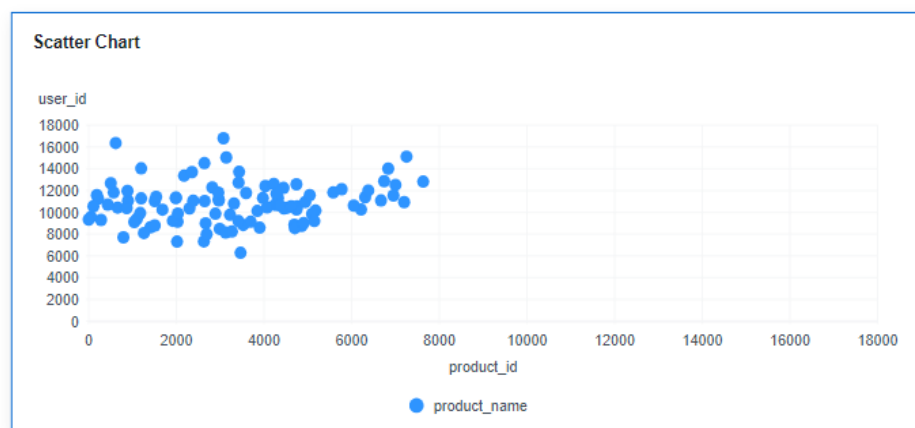
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a scatter chart.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-30 Scatter chart



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-128 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Color Legend (Dimension): In the dimension list, select the field and drag it to the column.
3. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click 🔍 next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-129 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.

Type	Parameter	Description
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set the style parameters of a scatter chart.

Table 6-130 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-131 Chart style

Parameter	Description
Show Legend	Choose to display or hide the legend. If you choose to hide it, the following parameters cannot be set.
Text	Set the font size of the text.
Position	Set the position of the legend, either below or above the chart.
Color Palette	Choose to use the system color palette.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
Context	Set the context for the series, supporting Simplified Chinese and English.
Unit	Units support automatic, none, hundred, thousand, ten thousand, hundred million, ten billion, and trillion.

Parameter	Description
Scientific Notation	Support the use of scientific notation.
Use thousands separator	Whether or not to use thousands separators.
Decimal Places	Whether or not to support decimal places.

Table 6-132 Coordinate axis

Axis Type	Parameter	Description
X axis	Show Title and Unit	Set whether to display the title and unit of the X axis. If the checkbox is not selected (☐), the title and unit of the X axis will not be displayed. If the checkbox is selected (☒), the title of the X axis can be automatically generated or manually entered, and the unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Auto Set Numeric Range	If the checkbox is not selected (☐), the numeric range needs to be manually set. If the checkbox is selected (☒), the numeric range can be automatically set by the chart.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the X-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis coordinate axis can be set.
	Show Axis Label	Set whether to display X-axis labels. If the checkbox is not selected (☐), the X-axis labels will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis label text, and even the angle of the X-axis labels can be set.

Axis Type	Parameter	Description
	Show Grid Line	Set whether to display the X-axis gridlines. If the checkbox is not selected (☐), the X-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the X-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	Supported types include linear and logarithmic.
	Abbreviated Axis Label	Set the X-axis label abbreviation.
Y axis	Show Title and Unit	Set whether to display the title and unit of the Y axis. If the checkbox is not selected (☐), the title and unit of the Y axis will not be displayed. If the checkbox is selected (☒), the title, position, and text of the Y axis can be automatically generated or manually entered. The position of the title can be either above or left of the Y axis. The unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Auto Set Numeric Range	If the checkbox is not selected (☐), the numeric range needs to be manually set. If the checkbox is selected (☒), the numeric range can be automatically set by the chart.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the Y-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the Y-axis coordinate axis can be set.

Axis Type	Parameter	Description
	Show Axis Label	- Set whether to display Y-axis labels. - If the checkbox is not selected (☐), the Y-axis labels will not be displayed. - If the checkbox is selected (☒), the font size and color of the Y-axis labels can be set. - Customize the display format of axis labels. Once checked, you can customize the display format.
	Show Grid Line	Set whether to display the Y-axis gridlines. If the checkbox is not selected (☐), the Y-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the Y-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	To display the data range on a logarithmic scale, it must be greater than 0 or less than 0 for both. Supported types include linear and logarithmic.
	Abbreviated Axis Label	Set the Y-axis label abbreviation.

Function Settings: You can set how null values are handled, with options to delete, intelligent delete, or set to zero.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-133 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. • Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. • SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.11.2 Bubble Chart

By using two sets of data to create multiple coordinate points, the distribution of the points can be examined to determine whether there is a correlation between multiple variables or to summarize the distribution pattern of the coordinate points. This section will show you how to add data and configure styles for bubble charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least three metrics must be selected, such as order quantity.
- The color legend is determined by the dimensions of the data and only one dimension can be selected.

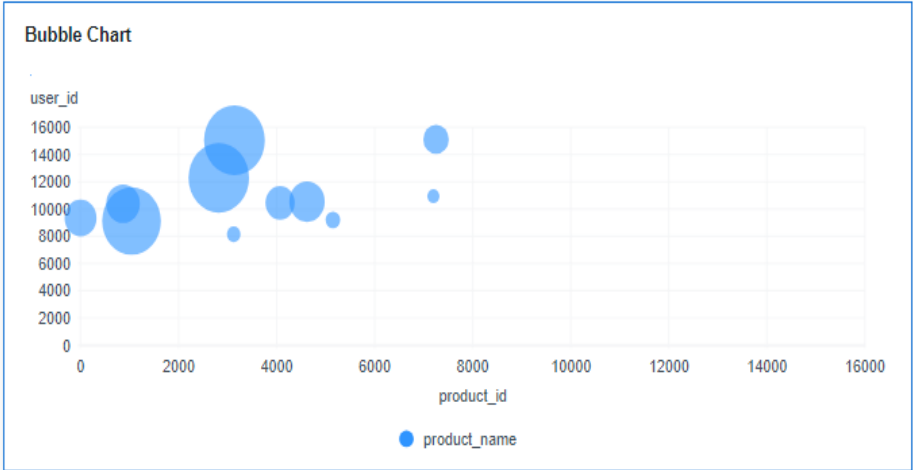
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a bubble chart.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-31 Bubble chart



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-134 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Color Legend (Dimension): In the dimension list, select the field and drag it to the column.
3. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click 🔍 next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-135 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.

Type	Parameter	Description
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set the style parameters of a bubble chart.

Table 6-136 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-137 Chart style

Parameter	Description
Show Legend	Choose to display or hide the legend. If you choose to hide it, the following parameters cannot be set.
Text	Set the font size of the text.
Position	Set the position of the legend, either below or above the chart.
Color Palette	Choose to use the system color palette or customize your own.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Table 6-138 Coordinate axis

Axis Type	Parameter	Description
X axis	Show Title and Unit	Set whether to display the title and unit of the X axis. If the checkbox is not selected (☐), the title and unit of the X axis will not be displayed. If the checkbox is selected (☒), the title of the X axis can be automatically generated or manually entered, and the unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Auto Set Numeric Range	If the checkbox is not selected (☐), the numeric range needs to be manually set. If the checkbox is selected (☒), the numeric range can be automatically set by the chart.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the X-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis coordinate axis can be set.
	Show Axis Label	Set whether to display X-axis labels. If the checkbox is not selected (☐), the X-axis labels will not be displayed. If the checkbox is selected (☒), the font size and color of the X-axis label text, and even the angle of the X-axis labels can be set.
	Show Grid Line	Set whether to display the X-axis gridlines. If the checkbox is not selected (☐), the X-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the X-axis can be set.
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	Supported types include linear and logarithmic.

Axis Type	Parameter	Description
	Abbreviated Axis Label	Set the X-axis label abbreviation.
Y axis	Show Title and Unit	Set whether to display the title and unit of the Y axis. If the checkbox is not selected (☐), the title and unit of the Y axis will not be displayed. If the checkbox is selected (☒), the title, position, and text of the Y axis can be automatically generated or manually entered. The position of the title can be either above or left of the Y axis. The unit of the X axis can be manually entered. The font size and color of the title text can be set.
	Auto Set Numeric Range	If the checkbox is not selected (☐), the numeric range needs to be manually set. If the checkbox is selected (☒), the numeric range can be automatically set by the chart.
	Show Axis	Set whether to display the coordinate axis. If the checkbox is not selected (☐), the Y-axis coordinate axis will not be displayed. If the checkbox is selected (☒), the font size and color of the Y-axis coordinate axis can be set.
	Show Axis Label	- Set whether to display Y-axis labels. - If the checkbox is not selected (☐), the Y-axis labels will not be displayed. - If the checkbox is selected (☒), the font size and color of the Y-axis labels can be set. - Customize the display format of axis labels. Once checked, you can customize the display format.
	Show Grid Line	Set whether to display the Y-axis gridlines. If the checkbox is not selected (☐), the Y-axis gridlines will not be displayed. If the checkbox is selected (☒), the number of gridlines and their color on the Y-axis can be set.

Axis Type	Parameter	Description
	Show Scale Line	Set whether to display the scale line. If the checkbox is not selected (☐), the scale line is not displayed. If the checkbox is selected (☒), the scale line is displayed.
	Scale Type	To display the data range on a logarithmic scale, it must be greater than 0 or less than 0 for both. Supported types include linear and logarithmic.
	Abbreviated Axis Label	Set the Y-axis label abbreviation.

Function Settings: You can set how null values are handled, with options to delete, intelligent delete, or set to zero.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-139 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒), the control supports query initialization. If the checkbox is not selected (☐), the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.12 Other

6.3.12.1 Word Cloud Chart

DataArts Insight allows you to create a word cloud, which is a colorful graphic made up of words that resemble a cloud. It is used to display large amounts of textual data. This section describes how to create a word cloud chart.

Notes and Constraints

- At least two fields are required for a dimension.
- At least one field is required for a metric.

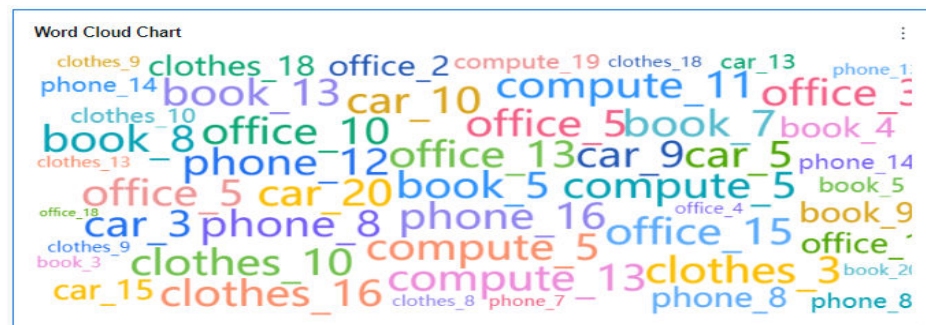
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a word cloud chart.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-32 Word cloud chart



Field

Set the fields of the word cloud chart.

1. In the right pane of the dashboard creation page, click **Field**. Select the required dimension and metric.
2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-140 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
4. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set word cloud style parameters based on [Table 6-141](#) and [Table 6-142](#).

Table 6-141 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-142 Chart style parameters

Parameter	Description
Color Scheme	Set the color scheme of the word cloud, either by using the system default or selecting your own.
Word Cloud Shape	Set the shape of the word cloud.

Parameter	Description
Computation Mode	Set the calculation mode to either relative size or emphasis.
Custom Word Size Range	Set the size of custom words. NOTE If the checkbox is not selected, the system default range of 12–60 will be used. If the text size is set too large, the system will automatically adjust it to the displayable range.
Vertical Text Display	Choose to display word groups vertically.
Value Settings	Set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
Tooltip	Set the background color, dimension text, indicator text, and numerical values for the tooltip.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-143 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.12.2 Parallel Coordinates

DataArts Insight allows you to set a parallel coordinate system. This section describes how to create a parallel coordinate system.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and at least one dimension must be selected, such as date, province, or product type.
- The metric axis is determined by the metrics of the data and at least two metrics must be selected, such as order quantity.
- The chart will display label values if the query limit is 14 or less, but not if it is greater than 14.

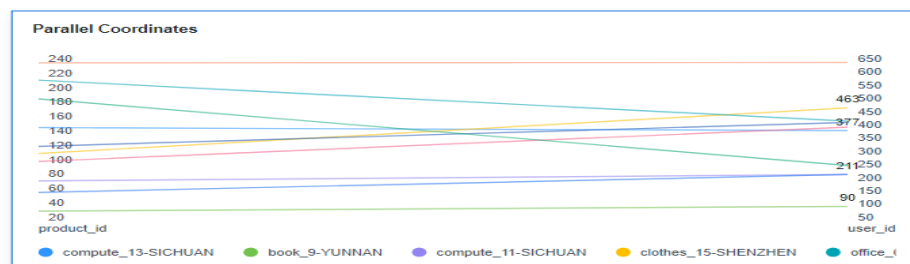
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click  to create a parallel coordinate system.
2. Select a dataset in the **Data** area.
3. Set parameters on the **Field**, **Style**, and **Advanced** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-33 Parallel coordinates



Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-144 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-145 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set the style parameters of the parallel coordinate system.

Table 6-146 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-147 Chart style

Parameter	Description
Show Legend	Choose to display or hide the legend. If you choose to hide it, the following parameters cannot be set.
Text	Set the font size of the text.
Position	Set the position of the legend, either below or above the chart.

Parameter	Description
Color Palette	Choose to use the system color palette or customize your own.
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Table 6-148 Coordinate axis

Parameter	Description
Show Axis	Set the coordinate line and color of the coordinate axis.
Show Axis Label	Set the text and text color of axis labels.
Show Scale Line	Set whether to display the scale line.
Scale Type	Set the scale type of the data. The value can be Linear or Logarithmic .

Table 6-149 Series settings

Parameter	Description
Select Metric	Select metrics based on the metrics selected on the Field tab.
Context	Set the context for the series, supporting Simplified Chinese and English.
Unit	Units support automatic, none, hundred, thousand, ten thousand, hundred million, ten billion, and trillion.
Scientific Notation	Support the use of scientific notation.
Use thousands separator	Whether or not to use thousands separators.
Decimal Places	Whether or not to support decimal places.

Function Settings: You can set how null values are handled, with options to delete, intelligent delete, or set to zero.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-150 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. ● Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. ● SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- **Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

 NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.12.3 Sankey

A Sankey chart can display the flow of data from one group to another, with the width of the branches representing the size of the data flow. This section describes how to create a Sankey chart.

Notes and Constraints

- You must drag at least two fields and can drag up to 20 fields to the **Dimension** area.
- You can only drag one field to the **Metric** area.

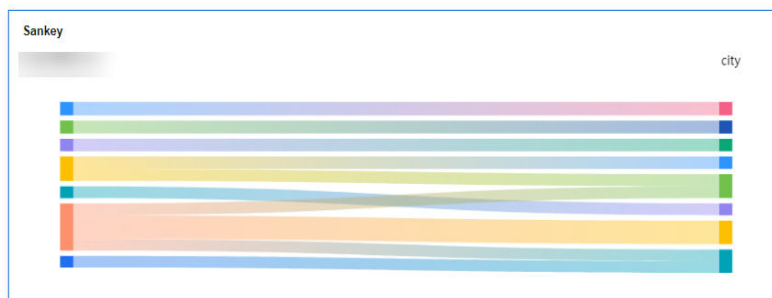
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the top navigation bar on the dashboard creation page, click **Add Chart** and choose **Other > Sankey** to create a Sankey chart.

2. Select a dataset in the **Data** area.
3. Set parameters on the **Field** and **Style** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-34 Sankey chart

Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 6-151 Parameters on the Field tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Method	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click 🔍 next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-152 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.

Type	Parameter	Description
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set Sankey chart style parameters.

- Basic settings

Table 6-153 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

- **Chart Style**

- **Visualization Style**

- Colors provided by the system are supported.
 - Sorting options include default, ascending node height, and descending node height.
 - Empty values for outgoing data can be displayed as nodes or as lost flows.
 - You can customize the width and spacing of nodes.
 - You can set line type, color, and transparency for data flows.
 - Line types include curve and straight.
 - Line color options include fixed, gradient at both ends, follow the starting node, and follow the ending node.

- **Labels**

- Data labels support full, dimension, and metric settings.

- Full: Supports displaying dimension and metric data.
- Dimension: When selected, the chart displays dimension data. When not selected, dimension data is not displayed. The value ranges from 12 to 32, and the color can be customized by the user.
- Metric: When selected, the chart displays metric data. When not selected, metric data is not displayed. The value ranges from 12 to 32, and the color can be customized by the user.
- Arrangement: The display order of dimension and metric data in the chart, respectively, is left/right and top/bottom.
- Class Labels
 - Position: Class labels can be displayed above or below the chart.
 - The spacing between the labels and the image can be customized by the user.
 - Text: The size and color of class labels can be customized by the user, with a size range of 12–23.
- Series Settings: You can select fields to set the node style and label text.
 - Node styles support bar charts.
 - Label text: Supports dimension and metric font size and color settings, with a font size range of 12–32.
- Tooltips: When the mouse hovers over the chart, a tooltip appears.
 - Supports displaying or not displaying tooltips in the chart.
 - Text: Supports setting the font size and color of the tooltip text, with a font size range of 12–32.
 - Background: Supports user-defined tooltip background color settings.

6.3.12.4 Funnel

Funnel charts visually represent data conversion rates at various stages, with widths indicating the conversion level at each stage. They are valuable in e-commerce, marketing, and other scenarios where tracking user behavior is crucial. For example, funnel charts can clearly illustrate the entire journey from initial product exposure to final conversion, offering valuable insights for business decision-making.

This section will show you how to add data and configure styles for funnel charts.

Notes and Constraints

- The dimension axis is determined by the dimensions of the data and only one dimension can be selected.
- The metric axis is determined by the metrics of the data and only one metric can be selected.

Prerequisites

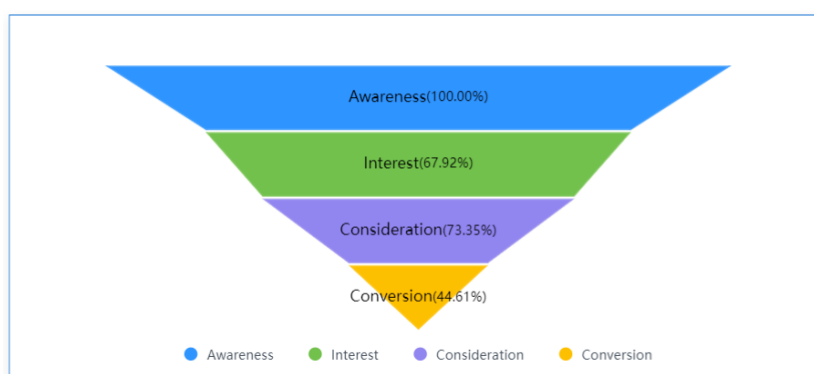
- A project has been created by referring to [Creating a Project](#).

- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the tool bar on the top, click **Add Chart** and select **Funnel** to create a funnel chart template.
2. Select a dataset in the **Data** area.
3. Set parameters on the [Field](#), [Style](#), and [Advanced](#) tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-35 Funnel chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.
6. In the displayed **Dashboard** dialog box, set **Name** and click **Confirm**.

Field

1. In the **Data** area on the right, double-click or drag required dimension and metric fields.
2. Set a filter.
 - a. Drag dimension and metric fields to the **Filter** area.
 - b. Click  next to a field in the **Filter** area.
 - c. In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-154 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Set funnel chart style parameters based on [Table 6-155](#) and [Table 6-156](#).

Table 6-155 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-156 Chart style

Parameter	Description
Visualization Style	Set the color of the funnel chart by choosing from the system's preset color options or creating your own custom color scheme. Set the layout, position, and padding of the funnel chart.

Parameter	Description
Range	Set the value range and width proportion of the funnel chart.
Value Settings	Set the context, unit, and value representation. Set the text size, direction, and position of legends. Sets the position and text size of class labels. Set the data label content, conversion rate calculation method, and text size.
Tooltip	Set the content, background color, dimension text, indicator text, and numerical values for the tooltip. Once enabled, a message will appear when you hover over the chart.

Table 6-157 Series settings

Parameter	Description
Select Series	Select a series.
Alias	Set an alias for the selected series.

Advanced

- Linkage

Click the **Advanced** tab and click  next to **Linkage**. The **Chart Linkage Settings** page is displayed. Set parameters. For details, see [Linkage example](#).

Table 6-158 Chart linkage settings

Parameter	Description
Fields to Bound	Select the fields to be bound first and then select the chart to be associated with them. You can select all charts on the dashboard.
Associated Charts	Set linked associated charts. You can select charts from the same dataset or different datasets. Follow bound field: When the bound field is set to A, the associated data tables filter data related to A. SQL placeholder: The bound field value corresponds to the value set for the SQL placeholder in the dataset.

- Initialize Query for Associated Query Control:** whether the associated query control supports query initialization. If the checkbox is selected (☒) , the control supports query initialization. If the checkbox is not selected (☐) , the control does not support query initialization.

NOTE

If you select this option, when a chart is linked to a query control and the query control does not have a default query set, the chart's data configuration will be queried during chart initialization.

6.3.12.5 Timeline

A timeline is a visual representation of events that occur at specific points in time. It provides an intuitive display of how behaviors and states evolve over time, helping you better understand when each event occurs. This section will guide you on how to add data and configure styles for a timeline.

Notes and Constraints

- **Timeline–Time Dimension** is mandatory and can only be filled with one time-type field. It supports day, week, month, quarter, and year-type fields, but not hour, minute, second, or other time-type fields.
- For **Node Label–Dimension**, you can fill in up to three fields if you do not fill in **Node Label–Metric**. Otherwise, you can only fill in one field.
- For **Node Label–Metric**, you can fill in up to three fields if you do not fill in **Node Label–Dimension**. Otherwise, you can only fill in one field.
- For **Status–Dimension**, you can only fill in one field.

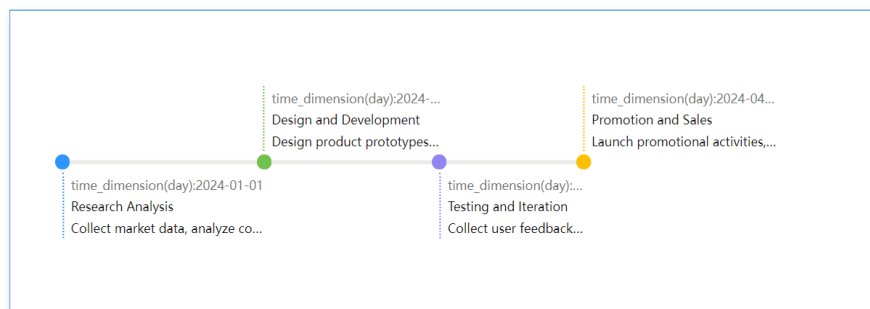
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**. On the displayed page, click the name of the dashboard you created. On the top menu bar, click **Add Chart** and select **Timeline** under **Other**.
2. Select a dataset in the **Data** area.
3. Set the parameters on the **Field** and **Style** tabs.
4. Click **Update**. The system automatically updates the chart.

Figure 6-36 Timeline



- Click **Save** or **Save and Publish** in the upper right corner to save the dashboard.
- In the displayed **Dashboard** dialog box, set **Name** and click **Confirm**.

Field

- In the **Data** area on the right, double-click or drag the required dimension and metric fields to the **Dimension** and **Measure** areas on the **Field** tab.
- Set a filter.
 - Drag dimension and metric fields to the **Filter** area.
 - Click  next to a field in the **Filter** area.
 - In the displayed **Set Filter** dialog box, set the parameters and click **OK**.

Table 6-159 Filter parameters

Type	Parameter	Description
String	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.

Type	Parameter	Description
	Condition	You can select And condition or Or condition as the condition type and select filter condition like $>$, $\geq$, $<$, $\leq$, and $=$. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

For how to set the timeline style, see [Table 6-160](#), [Table 6-161](#), [Table 6-162](#), and [Table 6-163](#).

Table 6-160 Basic Settings

Parameter	Description
Card Title	Whether to display the card title. If selected, the card title is displayed in the upper left corner of the chart.
Text	Set the text size and click  to select the text color.
Alignment	Set the alignment mode, which can be left alignment or center alignment.
Bottom Margin	Set the distance between the card title and the chart.
Divider	Whether to display the divider. You can set the size, color, and bottom margin of the divider.
Card Background	Whether to display the card background. Click  to select a background color.

Parameter	Description
Status Icon	Whether to display the status icon. You can set the display mode and color of icons. The display modes include Always display and Hover display .
Hide Panel Operations	You can customize whether to display  in the upper right corner of the chart.
Panel No Padding	You can customize whether to cancel card padding.

Table 6-161 Basic chart style

Parameter	Description
Switch View	Customize the chart style of the timeline, including support for milestones and time granularity.
Node	Customize the color, size, and distance of the nodes. Adjust the size and color of the lines.

Table 6-162 Node label parameters

Parameter	Description
Show Node Label	Customize whether to show node labels.
Label Settings	Set the label layout and alignment of the timeline. Choose whether to display the timeline fields, label fields, and today.
Value Settings	Set the context, unit, and value representation.

Table 6-163 Condition format

Parameter	Description
Select Series	The default value is the field in Status-Dimension .
Custom Style	Customize the color and size of nodes and lines for different statuses. You can also set custom style names.

6.4 Customizing Dashboard Pages and Grids

After creating a dashboard, DataArts Insight offers a variety of dashboard themes to enhance its visual appeal. You can achieve this by customizing global styles,

page layout, and component styles through the page settings. This section provides a detailed guide on how to customize the theme settings in dashboard page settings.

Prerequisites

You have logged in to the management console and accessed the dashboard editing page. For details, see [Creating a Dashboard](#).

Procedure

- **Page Settings**
 - a. On the dashboard editing page, click **Page Settings** in the upper right corner of the page.
 - b. On the page setting page, set the global style and page layout of the dashboard. For details about the parameters, see [Table 6-164](#) and [Table 6-165](#).

Table 6-164 Global style parameters

Parameter	Description
Page Background	Set the background color of the dashboard.
Color Palette	Set the color system supported by the dashboard. The options include System and Custom . Color scheme supported by the system: Select the required color scheme from the drop-down list. Custom : You can customize the images to determine the color scheme.
Font	Font of the dashboard.
Corner Rounding	Set the corner radius of the chart cards by either entering a specific value or using the  and  buttons.
Card Stroke	Set the stroke of the chart cards by either entering a specific value or using the  and  buttons.
Component Inner Margin	Set the inner margin of a component. The options include Default and Custom . You can customize the inner margin by either entering a specific value or using the  and  buttons.

Table 6-165 Page layout parameters

Parameter	Description
Page Title	Set the page title. You can select or deselect this parameter. If selected, the page title is displayed. If not selected, the page title is not displayed.
Title	Page title, which can be customized.
Text	Font size of the title. You can customize it by either entering a specific value or using the  and  buttons.
Alignment	Two alignment options are supported: left alignment and center alignment.
Bottom Margin	Set the margin from the title to the page. You can retain the default value or customize one. You can customize the value by either entering a specific value or using the  and  buttons.

- c. Click the **Advanced** tab. On this tab, set the parameters based on [Table 6-166](#).

Table 6-166 Parameters on the Advanced tab

Parameter	Description
Display watermark	If the checkbox is selected, the default username is displayed on the chart canvas. If the checkbox is not selected, the username is not displayed. You can also enter custom watermark content in the watermark content text box.
Global Parameter	Click  next to Parameter Setting . In the Global Parameters dialog box that appears, set the global parameter list, query conditions, and charts.

- d. Click **Save** to save the dashboard.
- **Grid Setting**
 - a. On the dashboard editing page, click **Grid Setting** in the upper right corner.
 - b. On the **Page Grid Configuration** page, set **Number of Grid Columns**, **Column Spacing**, **Line Spacing**, and **Page Margin**. For details about the parameters, see [Table 6-167](#).
 - c. Click **Save** to save the dashboard.

Table 6-167 Grid parameters

Parameter	Description
Number of Grid Columns	Set the number of grid columns. You can set the number by either using the  and  buttons or entering a specific value.
Column Spacing	Set the spacing between grid columns. You can set the spacing by either using the  and  buttons or entering a specific value.
Line Spacing	Set the spacing between grid lines. You can set the spacing by either using the  and  buttons or entering a specific value.
Page Margin	Set the margin between a grid and the page. You can set the margin by either using the  and  buttons or entering a specific value.

6.5 Previewing a Dashboard

Once you have created your dashboard, you may want to preview it to see how it looks. You can do this by using the preview function.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
5. Locate the dashboard you want to preview and click **Preview** in the **Operation** column.

6.6 Publishing a Dashboard

Once you have saved a dashboard, the next step is to publish it for sharing and use. This section will explain how to publish a dashboard.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
5. Click the name of the dashboard you want to publish.
6. Click **Save and Publish** in the upper right corner. A message is displayed, indicating that the dashboard is published successfully.
7. If you have edited the dashboard content, click **Republish** in the upper right corner. A message is displayed, indicating that the dashboard is published successfully.

6.7 Sharing a Dashboard

DataArts Insight allows you to share a dashboard with other users or user groups. The shared users or user groups will have editing and usage permissions for the dashboard. This section explains how to share a dashboard so that team members can collaborate quickly.

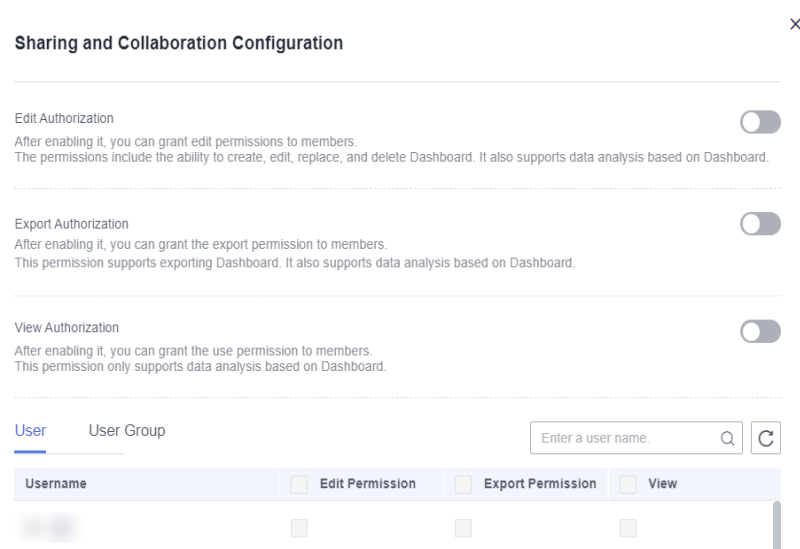
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#). The sharing and collaboration permissions of the data source have been enabled.
- A dataset has been created by referring to [Creating a Dataset Through Visual Configuration](#). The sharing and collaboration permissions of the dataset have been enabled.
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
5. On the displayed page, locate the dashboard you want to share and click **Sharing and Collaboration** in the **Operation** column.

Figure 6-37 Sharing and Collaboration Configuration



6. Select the permissions you want to grant.
 - **Edit Authorization:** Enabling this allows you to grant edit permissions to members, including editing and deleting dashboards, as well as performing data analysis based on the dashboard.
 - **Export Authorization:** Enabling this allows you to grant export permissions to members, allowing them to export dashboards, as well as perform data analysis based on the dashboard.
 - **View Authorization:** This is a customer service member permission that only allows data analysis based on the dashboard.
7. Select the objects you want to authorize.
 - **User:** Users can obtain editing and usage permissions for the dashboard.
 - **User Group:** When a user group is authorized, all users within the group will have relevant permissions on the dashboard.
8. Select the users and user groups that you want to authorize.

6.8 Managing Dashboards

If your analysis scenario changes and you need to modify your dashboard content, DataArts Insight provides editing and deletion operations for your dashboard. This section describes how to edit a dashboard.

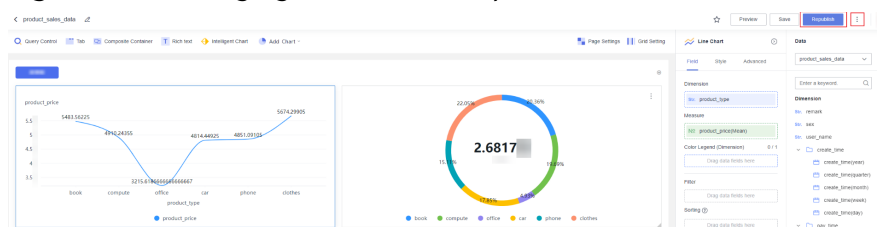
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Changing the Dashboard Publish Status

1. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
2. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
3. Click the name of the dashboard you want to publish.
 - Publishing the dashboard: Click **Save and Publish** in the upper right corner of the page.
 - Taking the dashboard offline: Click  in the upper right corner of the page and select **Offline**.

Figure 6-38 Changing the dashboard publish status



Managing Published Dashboards

You can edit, preview, view, share, and collaborate on published dashboards.

1. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
2. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
3. On the displayed page, locate the dashboard you want to manage, and click **Edit**, **Preview**, **Sharing and Collaboration**, or **Delete** in its **Operation** column as needed.

Figure 6-39 Managing a published dashboard

Dashboard					
Name	Status	Creator	Modified By	Modified @	Operation
product_sales_data	Published	et_modembi_30034900_01	et_modembi_30034900_01	2024/09/13 20:00:12	Edit Preview View Sharing and Collaboration

Managing a Dashboard That Has Been Taken Offline

You can edit, preview, share, collaborate on, and delete dashboards that have been taken offline.

1. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
2. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
3. On the displayed page, locate the dashboard you want to manage, and click **Edit**, **Preview**, **Sharing and Collaboration**, or **Delete** in its **Operation** column as needed.

Figure 6-40 Managing a dashboard that has been taken offline



Name	Status	Creator	Modified By	Modified	Operation
product_sales_data	Offline	ai_modernbi_20234900_01	ai_modernbi_20234900_01	2024/10/22 19:59:23	Edit Preview Sharing and Collaboration Delete

6.9 Managing Charts

DataArts Insight supports switching between different chart types as your business data changes and you need to adjust the chart display. This section describes how to switch the chart type.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Switching the Chart Type

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
2. Click the name of the desired dashboard.
3. Click  in the upper right corner of the chart and select **Switch chart type**.
4. Click the target chart type. The system automatically updates the chart.

Figure 6-41 Switching the chart type



Copying a Chart

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
2. Click the name of the desired dashboard.
3. Click  in the upper right corner of the chart and select **Copy**. The system creates a copy of the chart in the dashboard.

Viewing Data

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
2. Click the name of the desired dashboard.
3. Click  in the upper right corner of the chart and select **View data**. The data viewing dialog box appears.
 - **Data Type:** The options are **Formatted data** and **Raw data**.
 - To view the data, click the copy button in the upper right corner, paste the data in the related file, and click **Export Excel**.

Exporting Files

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
2. Click the name of the desired dashboard.
3. Click  in the upper right corner of the chart and select **Export File**.
4. In the dialog box that appears, set the parameters based on [Table 6-168](#).

Table 6-168 Parameters for exporting a file

Parameter	Description
Export Name	Name of the control to be exported. The default name is in <i>Chart title_Date_Export time</i> format.
File Format	File format. The options are Image , PDF , EXCEL , and WORD .
Watermarking	If you select Display watermark , the exported file will show the watermark. If you select Hide watermark , the exported file will not show the watermark.
Export Path	You can export the chart to a local host.

5. Click **OK**.

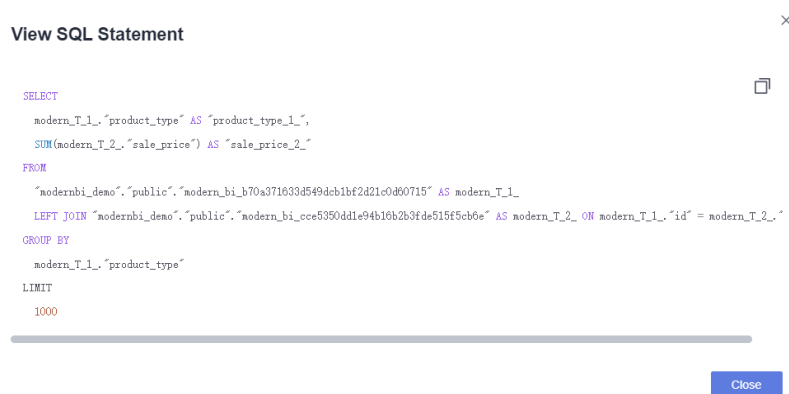
NOTE

Be cautious when exporting data as there may be a risk of personal data leakage.

Viewing SQL Statements

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
2. Click the name of the desired dashboard.
3. Click  in the upper right corner of the chart and select **View SQL Statement**.

Figure 6-42 Viewing SQL statements



Fixing and Deleting a Chart

1. In the navigation pane on the left, choose **Data Analytics > Dashboard**.
2. Click the name of the desired dashboard.
3. Click  in the upper right corner of the chart and select **Fix** or **Delete**.
 - **Fix:** After clicking **Fix**, you cannot move the chart. To undo the fixing, click  in the upper right corner of the chart and select **Unfix**.
 - **Delete:** Clicking **Delete** will delete the chart. Once deleted, the chart cannot be restored.

6.10 Viewing a Dashboard on a Mobile Device

You can share a dashboard to a mobile device for viewing.

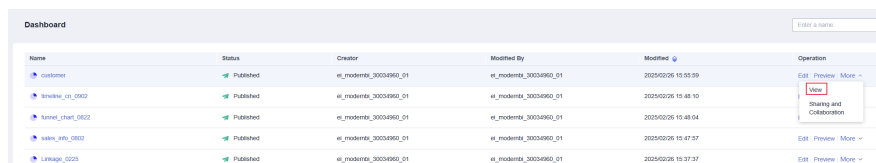
Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard has been created by referring to [Creating a Dashboard](#).

Procedure

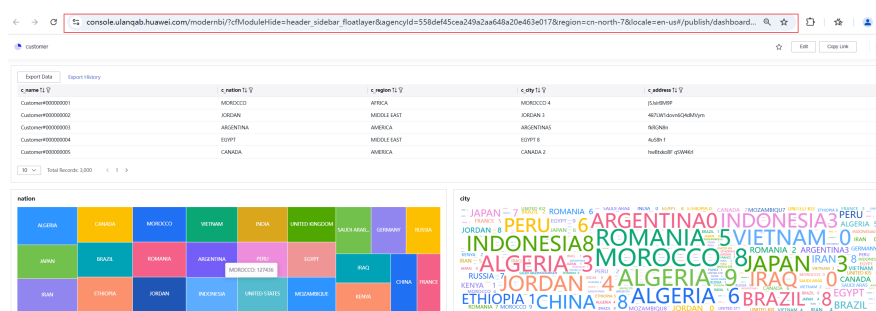
1. Log in to the DataArts Insight console.

- Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
- On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- In the navigation pane on the left, choose **Data Analytics > Dashboard**.
- Locate the dashboard you want to view, click **More** in its **Operation** column, and select **View**.

Figure 6-43 Viewing a dashboard

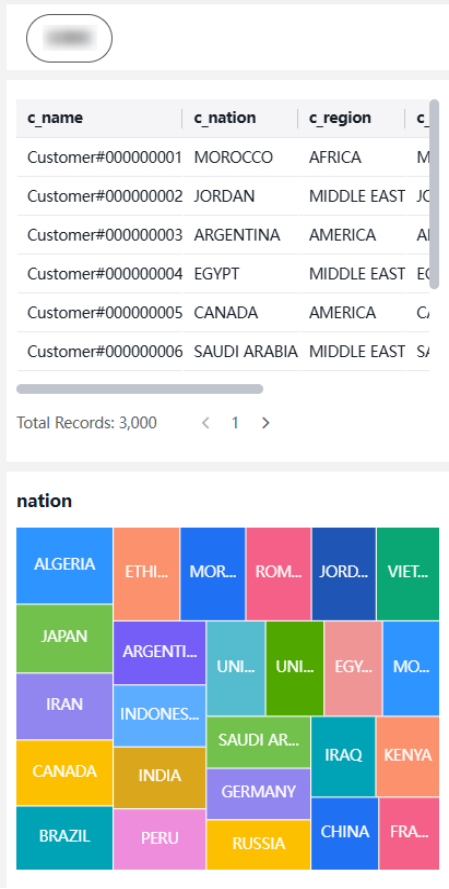
Name	Status	Creator	Modified By	Modified	Operation
customer	Published	et_mockdata_30034960_01	et_mockdata_30034960_01	2025/02/26 15:55:59	Edit Preview More
Wmshw_01_0002	Published	et_mockdata_30034960_01	et_mockdata_30034960_01	2025/02/26 15:48:10	View
Wmshw_01_0002	Published	et_mockdata_30034960_01	et_mockdata_30034960_01	2025/02/26 15:48:04	Edit Preview More
Wmshw_01_0002	Published	et_mockdata_30034960_01	et_mockdata_30034960_01	2025/02/26 15:47:57	Edit Preview More
Language_0225	Published	et_mockdata_30034960_01	et_mockdata_30034960_01	2025/02/26 15:37:37	Edit Preview More

- Obtain the dashboard URL in the browser's address box.

Figure 6-44 Obtaining the URL

- Enter the obtained URL on a mobile device to view the dashboard.

Figure 6-45 Viewing the dashboard on a mobile device



 NOTE

You can also access the URL of the embedded analytics on a mobile device to view the embedded analytics. For more information on embedded analytics, see [Embedded Analytics](#).

7 Creating a Large Screen

7.1 Large Screen Overview

Data large screens are crucial forms and carriers of data visualization, capable of displaying key business metrics such as sales figures and inventory status. Through dynamic charts, real-time numbers, and interactive interfaces, data large screens make complex information easier to understand and analyze. They are widely used in exhibition centers, control centers, and other important locations, effectively meeting the demand for high-visualization data display scenarios in enterprises.

Functions

DataArts Insight's large screen feature is designed to create a highly visual, user-friendly tool to build large screens.

- It comes with a variety of industry templates and content materials built-in, allowing for one-click application installation and quick setup of a visually stunning large screen.
- It combines visualization with storytelling techniques, supporting multi-scene and multi-page narrative displays.
- It further enhances the precision of chart configuration and supports animation effects, making it more conducive to atmosphere rendering.
- It allows for one-click reuse of data indicators and analysis processing, resulting in high processing efficiency.

7.2 Creating a Large Screen

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. Then, select an enterprise project in the upper right corner.

3. You can create a large screen in any of the following ways:

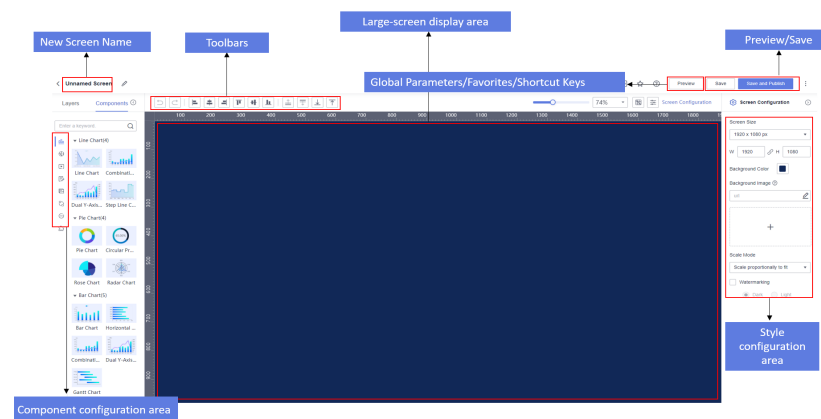
Method 1: Click **Workspace** in the top menu of the console and click **Create Screen** (Figure 7-1).

Method 2: Click **Project** on the top menu of the console. On the displayed page, click the name of the desired project. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.

Method 3: Click **Project** on the top menu of the console. On the displayed page, click the name of the desired project. In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, locate the desired dataset, click **More** in its **Operation** column, and select **Create Screen**.

Method 4: Click **Project** on the top menu of the console. On the displayed page, click the name of the desired project. In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, click the name of the desired dataset. On the displayed dataset editing page, click **Create Screen** in the upper right corner.

Figure 7-1 Large screen page

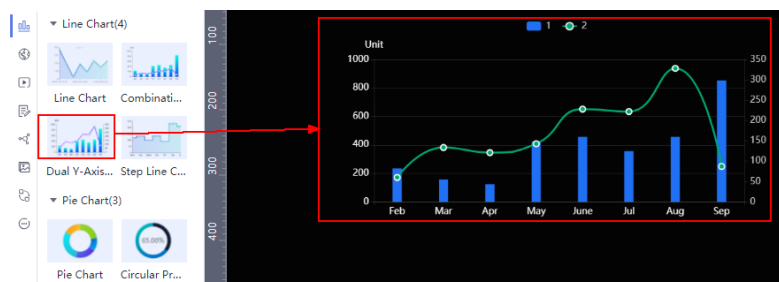


Step 2: Add Components

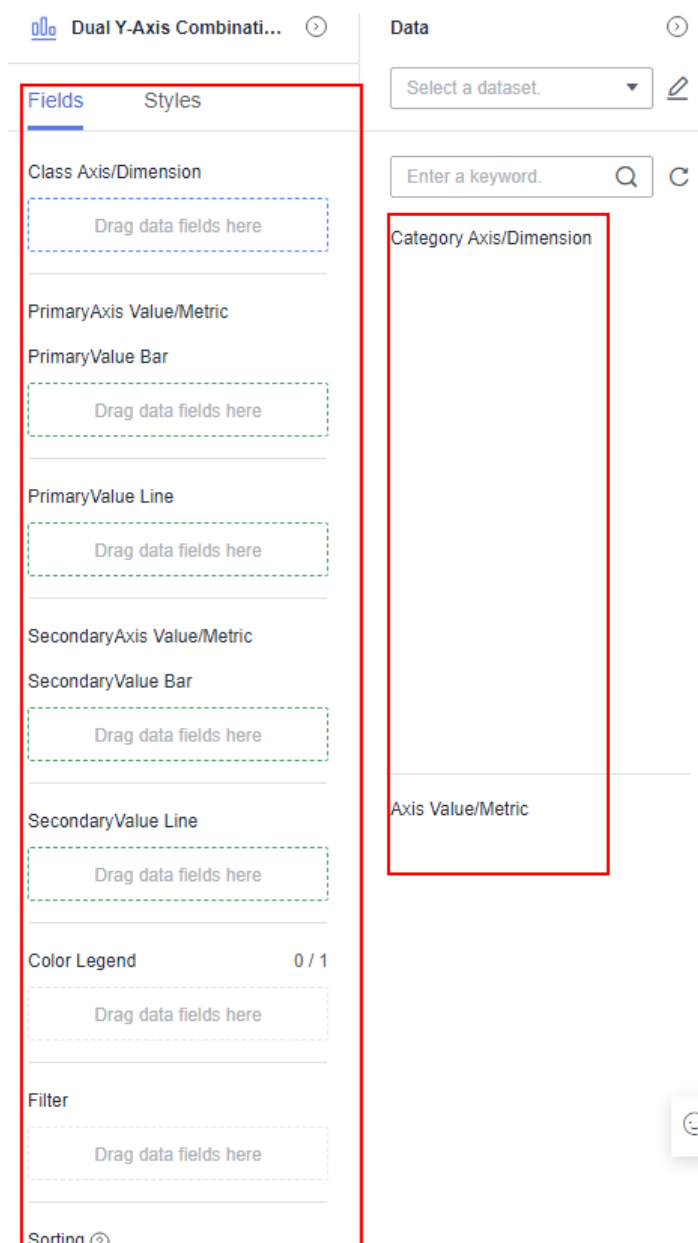
After entering a large screen, you will need to add relevant components and configure their fields and styles. For details about more operations on components, see [Large Screen Components](#).

Large screen components are the main building blocks of large screens. They offer a variety of chart types, maps, multimedia, text, materials, interactive features, other components, and custom components to meet diverse large screen building needs. This part describes how to create and configure large screen components.

1. In the left pane, drag required components to the canvas. You can also click to add components. In this example, we will use a dual Y-axis combination chart to demonstrate how to create and configure large screen components.

Figure 7-2 Example of a dual y-axis combination chart

2. Select a dataset for the component, drag required fields from the **Data** area in the right pane to their corresponding positions, and configure the fields. In this example, a line chart is used.

Figure 7-3 Configuring fields

3. Configure the chart style by setting the following parameters:
 - **Global Style:** Adjust the font on the icons.
 - **Line Style:** This configuration can only appear within the column chart type.
 - **Margin:** The distance between the chart content and the chart border.
 - **X Axis:** Configure the text, axis labels, coordinate axis, and grid lines on the X-axis of the chart.
 - **Y Axis:** Configure the text, axis labels, axis units, coordinate axis, and grid lines on the Y-axis of the chart.
 - **Legend:** Configure the text and layout of the legend.
 - **Tooltips:** Configure the trigger type, color, font size, and font weight of the tooltip.
 - **Animation:** Configure the entrance animation, animation effects, series-by-series animation, update animation time, and whether to start from the previous position.
 - **Value Settings:** Support setting the context and unit. The context supports Simplified Chinese and English. Units support automatic, none, hundred, thousand, ten thousand, hundred million, and trillion.
 - **Series:** Configure the color scheme of the series.

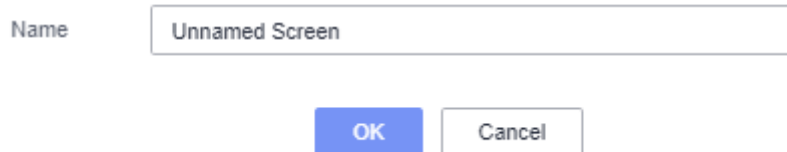
Step 3: Save or Save and Publish the Large Screen

Once the large screen fields and style are configured, click **Update** in the lower part. Then, click **Save and Publish** or **Save** in the upper right corner of the page.

- **Save:** After a large screen is saved, you cannot view it on the page.
In the displayed **Save Screen** dialog box, enter a screen name.

Figure 7-4 Save and Publish

Save Screen



The image shows a 'Save Screen' dialog box. It has a label 'Name' on the left and a text input field on the right containing the text 'Unnamed Screen'. Below the input field are two buttons: 'OK' (highlighted in blue) and 'Cancel' (white with a grey border).

NOTE

The large screen name can contain up to 32 characters. It must be specified and cannot start or end with a space. Only letters, numbers, spaces, underscores (_), and hyphens (-) are allowed.

- **Favorites:** After favoriting a large screen, you can quickly find it on the **My Favorites** tab of the **Workspace** page.
- **Save and Publish:** Once a large screen is saved and published, you can view it on the page. In the displayed **Save and Publish Screen** dialog box, enter a large screen name.

7.3 Setting Global Parameters

Large Screen Editing Page

Figure 7-5 Large screen editing page

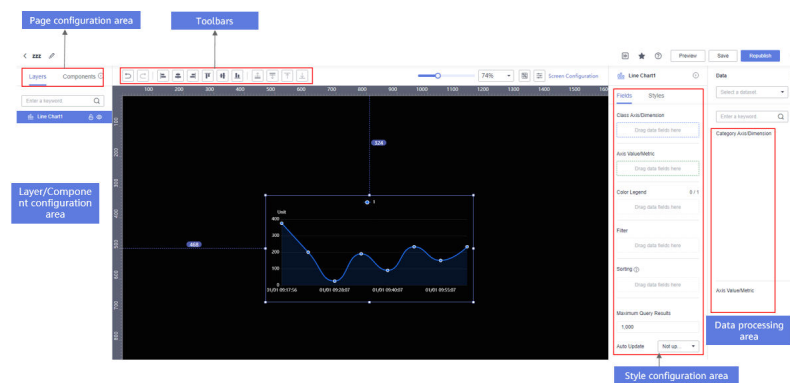


Table 7-1 Large screen areas

Area	Description
Toolbar	In the toolbar, you can align components to the left, center horizontally, align to the right, align to the top, center vertically, align to the bottom, bring to the front, or send to the back.
Page configuration area	Layers: Multiple layers are supported. You can configure layer groups, rotate layers, lock and hide layers, and more. Components: Add a variety of components to your large screen, including rich text, media, interactive controls, and materials to meet diverse needs.
Data processing area	You can select datasets, add data, modify data formats, and process data.
Style configuration area	Area for configuring the styles of data reports and components.

Toolbar

1. **Undo:** Click the undo button in the toolbar if you make a mistake in setting parameters.
2. **Redo:** Click the redo button in the toolbar to restore the undo step if you make a mistake in undoing.
3. **Align Left:** Align to the left margin based on the selected component or combination. If you select two or more components or combinations, the alignment rule is to align with the leftmost component or combination.

4. **Center Horizontally:** Align to the center based on the middle position of the selected element.
5. **Align Right:** Align to the right margin based on the selected component or combination. If you select two or more components or combinations, the alignment rule is to align with the rightmost component or combination.
6. **Align Top:** Align to the top margin based on the selected component or combination. If you select two or more components or combinations, the alignment rule is to align with the topmost component or combination.
7. **Center Vertically:** Align to the center based on the middle position of the selected element.
8. **Align Bottom:** Align to the bottom margin based on the selected component or combination. If you select two or more components or combinations, the alignment rule is to align with the bottommost component or combination.
9. **Move Down:** Move the component or combination down one layer.
10. **Move Up:** Move the component or combination up one layer.
11. **Pin to Top:** Bring the component to the front of the canvas.
12. **Pin to Bottom:** Send the component to the back of the canvas.
13. **Zoom Canvas:** Adjust the canvas zoom ratio, with a minimum value of 10% and a maximum value of 200%. You can adjust it through the scroll bar or drop-down box, and also support manually entering the zoom ratio. The shortcut key is Ctrl + mouse wheel.

Shortcut Keys

Table 7-2 Keyboard shortcut keys

Operation	win
Undo	Ctrl+Z
Redo	Ctrl+Y
Duplicate	Ctrl+D
Delete	Backspace
Multi-select	Ctrl + mouse click
Group	Ctrl+G
Ungroup	Shift+Ctrl+G
Pin to Top	Ctrl+Alt+]
Pin to Bottom	Ctrl+Alt+[
Move Up	Ctrl+]
Move Down	Ctrl+[
Lock/Unlock	Ctrl+l
Unhide/Hide	Ctrl+h

Operation	win
Move Component Left/Right/Up/Down	← → ↑ ↓
Preview	F9
Save	Ctrl+s
Zoom Canvas	Ctrl + mouse wheel
Pan Canvas Left/Right	Shift + mouse wheel
Pan Canvas Up/Down	Mouse wheel
Drag Canvas	Press and hold space bar and click mouse to drag

Setting Large Screen Parameters

Set the following large screen parameters:

- Adjust the canvas zoom ratio, with a minimum value of 10% and a maximum value of 200%. You can adjust it through the scroll bar or drop-down box, and also support manually entering the zoom ratio. The shortcut key is Ctrl + mouse wheel.

Figure 7-6 Adjusting the size of the large screen in the canvas area using the slider

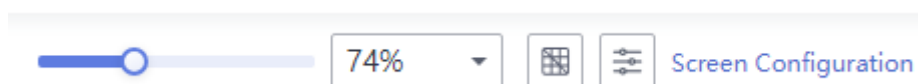
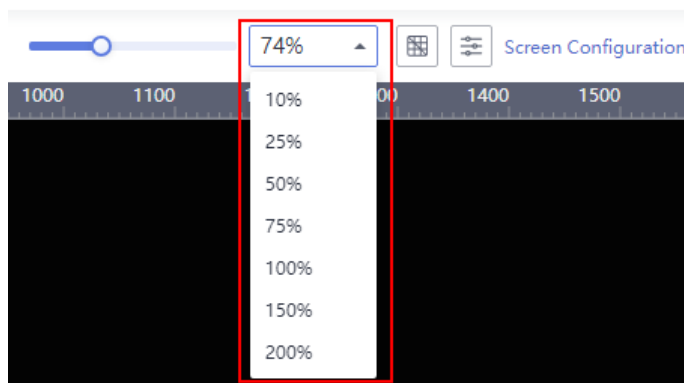
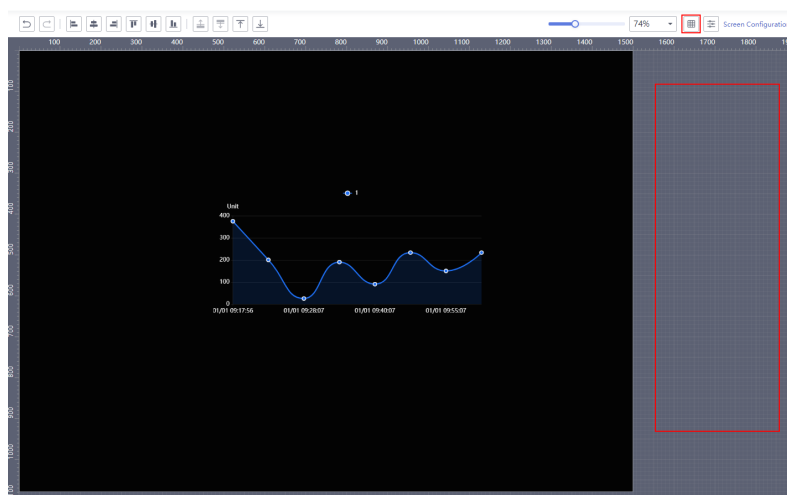
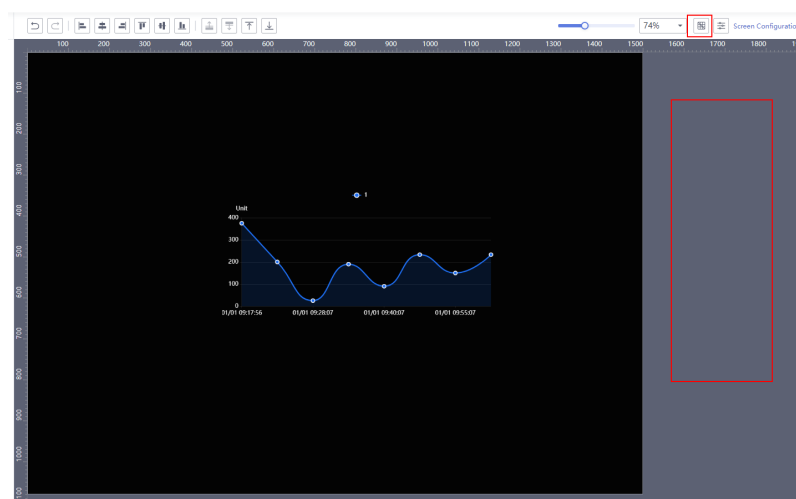


Figure 7-7 Adjusting the size of the large screen in the canvas area using the drop-down list



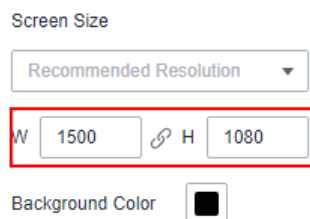
- Toggle the grid on or off in the canvas.

Figure 7-8 Toggling the grid on**Figure 7-9** Toggling the grid off

- Set the following large screen parameters:
 - There are four screen sizes to choose from: 1280×720px, 1920×1080px, 2560×1440px, and 3840×2160px. You can control them through a drop-down list or customize the height and width of the screen by inputting your own values.

Figure 7-10 Controlling the screen size through a drop-down list

Figure 7-11 Controlling the screen size by customizing the height and width



Screen Size

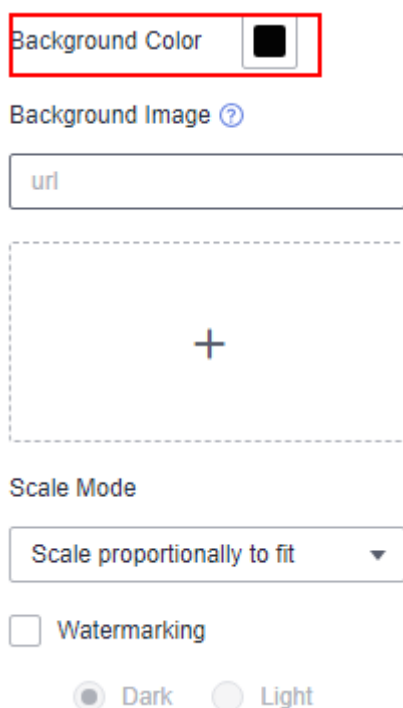
Recommended Resolution ▼

W 1500 H 1080

Background Color 

- Adjust the background color of the canvas using the background color option.

Figure 7-12 Background color



Background Color 

Background Image ?

url



Scale Mode

Scale proportionally to fit ▼

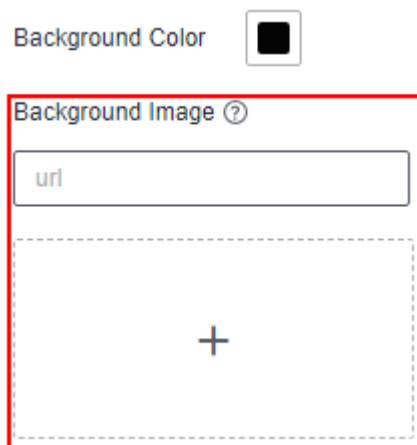
☐ Watermarking

☒ Dark ☐ Light

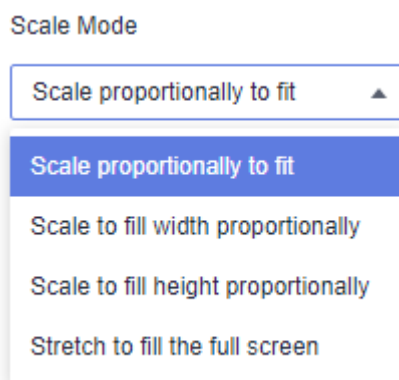
- Background image of the screen. You can upload the background image as required.

 NOTE

Use this feature with caution as it may result in the leakage of your background image data.

Figure 7-13 Background image

- There are four screen scaling modes to choose from: proportional scaling, proportional scaling to width, proportional scaling to height, and full-screen stretching.

Figure 7-14 Zoom mode**Table 7-3** Large screen parameters

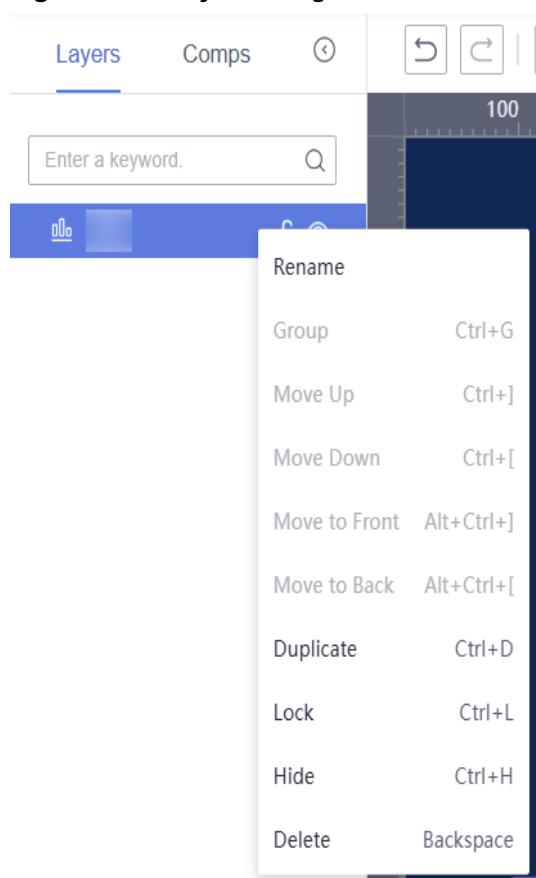
Parameter	Description	Default Value
Size of the large screen in the canvas area	Size of the large screen displayed on the canvas, in percentage. The minimum value is 10% and the maximum value is 200%.	100%
Grid	Toggle the grid on or off on the canvas.	Toggle it on
Screen size	There are four screen sizes to choose from: 1280×720px, 1920×1080px, 2560×1440px, and 3840×2160px.	1920×1080px
Background color	Adjust the background color of the canvas using the background color option.	Black

Parameter	Description	Default Value
Background image	You can upload your own background images for the screen as per your requirements.	None
Zoom mode	There are four screen scaling modes to choose from: proportional scaling, proportional scaling to width, proportional scaling to height, and full-screen stretching.	Proportional scaling

Layer Group

Layer configuration can enhance the layout of the canvas, where each element in the canvas is considered a layer. This part explains how to configure layer groups. The following operations can be performed on layers:

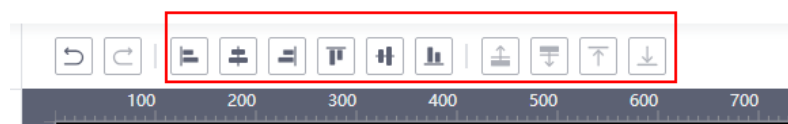
- **Group:** Select two or more components by holding down Ctrl and clicking, then right-click to group them. The shortcut key for grouping is **Ctrl+Shift+G**.
- **Move Down:** Move the component down one layer in the layer list. The shortcut key is **Ctrl+]**.
- **Move Up:** Move the component up one layer in the layer list. The shortcut key is **Ctrl+[**.
- **Move to Front:** Move the component to the front of the layer list. The shortcut key is **Alt+Ctrl+]**.
- **Move to Back:** Move the component to the back of the layer list. The shortcut key is **Alt+Ctrl+[**.
- **Duplicate:** Quickly copy a component or group on the screen. The shortcut key is **Ctrl+D**.
- **Hide:** Hide a component or group. The shortcut key is **Ctrl+H**.
- **Rename:** Rename a component or group.

Figure 7-15 Layer configuration

Flexibly Adjusting the Canvas Layout

This section explains the layout options for large screens, which allow for flexible adjustments to enhance the display of components on the canvas.

Compared to dashboards, large screens offer more flexibility in adjusting the canvas. You can freely drag and drop components and move them pixel by pixel. The toolbar on the top left can also be used to align components or groups to the left, center, or right, as well as to align them to the top, middle, or bottom, or to bring them to the front or back.

Figure 7-16 Toolbar

Reference Lines

To improve the usability of the large screen editor, DataArts Insight allows you to pull out reference lines on the left and top of the canvas, which always remain on

top of the layers. The main function of reference lines is shown in [Alignment](#), [Definition](#), and [Positioning](#).

Figure 7-17 Alignment

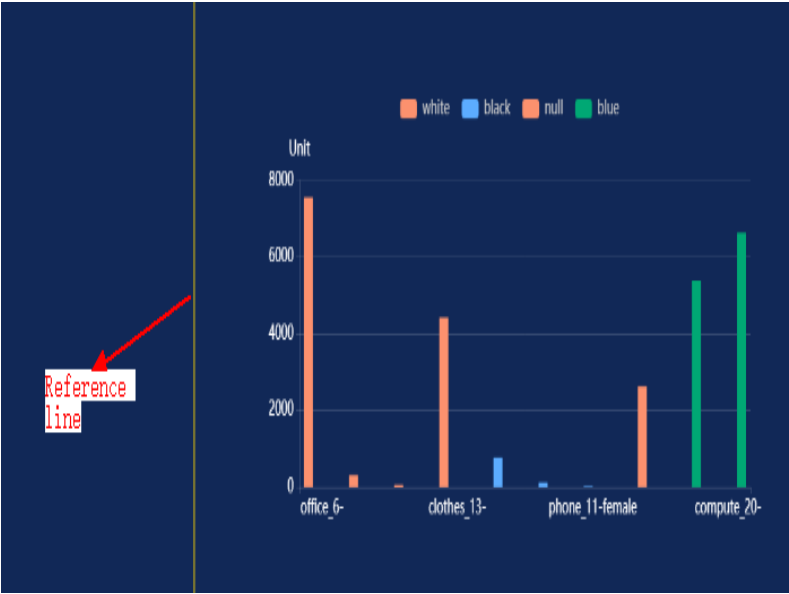


Figure 7-18 Definition

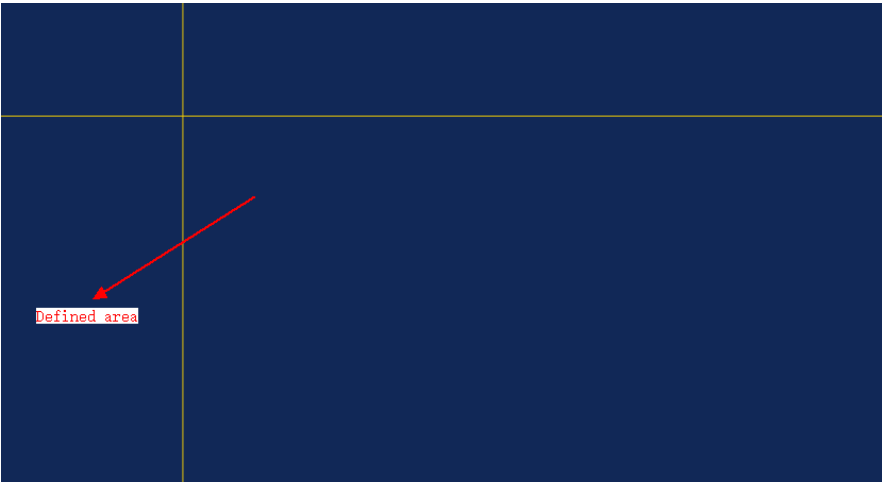


Figure 7-19 Positioning

7.4 Large Screen Components

7.4.1 Common Charts

7.4.1.1 Creating a Common Chart

Charts can help you present data analysis results in a clear and intuitive way. This section introduces different types of charts in large screens and their use cases, to help you in quickly selecting the appropriate chart for data presentation and display.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. The **Common charts** page shows common chart templates.
6. Drag or click a chart template to the canvas area.

7. In the data configuration area on the right, select a dataset.
8. Select the required chart type and configure fields and styles.
9. Once the large screen fields and style are configured, click **Update** in the lower part. Then, click **Save and Publish** or **Save** in the upper right corner of the page.

Chart Types and Description

Each chart has its use cases and data elements (fields that form the chart). The following describes the use cases, data elements, and examples of various charts.

Table 7-4 Use cases

Type	Chart	Description	Data Element
Line Chart	Line Chart	Line charts are used to display the trend of data over equal time intervals.	Class Axis/ Dimension Axis Value/ Metric Color Legend
	Combination Chart	Combination charts support dual-axis display of data with different magnitudes, and support data display scenarios for conventional line and column chart combinations. • In a combination chart, the line chart can display continuous data that changes over time (based on commonly used ratios), making it ideal for displaying the trend of data over equal time intervals. • In a combination chart, the bar chart can compare the differences between various groups of data.	Class Axis/ Dimension Axis Value/ Metric Color Legend
	Dual Y-Axis Combination Chart	Data of different magnitudes is displayed on two axes. • In a combination chart, the line chart can display continuous data that changes over time (based on commonly used ratios), making it ideal for displaying the trend of data over equal time intervals. • In a combination chart, the bar chart can compare the differences between various groups of data.	Class Axis/ Dimension Primary Axis Value/ Metric Secondary Axis Value/ Metric Color Legend

Type	Chart	Description	Data Element
	Step Line Chart	A step graph is a graphical representation of continuous data distribution.	Class Axis/ Dimension Axis Value/ Metric Color Legend
Pie Chart	Pie Chart	A pie chart shows the proportion of each item's size to the total sum of all items in the data.	Class Axis/ Dimension Axis Value/ Metric Color Legend
	Rose Chart	A rose chart displays comparisons between different data points and is particularly useful for categorical data.	Class Axis/ Dimension Axis Value/ Metric Color Legend
	Circular Progress Bar	A circular progress bar provides a visual representation of the progress of a specific indicator.	Progress Value/ Target Value/ Metric
	Radar Chart	A radar chart can display analyzed data or ratios, allowing you to easily check various data indicators and trends.	Class Axis/ Dimension Axis Value/ Metric Color Legend
Bar Chart	Bar Chart	Bar charts are useful for comparing differences between data groups and displaying changes in data over a period of time.	Class Axis/ Dimension Axis Value/ Metric Color Legend
	Horizontal Bar Chart	A horizontal bar chart is similar to a column chart, but displays data horizontally to allow for easy comparison of data sizes and differences between items.	Class Axis/ Dimension Axis Value/ Metric Color Legend

Type	Chart	Description	Data Element
	Combination Chart	Combination charts support dual-axis display of data with different magnitudes, and support data display scenarios for conventional line and column chart combinations. • In a combination chart, the line chart can display continuous data that changes over time (based on commonly used ratios), making it ideal for displaying the trend of data over equal time intervals. • In a combination chart, the bar chart can compare the differences between various groups of data.	Class Axis/ Dimension Axis Value/ Metric Color Legend
	Dual Y-Axis Combination Chart	Data of different magnitudes is displayed on two axes. • In a combination chart, the line chart can display continuous data that changes over time (based on commonly used ratios), making it ideal for displaying the trend of data over equal time intervals. • In a combination chart, the bar chart can compare the differences between various groups of data.	Class Axis/ Dimension Axis Value/ Metric Secondary Axis Value/ Metric Color Legend
	Gantt Chart	A Gantt chart is used to display the progress of various tasks.	Title/ Dimension Name/ Dimension Status/ Dimension Start Time/ Dimension End Time/ Dimension

7.4.1.2 Line Chart

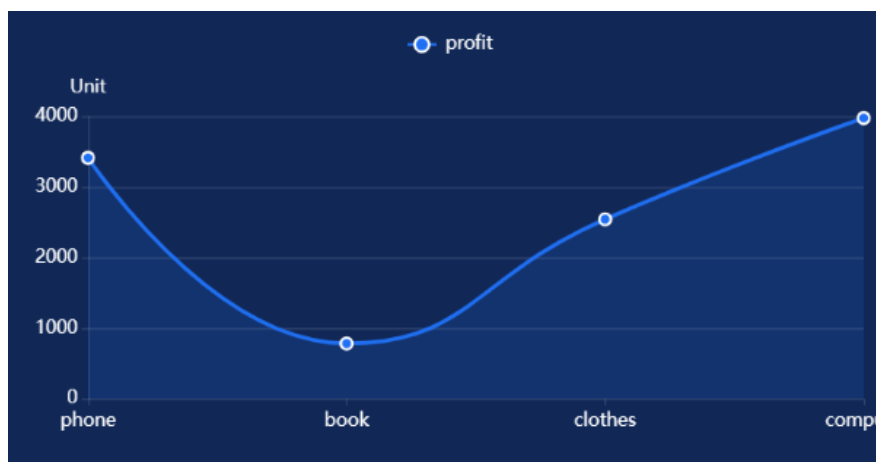
7.4.1.2.1 Line Chart

This section describes parameters for a line chart.

Procedure

1. In the component area on the left of the large screen page, click **Line Chart**.
2. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
3. Set the parameters on the **Fields**, **Styles**, and **Interactions** tab pages.
4. Click **Update** on the **Fields** tab. The chart data is automatically updated.

Figure 7-20 Line chart



5. Click **Save** or **Save and Publish** in the upper right corner to save the large screen.
6. In the **Save Screen** dialog box that appears, enter the large screen name and click **OK**.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-5 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
3. Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
4. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-6 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

This part describes the style parameters of a line chart.

Table 7-7 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-8 Global style and line style

Parameter	Description
Font	Font of the text in the chart.
Smooth Curve	The range of the smooth curve is 0 to 1.

Table 7-9 Margin

Parameter	Description
Top	The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Bottom	The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Left	The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Parameter	Description
Right	The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Table 7-10 X-axis and Y-axis

Type	Parameter	Description
X Axis	Show/Hide X Axis	If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
	Text	Text style of the X axis, including Font Size, Color, Font Weight, Angle, and more. • Data Type: data type of the X axis. The options are Numeric, Category, and Time. • Divisions: When Data Type is set to Numeric or Time, the number of displayed labels is automatically displayed based on the value of Divisions. This parameter is invalid when Data Type is set to other values. • Axis Color: color of the X axis.
	Zoom	Zoom ratio of the X axis. The range of the end value depends on the start value.
	Show/Hide Gridlines	If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed. You can set the line style of grid lines, including solid, dashed, and dotted lines, as well as their color.
Y Axis	Show/Hide Y Axis	If the checkbox is selected (☒), the Y axis is displayed. If the checkbox is not selected (☐), the Y axis is not displayed.
	Text	Text style of the Y axis, including Font Size , Color , Font Weight , and Angle .
	Axis Label	Text style of the Y axis, including Display Format, Minimum Value, Maximum Value, and Divisions. • The display format options include automatic, rounding, and various decimal places ranging from one to five. • The minimum value can be set to either the data's minimum value or rounded automatically. • The maximum value can be set to either the data's maximum value or rounded automatically. • The number of divisions cannot be less than one.

Type	Parameter	Description
	Axis Unit	Unit and color of the Y axis.
	Grid Line	- If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed. Line Style: You can set the line style of grid lines, including solid, dashed, and dotted lines, as well as their color.

Table 7-11 Legend

Parameter	Description
Show/Hide Legend	If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
Text	Text style of the legend, including Font Size , Color , and Font Weight .
Layout	Position of the legend. The options are Top center , Top left , Top right , Bottom center , Bottom left , and Bottom right .

Table 7-12 Tooltips

Parameter	Description
Show/Hide tooltips	Select (☒) or deselect (☐) the check box to show or hide the tooltips when you preview or view a published component.
Trigger Type	Trigger type of tooltips. The options are Coordinate Axis and Data Item .
Color	Font color of tooltips.
Font Size	Font size of tooltips.
Font Weight	Font weight of tooltips.

Table 7-13 Animation

Parameter	Description
Show/Hide Animation	If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.

Parameter	Description
Intro Animation Duration (ms)	Duration of the first rendering of the component, in ms. NOTE The value of the intro animation cannot be 0. The default value is 1000 ms.
Animation Effect	The system provides multiple common animation slow-moving effects.
Animate Sequentially	If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
Update Animation (ms)	Animation duration when the component data is updated, in ms.
Start from Previous Position	If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Table 7-14 Value settings and series

Parameter	Description
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
Series	• Color Scheme: Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes. • Series: Supports configuration of series colors (solid and gradient colors). Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced > Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-15](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **→**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**
 - i. Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
 - ii. Select the associated chart and click **OK**.

Table 7-15 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**
 - a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
 - b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
 - c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-16 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.

Parameter	Description
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect.
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

7.4.1.2.2 Combination Chart

This section describes parameters for a combination chart.

Procedure

1. In the component area on the left of the large screen page, click **Combination Chart**.
2. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
3. Set the parameters on the **Fields**, **Style**, and **Interactions** tab pages.
4. Click **Update** on the **Fields** tab. The chart data is automatically updated.

Figure 7-21 Combination chart

5. Click **Save** or **Save and Publish** in the upper right corner to save the large screen.
6. In the **Save Screen** dialog box that appears, enter the large screen name and click **OK**.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-17 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

- Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
- Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
- Set a filter.
 - Find the data field you need in the dimension and metric lists within the data column.
 - Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - Click **OK**.

Table 7-18 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes the style parameters of a combination chart.

Table 7-19 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-20 Global style and line style

Parameter	Description
Font	Font of the text in the chart.
Smooth Curve	The range of the smooth curve is 0 to 1.

Table 7-21 Bar style

Parameter	Description
Bar Width	Bar width, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 1 to 100.
Bar Corner Radius	Bar corner radius, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 0 to 100.
Series Spacing	Series spacing, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from -100 to 100.

Table 7-22 Margin

Parameter	Description
Top	The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Bottom	The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Left	The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Right	The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Table 7-23 X-axis and Y-axis

Type	Parameter	Description
X Axis	Show/Hide X Axis	If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
	Text	Text style of the X axis, including Font Size , Color , and Font Weight .
	Axis Label	Axis labels can be displayed or hidden. You can set the angle of the axis label. The value ranges from -90 to 90.
	Show/Hide Gridlines	If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.
Y Axis	Show/Hide Y Axis	If the checkbox is selected (☒), the Y axis is displayed. If the checkbox is not selected (☐), the Y axis is not displayed.
	Text	Text style of the Y axis, including Font Size , Color , Font Weight , and Angle .

Type	Parameter	Description
	Axis Label	Text style of the X axis, including Font Size, Color, and Font Weight. • The display format options include automatic, rounding, and various decimal places ranging from one to five. • The minimum value can be set to either the data's minimum value or rounded automatically. • The maximum value can be set to either the data's maximum value or rounded automatically. • The number of divisions cannot be less than one.
	Axis Unit	Unit and color of the Y axis.
	Coordinate axis	Color of the Y axis.
	Grid Line	• If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed. • Color: color of the grid lines.

Table 7-24 Legend

Parameter	Description
Show/Hide Legend	If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
Text	Text style of the legend, including Font Size , Color , and Font Weight .
Layout	Position of the legend. The options are Top center , Top left , Top right , Bottom center , Bottom left , and Bottom right .

Table 7-25 Tooltips

Parameter	Description
Show/Hide tooltips	Select (☒) or deselect (☐) the check box to show or hide the tooltips when you preview or view a published component.
Trigger Type	Trigger type of tooltips. The options are Coordinate Axis and Data Item .
Color	Font color of tooltips.

Parameter	Description
Font Size	Font size of tooltips.
Font Weight	Font weight of tooltips.

Table 7-26 Animation

Parameter	Description
Show/Hide Animation	If the checkbox is selected (☒) , animations are displayed. If the checkbox is not selected (☐) , animations are not displayed.
Intro Animation Duration (ms)	Duration of the first rendering of the component, in ms. NOTE The value of the intro animation cannot be 0. The default value is 1000 ms.
Animation Effect	The system provides multiple common animation slow-moving effects.
Animate Sequentially	If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
Update Animation (ms)	Animation duration when the component data is updated, in ms.
Start from Previous Position	If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Table 7-27 Value settings and series

Parameter	Description
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
Series	● Color Scheme: Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes. ● Series: Supports configuration of series colors (solid and gradient colors). Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-28](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **→**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- Select the associated chart and click **OK**.

Table 7-28 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**

- On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
- In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
- Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

 NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-29 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

7.4.1.2.3 Dual Y-Axis Combination Chart

This section describes the parameters of a dual Y-axis combination chart, which is a chart that combines both a line chart and a bar chart.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-30 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .

Parameter	Description
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
3. Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
4. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click 🔍 next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-31 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes the style parameters of a dual Y-axis combination chart.

Table 7-32 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-33 Global style and line style

Parameter	Description
Font	Font of the text in the chart.
Smooth Curve	The range of the smooth curve is 0 to 1.

Table 7-34 Bar style

Parameter	Description
Bar Width	Bar width, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 1 to 100.
Bar Corner Radius	Bar corner radius, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 0 to 100.
Series Spacing	Series spacing, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from -100 to 100.

Table 7-35 Margin

Parameter	Description
Top	The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Bottom	The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Left	The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Right	The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Table 7-36 X-axis and Y-axis

Type	Parameter	Description
X Axis	Show/Hide X Axis	If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
	Text	Text style of the X axis, including Font Size , Color , and Font Weight .
	Axis Label	Axis labels can be displayed or hidden. You can set the angle of the axis label. The value ranges from -90 to 90.
	Show/Hide Gridlines	If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.
Y Axis	Show/Hide Y Axis	If the checkbox is selected (☒), the Y axis is displayed. If the checkbox is not selected (☐), the Y axis is not displayed.
	Text	Text style of the Y axis, including Font Size , Color , Font Weight , and Angle .

Type	Parameter	Description
	Axis Label	Text style of the X axis, including Font Size, Color, and Font Weight. • The display format options include automatic, rounding, and various decimal places ranging from one to five. • The minimum value can be set to either the data's minimum value or rounded automatically. • The maximum value can be set to either the data's maximum value or rounded automatically. • The number of divisions cannot be less than one.
	Axis Unit	Unit and color of the Y axis.
	Coordinate axis	Color of the Y axis.
	Grid Line	• If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed. • Color: color of the grid lines.

Table 7-37 Legend

Parameter	Description
Show/Hide Legend	If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
Text	Text style of the legend, including Font Size , Color , and Font Weight .
Layout	Position of the legend. The options are Top center , Top left , Top right , Bottom center , Bottom left , and Bottom right .

Table 7-38 Tooltips

Parameter	Description
Show/Hide tooltips	Select (☒) or deselect (☐) the check box to show or hide the tooltips when you preview or view a published component.
Trigger Type	Trigger type of tooltips. The options are Coordinate Axis and Data Item .
Color	Font color of tooltips.

Parameter	Description
Font Size	Font size of tooltips.
Font Weight	Font weight of tooltips.

Table 7-39 Animation

Parameter	Description
Show/Hide Animation	If the checkbox is selected (☒) , animations are displayed. If the checkbox is not selected (☐) , animations are not displayed.
Intro Animation Duration (ms)	Duration of the first rendering of the component, in ms. NOTE The value of the intro animation cannot be 0. The default value is 1000 ms.
Animation Effect	The system provides multiple common animation slow-moving effects.
Animate Sequentially	If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
Update Animation (ms)	Animation duration when the component data is updated, in ms.
Start from Previous Position	If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Table 7-40 Value settings and series

Parameter	Description
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
Series	● Color Scheme: Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes. ● Series: Supports configuration of series colors (solid and gradient colors). Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-41](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **→**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- Select the associated chart and click **OK**.

Table 7-41 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**

- On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
- In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
- Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

 NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-42 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .
Associated Parameters	Set Effective Parameters of This Screen . • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. - Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. - Procedure - Configure global parameters in screen B and ensure that the same fields exist in screen A. - Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. - Select Carry null value and click OK. - The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. - Deselect Carry null value and click OK. - The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Chart Display

Figure 7-22 Dual Y-axis combination chart



7.4.1.2.4 Step Line Chart

This section describes parameters for a step line chart.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-43 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. • Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. • Click Update to test whether the drilldown function is set successfully. NOTE • Drill-down is only supported for dimension fields, not for metric fields. • You can only select one field as the starting point for drill-down. • When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). • Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
3. Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.

4. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-44 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
6. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
7. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

This part describes style parameters of a step line chart.

Table 7-45 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-46 Global Style

Parameter	Description
Font	Font of the text in the chart.
Data Point Position	Position of the data points in the step line chart. The value can be Start point , Midpoint , or Endpoint .

Table 7-47 Bar style

Parameter	Description
Bar Width	Bar width, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 1 to 100.
Bar Corner Radius	Bar corner radius, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 0 to 100.
Series Spacing	Series spacing, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from -100 to 100.

Table 7-48 Margin

Parameter	Description
Top	The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Bottom	The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Left	The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.
Right	The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Table 7-49 X-axis and Y-axis

Type	Parameter	Description
X Axis	Show/Hide X Axis	If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
	Text	Text style of the X axis, including Font Size , Color , and Font Weight .
	Coordinate axis	Set the color of the X axis.

Type	Parameter	Description
	Show/Hide Gridlines	If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.
Y Axis	Show/Hide Y Axis	If the checkbox is selected (☒), the Y axis is displayed. If the checkbox is not selected (☐), the Y axis is not displayed.
	Text	Text style of the Y axis, including Font Size , Color , Font Weight , and Angle .
	Coordinate Axis	Color of the Y axis.
	Grid Line	- If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed. - Color: color of the grid lines.

Table 7-50 Legend

Parameter	Description
Show/Hide Legend	If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
Text	Text style of the legend, including Font Size , Color , and Font Weight .
Layout	Position of the legend. The options are Top center , Top left , Top right , Bottom center , Bottom left , and Bottom right .

Table 7-51 Tooltips

Parameter	Description
Show/Hide tooltips	Select (☒) or deselect (☐) the check box to show or hide the tooltips when you preview or view a published component.
Trigger Type	Trigger type of tooltips. The options are Coordinate Axis and Data Item .
Color	Font color of tooltips.
Font Size	Font size of tooltips.

Parameter	Description
Font Weight	Font weight of tooltips.

Table 7-52 Animation

Parameter	Description
Show/Hide Animation	If the checkbox is selected (☒) , animations are displayed. If the checkbox is not selected (☐) , animations are not displayed.
Intro Animation Duration (ms)	Duration of the first rendering of the component, in ms. NOTE The value of the intro animation cannot be 0. The default value is 1000 ms.
Animation Effect	The system provides multiple common animation slow-moving effects.
Animate Sequentially	If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
Update Animation (ms)	Animation duration when the component data is updated, in ms.
Start from Previous Position	If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Table 7-53 Value settings and series

Parameter	Description
Value Settings	You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
Series	● Color Scheme: Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes. ● Series: Supports configuration of series colors (solid and gradient colors). Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-54](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **→**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- Select the associated chart and click **OK**.

Table 7-54 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**

- On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
- In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
- Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

 NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

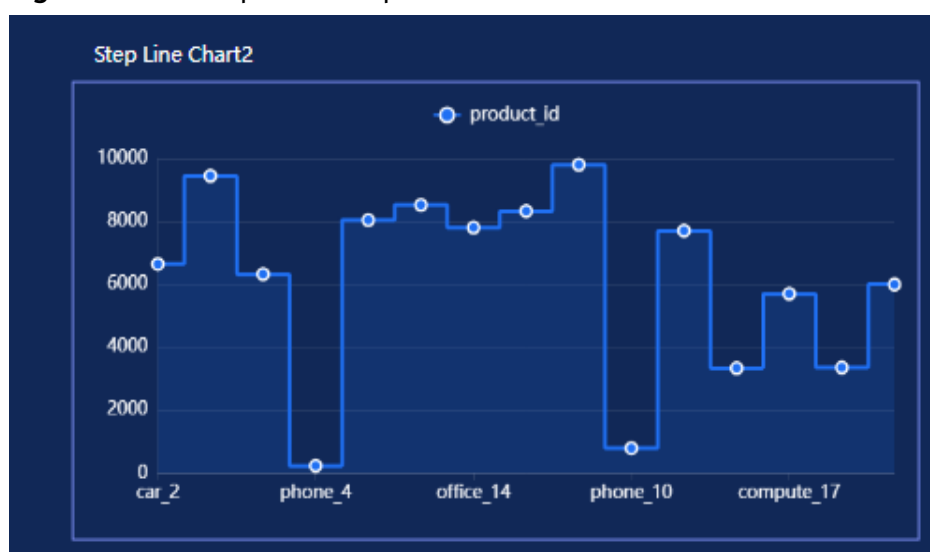
Table 7-55 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .
Associated Parameters	Set Effective Parameters of This Screen . • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Chart Display

Figure 7-23 Example of a step line chart



7.4.1.3 Pie Chart

7.4.1.3.1 Pie Chart

This section describes parameters of a pie chart.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-56 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. • Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. • Click Update to test whether the drilldown function is set successfully. NOTE • Drill-down is only supported for dimension fields, not for metric fields. • You can only select one field as the starting point for drill-down. • When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). • Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.

3. Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
4. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-57 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.

Type	Parameter	Description
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
6. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
7. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes the style parameters of a pie chart.

Table 7-58 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-59 Global Style

Parameter	Description
Font	Font of the text in the chart.

Table 7-60 Label Attribute

Parameter	Description
Show Label Attribute	If the checkbox is selected (☒), label attributes are displayed. If the checkbox is not selected (☐), label attributes are not displayed.
Distance to Center	Set the distance of the label from the center.
Axis Distance	Set the axis distance of a label.
Font Size	Set the font size of the label.
Font Weight	Set the font weight of the label.
Data Name	If the checkbox is selected (☒), data names are displayed. If the checkbox is not selected (☐), data names are not displayed.
Display Metric Name	If the checkbox is selected (☒), metric names are displayed. If the checkbox is not selected (☐), metric names are not displayed.
Data Value	If the checkbox is selected (☒), data values are displayed. If the checkbox is not selected (☐), data values are not displayed.
Proportion Display	If the checkbox is selected (☒), proportions are displayed. If the checkbox is not selected (☐), proportions are not displayed.

Table 7-61 Pie Attribute

Parameter	Description
Inner Radius	Inner radius. The value cannot be left blank and must range from 0 to 100.
Outer Radius	Outer radius. The value cannot be left blank and must range from 0 to 100.
Horizontal Position	Horizontal position. The value cannot be left blank and must range from 0 to 100.
Vertical Position	Vertical position. The value cannot be left blank and must range from 0 to 100.

Table 7-62 Legend

Parameter	Description
Show Legend	If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
Display Metric Name	Whether to display the metric name.
Data Value	Whether to display the data value.
Proportion Display	Whether to display the proportion.
Text	Text style of the legend, including Font Size , Color , and Font Weight .
Layout	You can set the direction, position, left and right spacing, top and bottom spacing, and legend spacing.
Legend Mark	You can set the mark type, width, and height.

Table 7-63 Tooltips

Parameter	Description
ShowTooltips	Select (☒) or deselect (☐) the check box to show or hide the tooltips when you preview or view a published component.
Color	Font color of tooltips.
Font Size	Font size of tooltips.
Font Weight	Font weight of tooltips.

Table 7-64 Animation

Parameter	Description
Show/Hide Animation	If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.
Intro Animation Duration (ms)	Duration of the first rendering of the component, in ms. NOTE The value of the intro animation cannot be 0. The default value is 1000 ms.
Animation Effect	The system provides multiple common animation slow-moving effects.

Parameter	Description
Animate Sequentially	If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
Update Animation (ms)	Animation duration when the component data is updated, in ms.
Start from Previous Position	If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Table 7-65 Borderline Options and Series

Parameter	Description
Borderline Options	• Color: color of the borderline. • Width: width of the borderline. The value cannot be left blank and must range from 0 to 10. • Transparency: transparency of the borderline. Note that the value cannot be left blank and must range from 0 to 1.
Series	• Color Scheme: Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes. • Series: Supports configuration of series colors (solid and gradient colors). Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced > Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-66](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **↓**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.

- ii. Select the associated chart and click **OK**.

Table 7-66 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**
 - a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
 - b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
 - c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-67 Parameters

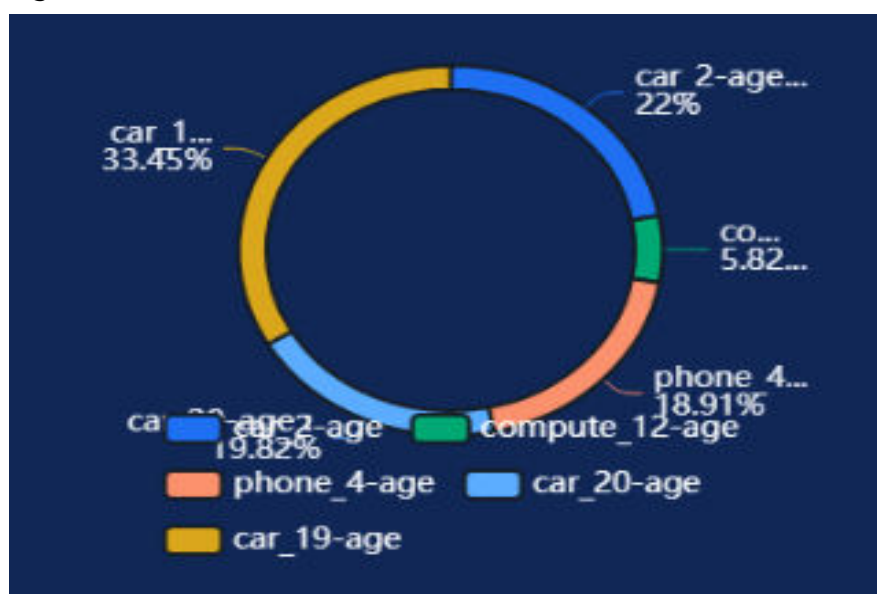
Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.

Parameter	Description
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect.
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Chart Display

Figure 7-24 Pie chart



7.4.1.3.2 Circular Progress Bar

This section describes parameters of a circular progress bar.

Field

You can manually input or dynamically configure the fields for a circular progress bar.

- For manual input, you need to manually enter the target value and progress value.

Figure 7-25 Manual input

The screenshot shows the 'Fields' configuration tab for a circular progress bar. It has two tabs: 'Fields' (active) and 'Styles'. Under 'Fields', there are two radio buttons: 'Manual input' (selected) and 'Dynamic fields'. Below the radio buttons, there are two input fields. The first is labeled 'Target Value' and contains the text '1,000'. The second is labeled 'Progress Value' and contains the text '650'.

- Dynamic fields
 - In the axis value/metric list, select fields and drag and drop them to the **Progress Value/Target Value/Metric** area.
 - **Filter:** If you have a large amount of data, you can enable the filter function to filter out the required data categories from the dataset. Filters can filter character, numeric, and date data.

Filter Settings: Click  next to the field you wish to filter and you will be directed to the filter settings page.

- Filter field selection dimension
 - Non-time fields

Table 7-68 Filter parameters

Parameter	Description
Dataset	The dataset selected for constructing the large screen component.
Selected Field	The fields selected for filtering (non-time fields).
Filter Mode	When the selected field is a dimension, filtering can be done by condition or enumeration.

Parameter	Description
Condition Type	When the selected field is a dimension and filtering is done by condition, both AND and OR conditions are supported. When the selected field is a dimension and filtering is done by enumeration, single or multiple selections are supported.
Filter Criteria	When the selected field is a dimension and filtering is done by condition, the following conditions can be set: exact match, contains, starts with, does not match, does not contain, is empty, is not empty, etc. When the selected field is a dimension and filtering is done by enumeration, the corresponding field can be selected.

- Time fields

Table 7-69 Filter parameters

Parameter	Description
Dataset	The dataset selected for constructing the large screen component.
Selected Field	The fields selected for filtering (time fields).
Filter Mode	When the selected field is a dimension, filtering can be done by single value, range value, or condition.
Filter Criteria	When the selected field is a dimension and filtering is done by single value or range value, the filtering conditions support both absolute and relative time. When the selected field is a dimension and filtering is done by condition, both AND and OR conditions are supported.

- Filter field selection metric

Table 7-70 Filter parameters

Parameter	Description
Dataset	The dataset selected for constructing the large screen component.

Parameter	Description
Selected Field	Select the fields to be filtered.
Condition Type	When the selected field is a metric and filtering is done by condition, both AND and OR conditions are supported.
Filter Criteria	When the field to be set is a metric, filtering conditions support settings such as >, ≥, <, ≤, =, ≠, is empty, is not empty, etc. It also supports settings before and after data aggregation.

- Sorting: Sorts the dragged class axis/dimension fields in ascending or descending order.

Sorting settings: Click  of the sorting field and choose the desired order.

NOTE

Sorting by metric: Metric fields in the sorting slots are not displayed in the chart by default. To display them, drag and drop them into the metric slots.

- Set **Maximum Query Results**. The value ranges from 1 to 5000.
- Auto-refresh: Set the time for data refresh, which can be 1 minute, 5 minutes, 15 minutes, 30 minutes, or no refresh.

Click **Update** to automatically update the chart.

Style

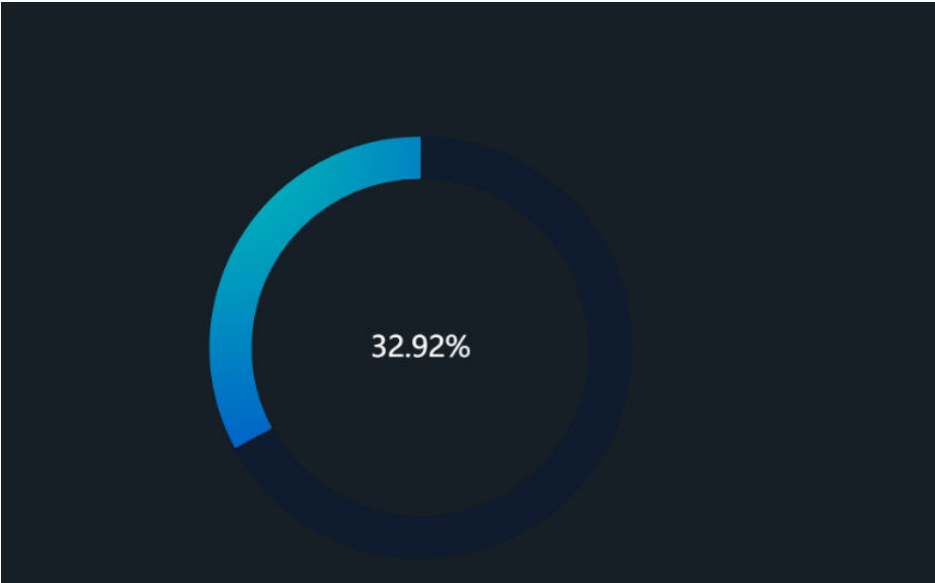
This part describes style parameters of a circular progress bar.

- **Size/Position**
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.
- **Progress Bar**
 - **Inner Radius**: inner radius. The value cannot be left blank and must range from 0 to 100.
 - **Outer Radius**: outer radius. The value cannot be left blank and must range from 0 to 100.
 - **Background Color**: background color of the progress bar.
 - **Progress Bar Color**: color of the progress bar.
- **Proportion**

- **Show Proportion:** If the checkbox is selected (☒), the proportion is displayed. If the checkbox is not selected (☐), the proportion is not displayed.
- **Decimal Places:** number of decimal places. The value cannot be left blank and must range from 0 to 10.
- **Proportion Text:** You can set the font, numerical color, numerical font size, and font weight.
- **Offset:** You can set both the horizontal offset and vertical offset.
- **Value Tag**
 - **Show Value Tag:** If the checkbox is selected (☒), value tags are displayed. If the checkbox is not selected (☐), value tags are not displayed.
 - **Current Value Name:** name of the current value.
 - **Target Value Name:** name of the target value.
 - **Alignment:** The options include **Left/Right** and **Top/Bottom**.
 - **Arrangement:** The options are **Top, Right, Inside, Left, Bottom, Upper Left Corner, Lower Left Corner, Upper Right Corner, and Lower Right Corner**.
 - **Text:** You can set the font, color, font size, and font weight of the value tag.
- **Tooltips:** Set whether to display tooltips.
- **Animation**
 - **Show Animation:** If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.
 - **Intro Animation Duration (ms):** duration of the first rendering of the component, in ms.
 - **Animation Effect:** The system provides multiple common animation slow-moving effects.
 - **Animate Sequentially:** If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
 - **Update Duration (ms):** animation duration when the component data is updated, in ms.
 - **Start from Previous Position:** If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Chart Display

Figure 7-26 Circular progress bar



7.4.1.3.3 Rose Chart

This section describes parameters of a rose chart.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-71 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
3. Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
4. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-72 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

Table 7-73 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-74 Global Style

Parameter	Description
Font	Font of the text in the chart.
Data Display	Display style of the rose chart. The options include Radius and Area .

Table 7-75 Label Attribute

Parameter	Description
Show Label Attribute	If the checkbox is selected (☒), label attributes are displayed. If the checkbox is not selected (☐), label attributes are not displayed.
Distance to Center	Set the distance of the label from the center.
Axis Distance	Set the axis distance of a label.
Font Size	Set the font size of the label.
Font Weight	Set the font weight of the label.

Parameter	Description
Data Name	If the checkbox is selected (☒), data names are displayed. If the checkbox is not selected (☐), data names are not displayed.
Display Metric Name	If the checkbox is selected (☒), metric names are displayed. If the checkbox is not selected (☐), metric names are not displayed.
Data Value	If the checkbox is selected (☒), data values are displayed. If the checkbox is not selected (☐), data values are not displayed.
Proportion Display	If the checkbox is selected (☒), proportions are displayed. If the checkbox is not selected (☐), proportions are not displayed.

Table 7-76 Pie Attribute

Parameter	Description
Inner Radius	Inner radius. The value cannot be left blank and must range from 0 to 100.
Outer Radius	Outer radius. The value cannot be left blank and must range from 0 to 100.
Horizontal Position	Horizontal position. The value cannot be left blank and must range from 0 to 100.
Vertical Position	Vertical position. The value cannot be left blank and must range from 0 to 100.

Table 7-77 Legend

Parameter	Description
Show/Hide Legend	If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
Text	Text style of the legend, including Font Size , Color , and Font Weight .
Layout	Position of the legend. The options are Top center , Top left , Top right , Bottom center , Bottom left , and Bottom right .

Table 7-78 Tooltips

Parameter	Description
ShowTooltips	Select (☒) or deselect (☐) the check box to show or hide the tooltips when you preview or view a published component.
Color	Font color of tooltips.
Font Size	Font size of tooltips.
Font Weight	Font weight of tooltips.

Table 7-79 Visual Mapping and Series

Parameter	Description
Visual Mapping	• Show Visual Mapping: If the checkbox is selected (☒), visual mapping is displayed. If the checkbox is not selected (☐), visual mapping is not displayed. • Maximum Value: maximum value of visual mapping. • Minimum Value: minimum value of visual mapping. • Mapping Type: The value can be Continuous or Segmented (equivalent). • Direction: The options include Vertical and Horizontal. • Width: width of the mapping. The value cannot be left blank and must range from 0 to 50. • Height: height of the mapping. The value cannot be left blank and must range from 1 to 200. • Left: left of the mapping. The value cannot be left blank and must range from 0 to 100. • Right: right of the mapping. The value cannot be left blank and must range from 0 to 100. • Text: You can set the color and font size.
Series	• Color Scheme: Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes. • Series: Supports configuration of series colors (solid and gradient colors). Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-80](#). For details, see [Example linkage](#).

- **Filter**
 - i. Click **Filter**. The **Filter** tab is displayed.
 - ii. Click **+** next to **Fields to Bound**. The associated field box is displayed.
 - iii. Click **→**, select the field to be bound, select the associated chart, and click **OK**.
- **Shown/Hidden**
 - i. Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
 - ii. Select the associated chart and click **OK**.

Table 7-80 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**
 - a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
 - b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
 - c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-81 Parameters

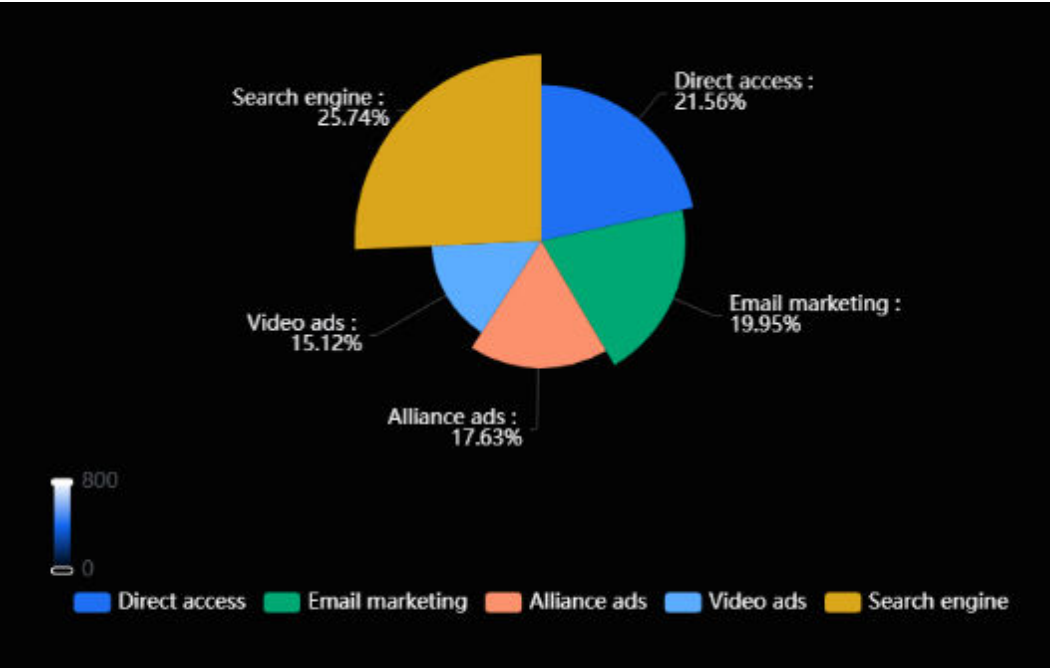
Parameter	Description
Redirect Type	Intra-system redirect : Redirect to the internal screen and dashboard projects. External redirect : Redirect to a link that is not in the software.

Parameter	Description
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect.
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Chart Display

Figure 7-27 Rose chart



7.4.1.3.4 Radar Chart

A radar chart can display analyzed data or ratios, allowing you to easily view various data indicators and trends. It maps the data of multiple dimensions onto a coordinate axis that starts at the same center point and ends at the circumference, connecting the points of the same group with lines. This chart is often used to show the distribution of dimension values. This section will introduce the configuration of radar charts.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-82 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .

Parameter	Description
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
3. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click 🔍 next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-83 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

4. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

5. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
6. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

Table 7-84 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-85 Global Style

Parameter	Description
Font	Font of the text in the chart.

Table 7-86 Basic chart style

Parameter	Description
Show Shape Line	Set whether to display the chart border, the type of border, and its weight.
Shape Area Filling	Height of the target, in pixels.
Show Mark Point	Set the type of marker points, supporting both round and square shapes.
Null Value Processing	Set the handling method for null values, supporting Delete , Intelligent delete , and Set to zero .

Table 7-87 Coordinate axis

Parameter	Description
Visual Style	Set the visualization style, supporting Polygon and Circle .
Radius Ratio	Set the radius ratio. The input value must range from 0 to 100.
Branch	Set the font size, color, and font weight of the branch.
Axis Split Number	Set the number of segments on the coordinate axis. The input value must range from 0 to 10.
Show Tick	Set whether to display the scale line.
Show Grid Line	Set whether to display grid lines. Set the type, weight, and color of the grid lines.
Show Axis Label	Set whether to display axis labels. Set the font size, color, and font weight of the axis labels.

Table 7-88 Legend and Label Attribute

Parameter	Description
Legend	- Set whether to display the legend. - Set the font size, color, font weight, direction, position, top and bottom spacing, and legend spacing.
Show Label Attribute	- Set whether to display label attributes. - Set the font size, color, and font weight of the label attributes. The font size ranges from 10 to 100.

Table 7-89 Tooltips and Series

Parameter	Description
Show/Hide Tooltips	- Set whether to display the tooltips and data name. - Set Color, Font Size, and Font Weight.
Series	Color Scheme: Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes. Series: Supports configuration of series colors (solid and gradient colors). Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.

Chart Display

Figure 7-28 Radar chart



7.4.1.4 Bar Chart

7.4.1.4.1 Bar Chart

This section describes parameters of a bar chart.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-90 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
3. Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
4. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-91 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes the style parameters of a bar chart.

- **Size/Position**
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-29 Size/Position

The screenshot shows the 'Styles' tab selected in a menu with 'Fields' and 'Interac'. Below the menu, there are four input fields: 'W' with value '680', 'H' with value '350', 'X' with value '621', and 'Y' with value '403'. Below these is an 'Opacity' slider set to '100%'.

- **Global Style**
 - **Font**: font of the text in the chart.

Figure 7-30 Global style

The screenshot shows the 'Global Style' section with a dropdown menu for 'Font' currently set to 'Microsoft Y...'.

- **Bar Style**
 - **Bar Width**: bar width, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 1 to 100.
 - **Bar Corner Radius**: bar corner radius, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 0 to 100.

- **Series Spacing:** series spacing, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from -100 to 100.

Figure 7-31 Bar style

Bar Style ^

Bar Width	-	20	+
Bar Corner Radius	-	0	+
Series Spacing	-	0	+

- **Margin**

- **Top:** The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Bottom:** The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Left:** The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Right:** The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Figure 7-32 Margin

Margin ^

Top	-	50	+
Bottom	-	26	+
Left	-	5	+
Right	-	5	+

- **Value Labels**

- **Show Value Labels:** If the checkbox is selected (☒), value labels are displayed. If the checkbox is not selected (☐), value labels are not displayed.
- **Font Size:** font size of the value label.
- **Color:** color of the value label.
- **Font Weight:** font weight of the value label.
- **Position:** position of the value label.

- **Spacing Between Labels:** spacing between labels above the bar chart.

Figure 7-33 Value labels

Value Labels ^

☒ Show Value Labels

Font Size

Color

Font Weight

Position

Spacing Between Labels

- X Axis
 - **Show X Axis:** If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
 - **Axis Label:** You can set the font size, color, font weight, and angle.
 - **Data Type:** data type of the X axis. The options are **Numeric**, **Category**, and **Time**.
 - **Auto Spacing:** whether to enable automatic spacing.
 - **Label Spacing:** number of spaces between labels.
 - **Minimum Label:** whether to support the minimum label.
 - **Maximum Label:** whether to support the maximum label.
 - **Zoom:** whether to enable zooming.
 - **Text Overflow:** whether to allow text overflow. The overflow width can be set.
 - **Coordinate Axis:** color of the X axis.
 - **Grid Line:** If the checkbox is selected (☒), grid lines of the X axis are displayed. If the checkbox is not selected (☐), grid lines of the X axis are not displayed.

Figure 7-34 X axis

X Axis ^

☒ ShowX Axis

Axis Label

Font Size

Color

Font Weight

Angle

Data Type

Auto Spacing ☐

Label Spacing

Minimum Label ☒

Maximum Label ☒

Zoom ☐

Start Value(%)

End Value(%)

Text Overflow ☐

Overflow Width

Coordinate Axis ☒

Color

Grid Line ☐

Color

- **Y Axis**

- **Show Y Axis:** If the checkbox is selected (☒), the Y axis is displayed. If the checkbox is not selected (☐), the Y axis is not displayed.
- **Text:** You can set the font size, font color, font weight, and angle.

- **Axis Label:** You can set the display format, minimum value, maximum value, and number of divisions.
- **Axis Unit:** whether to display the axis unit. The unit color and unit name can be set.
- **Coordinate Axis:** color of the Y axis.
- **Grid Line:** If the checkbox is selected (☒), grid lines of the Y axis are displayed. If the checkbox is not selected (☐), grid lines of the Y axis are not displayed.

Figure 7-35 Y Axis

Y Axis ^

☒ ShowY Axis

Text

Font Size: 16

Font Color:

Font Weight:

Angle: 0

Axis Label ☒

Display Format:

Minimum Value:

Maximum Value:

Divisions: 5

Axis Unit ☒

Unit:

Color:

Coordinate Axis ☒

Color:

Grid Line ☒

Color:

- Legend

- **Show Legend:** If the checkbox is selected (☒), legends are displayed. If the checkbox is not selected (☐), legends are hidden.
- **Text:** text style of the legend, including **Font Size**, **Color**, and **Font Weight**.
- **Layout:** You can set the legend direction, position, left/right spacing, top/bottom spacing, and legend spacing.

Figure 7-36 Legend

Legend ^

☒ ShowLegend

Text

Font Size

Color

Font Weight

Layout

Direction

Position

Left and Right Spacing

Top and Bottom Spacing

Legend Spacing

- Tooltips

- **Show Tooltips:** If the checkbox is selected (☒), a tooltip is displayed when you preview or view a published component. If the checkbox is not selected (☐), no tooltip is displayed when you preview or view a published component.
- **Trigger Type:** The options include **Data Item** and **Coordinate Axis**.
- **Interaction Result:** The options include **Semitransparent** and **Zoom In**.
- **Color:** font color of the tooltips.
- **Font Size:** font size of tooltips.
- **Font Weight:** font weight of tooltips.

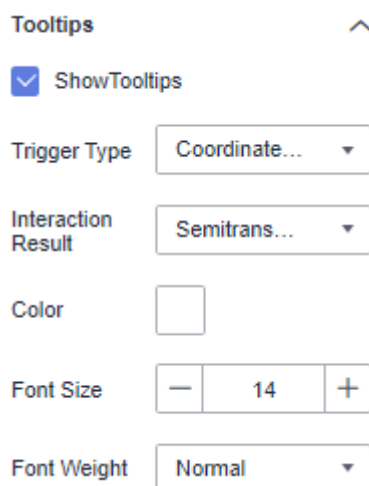
Figure 7-37 Tooltips

Figure 7-37 displays the configuration options for Tooltips in the DataArts Insight interface. The settings are as follows:

- ShowTooltips:** A checkbox that is currently checked.
- Trigger Type:** A dropdown menu set to "Coordinate..."
- Interaction Result:** A dropdown menu set to "Semitrans..."
- Color:** A color selection box, currently empty.
- Font Size:** A numeric input field set to 14, with minus and plus buttons for adjustment.
- Font Weight:** A dropdown menu set to "Normal".

- **Animation**
 - **Show Animation:** If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.
 - **Intro Animation Duration (ms):** duration of the first rendering of the component, in ms.
 - **Animation Effect:** The system provides multiple common animation slow-moving effects.
 - **Animate Sequentially:** If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
 - **Update Duration (ms):** animation duration when the component data is updated, in ms.
 - **Start from Previous Position:** If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Figure 7-38 Animation

Animation ^

☒ ShowAnimation

Intro Animation Duration (ms) — 1,000 +

Animation Effect cubicInOut ▾

Animate Sequentially ☐

Update Animation (ms) — 300 +

Start from Previous Position ☒

- **Series to Category**
 - **Show Series to Category:** whether to support the display of series to categories.
- **Value Settings:** You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
- **Condition Format**
 - Select fields you need to configure.
 - Condition selection: Choose between comparing with a fixed value or a dynamic value.
 - Filter Condition Types: Includes greater than, greater than or equal to, equal to, less than or equal to, less than, not equal to, greater than A and less than or equal to B, greater than or equal to A and less than B, greater than A and less than B, greater than or equal to A and less than or equal to B. Fixed comparison values can be customized, while dynamic field comparison values are system-selected.
 - Color Scheme: After setting the filter conditions, click the color button to customize the color.
 - Add Rule: Click + to add a filter condition.
 - Delete: Click - to delete a filter condition.
- **Series:** You can set the color of a series.

Interactions

- **Link**
 - **Procedure:** Choose **Advanced > Link**. The **Chart Linkage Configuration** page is displayed. Set parameters by referring to [Table 7-92](#).
 - **Filter**
 - 1) Click **Filter**. The **Filter** tab is displayed.
 - 2) Click + next to **Fields to Bound**. The associated field box is displayed.

- 3) Click , select the field to be bound, select the associated chart, and click **OK**.

▪ **Shown/Hidden**

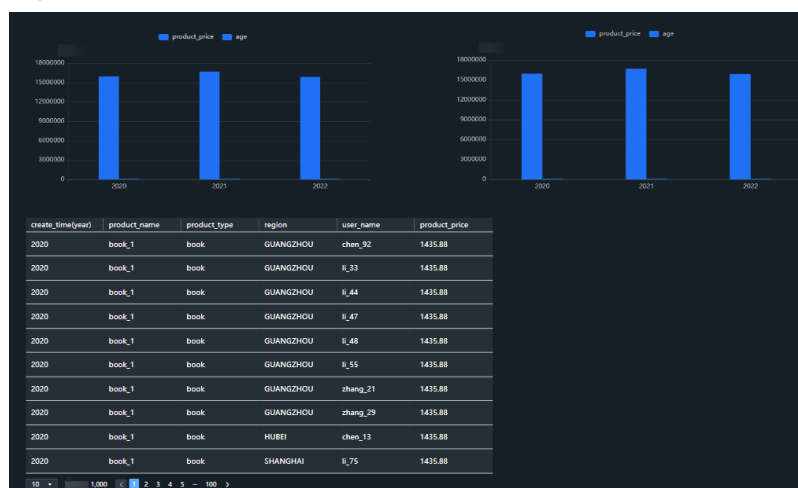
- 1) Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- 2) Select the associated chart and click **OK**.

Table 7-92 Chart linkage configuration parameters

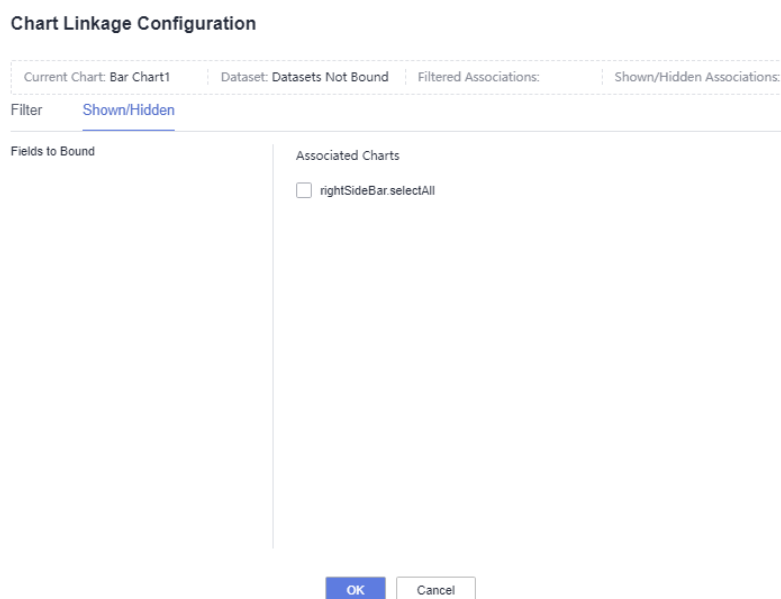
Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Example scenario:** Use the sales data of a product as an example.
 - i. Create a table (table fields displayed: production time, product name, product type, region, username, production price) and create a bar chart (displayed fields: product price, user age, production time). The bar chart in the upper right corner of [Figure 7-39](#) is linked to the bar chart on the left, showing or hiding the table chart below.

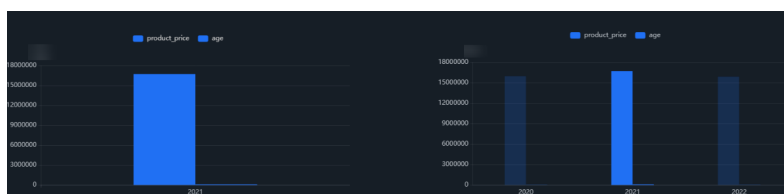
Figure 7-39 Linked chart



- ii. Click the bar chart and click the **Interactions** tab in the right pane. Choose **Advanced** > **Link**. The **Chart Linkage Configuration** page is displayed. On the **Filter** tab, select the fields to be bound and then select the chart to be associated with them. On the **Shown/Hidden** tab, select the fields to be bound and then select the chart to be associated with them.

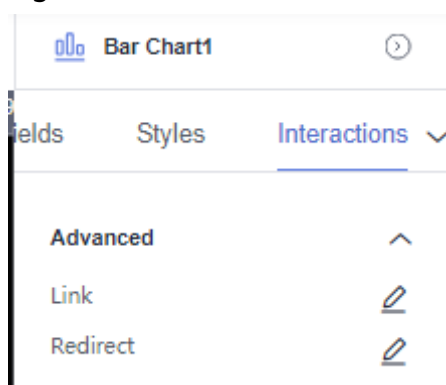
Figure 7-40 Chart linkage configuration

- iii. Once the parameters are set, click **Save** in the upper right corner of the page, and then click **Preview**. The preview page is displayed.
- iv. When you hover over a bar in the bar chart, the entire bar will be highlighted (with a background color that can be customized). Clicking the **2021** label on the X axis of the bar chart will filter the data and hide the table on the left side of the chart.

Figure 7-41 Bar chart display

- v. To view the overall chart display, click the highlighted bar to cancel linkage.
- **Redirect**
 1. Click **Interactions**.
 2. Choose **Advanced** > **Redirect**. The chart redirection page is displayed.

Figure 7-42 Interactions tab



3. Click **+** next to **Fields to Bound**. The associated field box is displayed.
4. Click **-** and select the field to be bound.
5. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**.

NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-93 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .

Parameter	Description
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

6. Example redirect: Use a sales report for a specific store as an example.
 - a. Create a bar chart (displayed fields: product price, user age, and production time) on the large screen, and set an intelligent chart (displayed fields: production time, product name, username, and production price) on the dashboard.

Figure 7-43 Bar chart

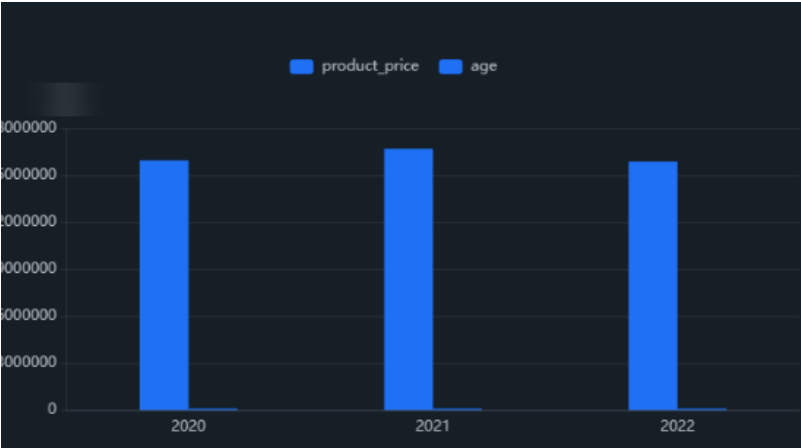


Figure 7-44 Intelligent chart

Table

Export Data Export History

create_time ↑ ↓	product_name ↑ ↓	user_name ↑ ↓	product_price ↑ ↓
2022-02-07 07:51:00	clothes_8	--	647.347
2022-07-12 11:08:00	phone_5	--	3706.542
2021-02-11 10:37:00	office_1	--	100.635
2020-09-07 03:24:00	office_2	--	812.842
2020-08-13 23:14:00	compute_2	--	7403.505

10 Total Records: 9,888 < 1 >

- b. Once the chart is set, go to the large screen page. Click **Interactions** and click **Redirect**.
- c. Bind the **create_time (year)** field, set **Redirect Type** to **External redirect** and **Open Mode** to **Open in new window**.

Figure 7-45 Page for setting chart redirection

Chart Redirect

Current Component: Bar Chart0 Dataset: Screen: bar_chart

Fields to Bound

create_time

Redirect Type

☐ Intra-system redirect ☒ External redirect

Open Mode

☐ Open in this window ☐ Open in new window ☒ Open in popup window

Popup Window Size Width: 800 Height: 600

URL

Copy URL

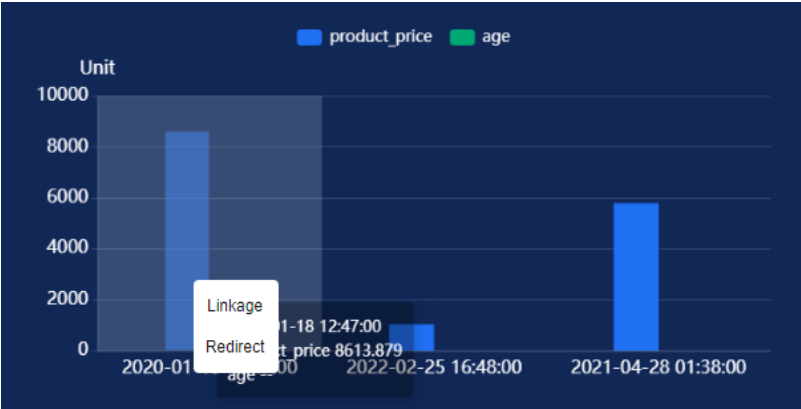
Double-click to add a dimension field.

create_time

OK Cancel

- d. Click **OK**.
- e. Click **Preview** in the upper right corner of the page.

Figure 7-46 Preview page



f. Click the bar chart. Click **Redirect**. The intelligent chart page is displayed.

Chart Display

Figure 7-47 Example of a bar chart



7.4.1.4.2 Horizontal Bar Chart

This section describes parameters of a horizontal bar chart.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-94 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .

Parameter	Description
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field (🔍) in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

- Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
- Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
- Set a filter.
 - Find the data field you need in the dimension and metric lists within the data column.
 - Click 🔍 next to the field you wish to filter and you will be directed to the filter settings page.
 - Click **OK**.

Table 7-95 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes the style parameters of a horizontal bar chart.

- **Size/Position**
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-48 Size/Position

The screenshot shows the 'Styles' tab selected. It contains four input fields: 'W' with value 680, 'H' with value 350, 'X' with value 417, and 'Y' with value 385. Below these is an 'Opacity' slider with a blue bar and a circle, and a text box showing '100%'.

- **Global Style**
 - **Font**: font of the text in the chart.

Figure 7-49 Global Style

The screenshot shows the 'Global Style' section with a 'Font' dropdown menu. The selected font is 'Microsoft Y...'. There is an upward arrow icon to the right of the dropdown.

- **Bar Style**
 - **Bar Width**: bar width, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 1 to 100.
 - **Bar Corner Radius**: bar corner radius, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 0 to 100.

- **Series Spacing:** series spacing, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from -100 to 100.

Figure 7-50 Bar style

Bar Style ^

Bar Width	-	20	+
Bar Corner Radius	-	0	+
Series Spacing	-	0	+

- **Margin**

- **Top:** The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Bottom:** The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Left:** The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Right:** The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Figure 7-51 Margin

Margin ^

Top	-	26	+
Bottom	-	24	+
Left	-	0	+
Right	-	56	+

- **Value Labels**

- **Show Value Labels:** If the checkbox is selected (☒), value labels are displayed. If the checkbox is not selected (☐), value labels are not displayed.
- **Font Size:** font size of the value label.
- **Color:** color of the value label.
- **Font Weight:** font weight of the value label.
- **Position:** position of the value label.

Figure 7-52 Value labels

Value Labels ^

☒ ShowValue Labels

Font Size

Color

Font Weight

Position

- X Axis
 - **Show X Axis:** If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
 - **Text:** You can set the font size, font color, font weight, and angle.
 - **Axis Label:** You can set the display format, minimum value, maximum value, and number of divisions.
 - **Axis Unit:** whether to display the axis unit. The unit color and unit name can be set.
 - **Coordinate Axis:** color of the Y axis.
 - **Grid Line:** If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.
- Y Axis
 - **Show Y Axis:** If the checkbox is selected (☒), the Y axis is displayed. If the checkbox is not selected (☐), the Y axis is not displayed.
 - **Label:** You can set the font size, font color, font weight, and angle.
 - **Text Overflow:** whether to allow text overflow. The overflow width can be set.
 - **Coordinate Axis:** color of the Y axis.
 - **Grid Line:** If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.
- Legend
 - **Show Legend:** If the checkbox is selected (☒), legends are displayed. If the checkbox is not selected (☐), legends are hidden.
 - **Text:** text style of the legend, including **Font Size**, **Color**, and **Font Weight**.

- **Layout:** You can set the legend direction, position, left/right spacing, top/bottom spacing, and legend spacing.

Figure 7-53 Legend

The screenshot shows the 'Legend' configuration panel. At the top, there is a title 'Legend' with an upward arrow icon. Below it is a checked checkbox labeled 'ShowLegend'. Under the 'Text' section, there are three controls: 'Font Size' with a numeric input set to 14 and minus/plus buttons, 'Color' with a color selection box, and 'Font Weight' with a dropdown menu set to 'Normal'. Under the 'Layout' section, there is a 'Position' dropdown menu set to 'Top center'.

- Tooltips

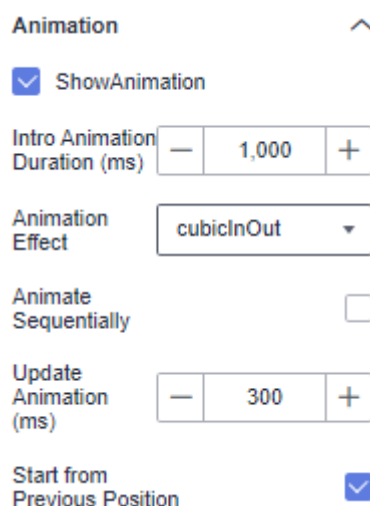
- **Show Tooltips:** If the checkbox is selected (☒), a tooltip is displayed when you preview or view a published component. If the checkbox is not selected (☐), no tooltip is displayed when you preview or view a published component.
- **Data Name:** whether to display the data name.
- **Color:** font color of the tooltips.
- **Font Size:** font size of tooltips.
- **Font Weight:** font weight of tooltips.

Figure 7-54 Tooltips

The screenshot shows the 'Tooltips' configuration panel. At the top, there is a title 'Tooltips' with an upward arrow icon. Below it is a checked checkbox labeled 'ShowTooltips'. Under the 'Trigger Type' section, there is a dropdown menu set to 'Coordinate...'. Under the 'Interaction Result' section, there is a dropdown menu set to 'Semitrans...'. Below these are three controls: 'Color' with a color selection box, 'Font Size' with a numeric input set to 14 and minus/plus buttons, and 'Font Weight' with a dropdown menu set to 'Normal'.

- Animation

- **Show Animation:** If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.
- **Intro Animation Duration (ms):** duration of the first rendering of the component, in ms.
- **Animation Effect:** The system provides multiple common animation slow-moving effects.
- **Animate Sequentially:** If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
- **Update Duration (ms):** animation duration when the component data is updated, in ms.
- **Start from Previous Position:** If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Figure 7-55 Animation

- **Series to Category**
 - **Show Series to Category:** whether to support the display of series to categories.
- **Value Settings:** You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-96](#). For details, see [Example linkage](#).

 - **Filter**
 - i. Click **Filter**. The **Filter** tab is displayed.

- ii. Click **+** next to **Fields to Bound**. The associated field box is displayed.
 - iii. Click **→**, select the field to be bound, select the associated chart, and click **OK**.
- **Shown/Hidden**
- i. Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
 - ii. Select the associated chart and click **OK**.

Table 7-96 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**
 - a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
 - b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
 - c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-97 Parameters

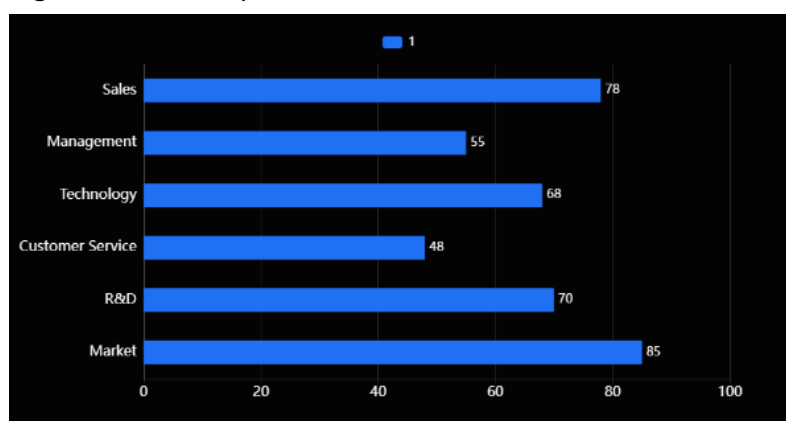
Parameter	Description
Redirect Type	Intra-system redirect : Redirect to the internal screen and dashboard projects. External redirect : Redirect to a link that is not in the software.

Parameter	Description
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect.
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Chart Display

Figure 7-56 Example of a horizontal bar chart



7.4.1.4.3 Combination Chart

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-98 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. • Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. • Click Update to test whether the drilldown function is set successfully. NOTE • Drill-down is only supported for dimension fields, not for metric fields. • You can only select one field as the starting point for drill-down. • When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). • Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

2. Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.

3. Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
4. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-99 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.

Type	Parameter	Description
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
6. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
7. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes the style parameters of a combination chart.

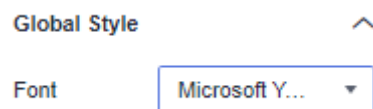
- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-57 Size/Position



The image shows a user interface for configuring chart styles. At the top, there are two tabs: 'Fields' and 'Styles', with 'Styles' being the active tab. Below the tabs, there are four input fields arranged in a 2x2 grid: 'W' with the value '680', 'H' with '350', 'X' with '762', and 'Y' with '530'. Below these fields is an 'Opacity' section featuring a horizontal slider bar and a text box showing '100%'.

- **Global Style**
 - **Font:** font of the text in the chart.

Figure 7-58 Global Style

- **Line Style:** The value for a smooth curve ranges from 0 to 1.
- **Bar Style**
 - **Bar Width:** bar width, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 1 to 100.
 - **Bar Corner Radius:** bar corner radius, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 0 to 100.
 - **Series Spacing:** series spacing, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from -100 to 100.

Figure 7-59 Bar style

- **Margin**
 - **Top:** The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
 - **Bottom:** The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
 - **Left:** The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.
 - **Right:** The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Figure 7-60 Margin

Margin

Top	—	56	+
Bottom	—	26	+
Left	—	15	+
Right	—	15	+

- X Axis
 - **Show X Axis:** If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
 - **Text:** text style of the X axis, including **Font Size**, **Color**, and **Font Weight**.
 - **Axis Label:** displays the angle of the axis label. The value ranges from – 90 to 90.
 - **Axis Color:** color of the X axis.
 - **Grid Line:** If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.
- Y Axis
 - **Show Y Axis:** If the checkbox is selected (☒), the Y axis is displayed. If the checkbox is not selected (☐), the Y axis is not displayed.
 - **Text:** text style of the Y axis, including **Font Size**, **Color**, and **Font Weight**.
 - **Axis Label:** text style of the Y axis, including **Display Format**, **Minimum Value**, **Maximum Value**, and **Divisions**.
 - The display format options include automatic, rounding, and various decimal places ranging from one to five.
 - The minimum value can be set to either the data's minimum value or rounded automatically.
 - The maximum value can be set to either the data's maximum value or rounded automatically.
 - The number of divisions cannot be less than one.
 - **Axis Unit:** unit and color of the Y axis.
 - **Coordinate Axis:** color of the Y axis line.

- **Grid Line:** If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.
- Legend
 - **Show Legend:** If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
 - **Text:** text style of the legend, including **Font Size**, **Color**, and **Font Weight**.
 - **Layout:** position of the legend. The options are **Top center**, **Top left**, **Top right**, **Bottom center**, **Bottom left**, and **Bottom right**.

Figure 7-61 Legend

Legend ^

☒ ShowLegend

Text

Font Size 14

Color

Font Weight

Layout

Left and Right Spacing 16

Top and Bottom Spacing 16

Position

- Tooltips
 - **Show Tooltips:** If the checkbox is selected (☒), a tooltip is displayed when you preview or view a published component. If the checkbox is not selected (☐), no tooltip is displayed when you preview or view a published component.
 - **Trigger Type:** trigger type of tooltips. The options are **Coordinate Axis** and **Data Item**.
 - **Color:** font color of the tooltips.
 - **Font Size:** font size of tooltips.
 - **Font Weight:** font weight of tooltips.

Figure 7-62 Tooltips

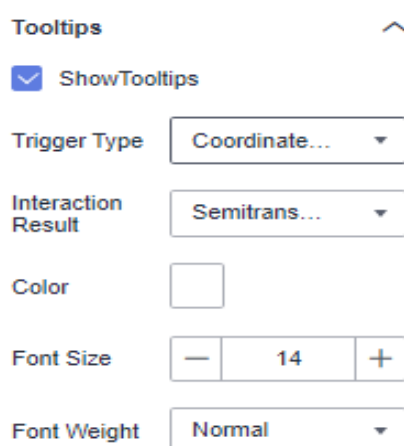


Figure 7-62 shows the configuration panel for Tooltips. The panel includes the following settings:

- ShowTooltips:** A checked checkbox.
- Trigger Type:** A dropdown menu set to "Coordinate...".
- Interaction Result:** A dropdown menu set to "Semitrans...".
- Color:** An empty input field.
- Font Size:** A spinner control set to 14.
- Font Weight:** A dropdown menu set to "Normal".

- Animation

- **Show Animation:** If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.
- **Intro Animation Duration (ms):** duration of the first rendering of the component, in ms.

 NOTE

The value of the intro animation cannot be 0. The default value is **1000** ms.

- **Animation Effect:** The system provides multiple common animation slow-moving effects.
- **Animate Sequentially:** If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
- **Update Duration (ms):** animation duration when the component data is updated, in ms.
- **Start from Previous Position:** If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Figure 7-63 Animation

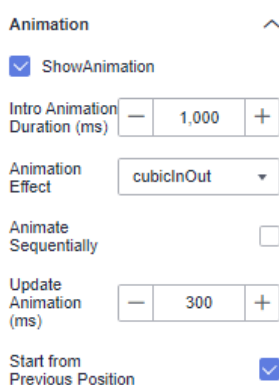


Figure 7-63 shows the configuration panel for Animation. The panel includes the following settings:

- ShowAnimation:** A checked checkbox.
- Intro Animation Duration (ms):** A spinner control set to 1,000.
- Animation Effect:** A dropdown menu set to "cubicInOut".
- Animate Sequentially:** An unchecked checkbox.
- Update Animation (ms):** A spinner control set to 300.
- Start from Previous Position:** A checked checkbox.

- **Value Settings:** You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-100](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **↓**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- Select the associated chart and click **OK**.

Table 7-100 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**

- On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
- In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
- Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

 NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

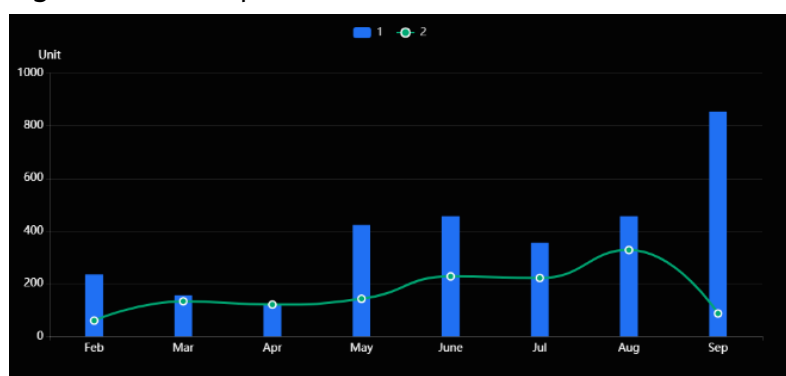
Table 7-101 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .
Associated Parameters	Set Effective Parameters of This Screen . • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Chart Display

Figure 7-64 Example of a combination chart



7.4.1.4.4 Dual Y-Axis Combination Chart

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-102 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

- Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
- Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
- Set a filter.
 - Find the data field you need in the dimension and metric lists within the data column.
 - Click  next to the field you wish to filter and you will be directed to the filter settings page.

- c. Click **OK**.

Table 7-103 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
- Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.

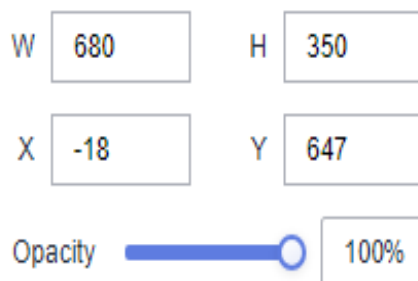
- c. To cancel sorting, click  next to the sorting field.
6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This part describes the style parameters of a dual Y-axis combination chart.

- **Size/Position**
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

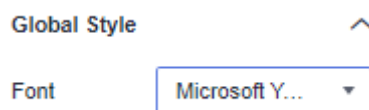
Figure 7-65 Size/Position



The figure shows a configuration interface for the Size/Position of a chart. It consists of four input fields arranged in a 2x2 grid: 'W' (width) with value 680, 'H' (height) with value 350, 'X' (position) with value -18, and 'Y' (position) with value 647. Below these is an 'Opacity' slider set to 100%.

- **Global Style**
 - **Font**: font of the text in the chart.

Figure 7-66 Global Style



The figure shows a configuration interface for the Global Style. It features a 'Global Style' header with an upward arrow icon. Below it, there is a 'Font' label and a dropdown menu currently displaying 'Microsoft Y...'.

- **Line Style**: The value for a smooth curve ranges from 0 to 1.
- **Bar Style**
 - **Bar Width**: bar width, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 1 to 100.

- **Bar Corner Radius:** bar corner radius, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from 0 to 100.
- **Series Spacing:** series spacing, which can be adjusted by entering a numerical value or clicking - or +. Note that the input cannot be empty and must be from -100 to 100.

Figure 7-67 Bar style

Bar Style ^

Bar Width 20

Bar Corner Radius 0

Series Spacing 0

- **Margin**

- **Top:** The spacing between the chart and the top of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Bottom:** The spacing between the chart and the bottom of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Left:** The spacing between the chart and the left of the layer, which can be adjusted by entering a numerical value or clicking - or +.
- **Right:** The spacing between the chart and the right of the layer, which can be adjusted by entering a numerical value or clicking - or +.

Figure 7-68 Margin

Margin ^

Top 56

Bottom 26

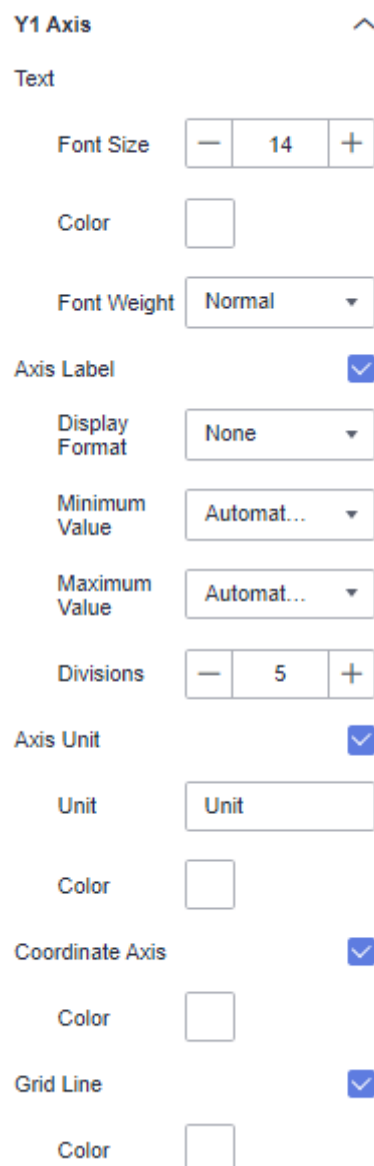
Left 15

Right 15

- **X Axis**

- **Show X Axis:** If the checkbox is selected (☒), the X axis is displayed. If the checkbox is not selected (☐), the X axis is not displayed.
- **Text:** text style of the X axis, including **Font Size**, **Color**, and **Font Weight**.
- **Axis Label:** displays the angle of the axis label. The value ranges from -90 to 90.
- **Color:** color of the X axis.
- **Grid Line:** If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed.

- **Y1 Axis**
 - **Text:** text style of the Y1 axis, including **Font Size**, **Color**, and **Font Weight**.
 - **Axis Label:** text style of the Y1 axis, including **Display Format**, **Minimum Value**, **Maximum Value**, and **Divisions**.
 - The display format options include automatic, rounding, and various decimal places ranging from one to five.
 - The minimum value can be set to either the data's minimum value or rounded automatically.
 - The maximum value can be set to either the data's maximum value or rounded automatically.
 - The number of divisions cannot be less than one.
 - **Axis Unit:** unit and color of the Y1 axis.
 - **Coordinate Axis:** color of the Y1 axis line.
 - **Grid Line:** If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed. The grid line color can also be set.

Figure 7-69 Y1 axis

Y1 Axis ^

Text

Font Size: — 14 +

Color:

Font Weight: Normal ▾

Axis Label ☒

Display Format: None ▾

Minimum Value: Automat... ▾

Maximum Value: Automat... ▾

Divisions: — 5 +

Axis Unit ☒

Unit: Unit

Color:

Coordinate Axis ☒

Color:

Grid Line ☒

Color:

- **Y2 Axis**
 - **Text:** text style of the Y2 axis, including **Font Size**, **Color**, and **Font Weight**.
 - **Axis Label:** text style of the Y2 axis, including **Display Format**, **Minimum Value**, **Maximum Value**, and **Divisions**.
 - The display format options include automatic, rounding, and various decimal places ranging from one to five.
 - The minimum value can be set to either the data's minimum value or rounded automatically.
 - The maximum value can be set to either the data's maximum value or rounded automatically.
 - The number of divisions cannot be less than one.

- **Axis Unit:** unit and color of the Y2 axis.
- **Coordinate Axis:** color of the Y2 axis line.
- **Grid Line:** If the checkbox is selected (☒), grid lines are displayed. If the checkbox is not selected (☐), grid lines are not displayed. The grid line color can also be set.

Figure 7-70 Y2 axis

Y2 Axis 

Text

Font Size 14

Color

Font Weight

Axis Label ☒

Display Format

Minimum Value

Maximum Value

Divisions 5

Axis Unit ☐

Unit

Color

Coordinate Axis ☒

Color

Grid Line ☐

Color

- Legend
 - **Show Legend:** If the checkbox is selected (☒), the legend is displayed. If the checkbox is not selected (☐), the legend is not displayed.
 - **Text:** text style of the legend, including **Font Size**, **Color**, and **Font Weight**.

- **Layout:** position of the legend. The options are **Top center**, **Top left**, **Top right**, **Bottom center**, **Bottom left**, and **Bottom right**.

Figure 7-71 Legend

The screenshot shows the 'Legend' configuration panel. It has a title 'Legend' with an expand/collapse icon. Below the title is a checked checkbox labeled 'ShowLegend'. Under the 'Text' section, there are three controls: 'Font Size' with a numeric input set to 14, 'Color' with a gray color swatch, and 'Font Weight' with a dropdown menu set to 'Normal'. Under the 'Layout' section, there are three controls: 'Left and Right Spacing' with a numeric input set to 16, 'Top and Bottom Spacing' with a numeric input set to 16, and 'Position' with a dropdown menu set to 'Top center'.

- Tooltips

- **Show Tooltips:** If the checkbox is selected (☒), a tooltip is displayed when you preview or view a published component. If the checkbox is not selected (☐), no tooltip is displayed when you preview or view a published component.
- **Trigger Type:** trigger type of tooltips. The options are **Coordinate Axis** and **Data Item**.
- **Color:** font color of the tooltips.
- **Font Size:** font size of tooltips.
- **Font Weight:** font weight of tooltips.

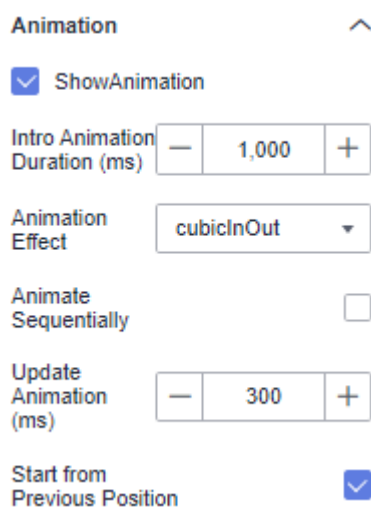
Figure 7-72 Tooltips

The screenshot shows the 'Tooltips' configuration panel. It has a title 'Tooltips' with an expand/collapse icon. Below the title is a checked checkbox labeled 'ShowTooltips'. Under the 'Trigger Type' section, there is a dropdown menu set to 'Coordinate...'. Under the 'Text' section, there are three controls: 'Color' with a white color swatch, 'Font Size' with a numeric input set to 14, and 'Font Weight' with a dropdown menu set to 'Normal'.

- Animation

- **Show Animation:** If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.
- **Intro Animation Duration (ms):** duration of the first rendering of the component, in ms.

 **NOTE**
The value of the intro animation cannot be 0. The default value is **1000** ms.
- **Animation Effect:** The system provides multiple common animation slow-moving effects.
- **Animate Sequentially:** If this option is selected, the series are animated in sequence. If this option is deselected, all series are animated at the same time.
- **Update Duration (ms):** animation duration when the component data is updated, in ms.
- **Start from Previous Position:** If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Figure 7-73 Animation

- **Value Settings:** You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Interactions

- **Link**
On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-104](#). For details, see [Example linkage](#).
- **Filter**
 - i. Click **Filter**. The **Filter** tab is displayed.

- ii. Click **+** next to **Fields to Bound**. The associated field box is displayed.
 - iii. Click **→**, select the field to be bound, select the associated chart, and click **OK**.
- **Shown/Hidden**
- i. Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
 - ii. Select the associated chart and click **OK**.

Table 7-104 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**
 - a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
 - b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
 - c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-105 Parameters

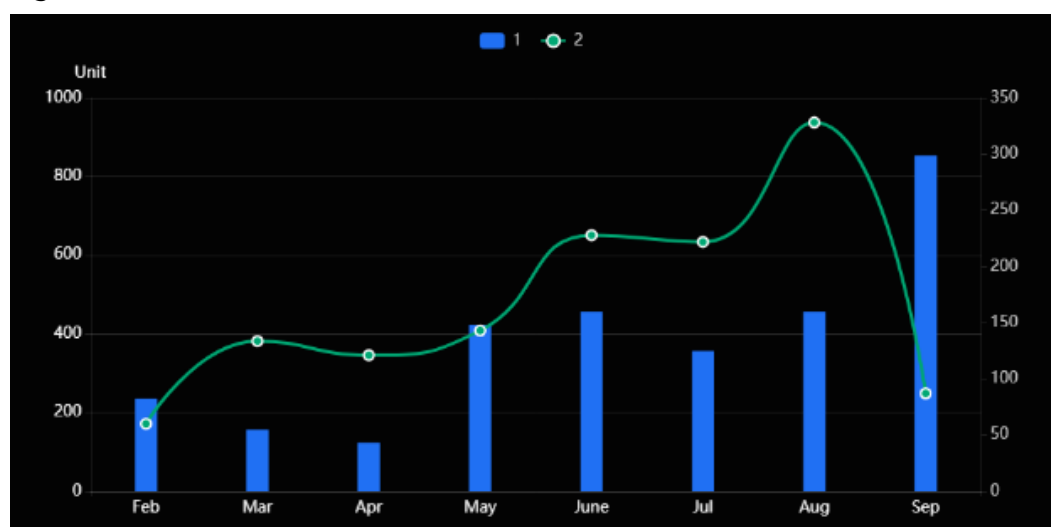
Parameter	Description
Redirect Type	Intra-system redirect : Redirect to the internal screen and dashboard projects. External redirect : Redirect to a link that is not in the software.

Parameter	Description
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect.
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Chart Display

Figure 7-74 Dual Y-axis combination chart



7.4.1.4.5 Gantt Chart

This section describes basic information about a Gantt chart and how to use the chart.

Field

1. On the **Field** tab, double-click or drag the required dimensions and metrics to the **Dimension** and **Metric** areas.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-106 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.

Type	Parameter	Description
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
4. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

- **Size/Position**
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-75 Size/Position

W 680 H 350

X -18 Y 647

Opacity 100%

- **Global Style**
Font: font of the text in the chart.

Figure 7-76 Global Style

Global Style ^

Font Microsoft Y... ▼

- **Gantt Chart Style**
 - **Chart Label**
 - **Font Size:** font size of the Gantt chart label, which can be customized. The value ranges from 10 to 100.
 - **Color:** color of the Gantt chart label, which can be customized.
 - **Font Weight:** The options include **Normal**, **Bold**, **Bolder**, and **Lighter**.
 - **Status-Color Configuration:** Obtain the range of status enumerated values based on the **Status/Dimension** area on the **Fields** tab and customize the colors for the values.
- **Margin:** You can customize the top, bottom, left, and right margins of the Gantt chart.
- **X Axis/Y Axis**

Axis Label: font size, font color, and font weight of the X axis and Y axis labels.

Figure 7-77 X/Y axis

X Axis ^

Axis Label

Font Size — 14 +

Color

Font Weight Normal ▼

Y Axis ^

Axis Label

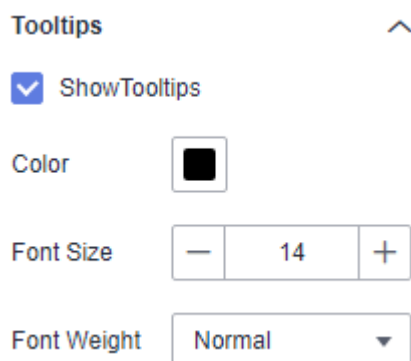
Font Size — 14 +

Font Color

Font Weight Normal ▼

- **Tooltips**
 - **Show Tooltips:** If the checkbox is selected (☒), a tooltip is displayed when you preview or view a published component. If the checkbox is not selected (☐), no tooltip is displayed when you preview or view a published component.

- **Color:** font color of tooltips.
- **Font Size:** font size of tooltips.
- **Font Weight:** font weight of tooltips.

Figure 7-78 Tooltips

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-107](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **→**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- Select the associated chart and click **OK**.

Table 7-107 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**

- a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
- b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
- c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

 NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-108 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .

Parameter	Description
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

Example of Using a Gantt Chart

Display the optimal sales period for a store's products.

- Displays data.

Table 7-109 Product type table

Product Type	Product Name	Color	Start Date	End Time
Mobile phone	Mobile phone A	White	May 2023	July 2, 2023
Mobile phone	Mobile phone B	Red	May 2023	July 3, 2023
Mobile phone	Mobile phone C	Black	May 2023	August 4, 2023
Desktop computer	Computer A	Black	January 2023	August 5, 2023
Desktop computer	Computer B	Black	May 2023	August 6, 2023
Desktop computer	Computer C	Black	May 2023	August 7, 2023
Tablet	Tablet D	Red	May 2023	August 8, 2023
Tablet	Tablet M	Pink	June 2023	August 9, 2023
Laptop	Laptop A	Pink	June 2023	August 10, 2023
Laptop	Laptop C	Red	June 2023	August 11, 2023

- Procedure
 - Click  in the upper left corner to select a region.
 - In the lower left corner of the navigation pane, select an enterprise project from **Enterprise Project**.
 - [Create a project.](#)
 - [Create a data source.](#)
 - Create a dataset by referring to [Creating a Dataset](#).
 - Create a large screen by referring to [Creating a Large Screen](#). In the **Common charts** area in the left pane, select **Gantt Chart** and create it.
 - Select the dataset created in [Creating a Dataset](#) and drag and drop the corresponding fields to the **Title/Dimension**, **Name/Dimension**, **Status/Dimension**, **Start Time/Dimension**, and **End Time/Dimension** areas.
 - Click **Update** in the lower right corner. The Gantt chart displays data. Set the Gantt chart based on the style parameters.

7.4.2 Creating a Map

7.4.2.1 Creating a Map

Map components are used to display the data size and distribution range of metrics on a map. Map components include basic 2D maps, world maps, custom maps, and multi-layered maps.

Prerequisites

- You have subscribed to DataArts Insight.
- A project for managing data sources has been created. For details, see [Creating a Project](#).
- You have obtained data. For details, see [Creating a Data Source](#).
- You have prepared the required dataset. For details, see [Creating a Dataset Through Visual Configuration](#).
- You have created a screen. For details, see [Creating a Large Screen](#).

Procedure

1. Click the **Maps** icon in the left navigation pane to switch to the map component page.
2. Drag or click a map component to the canvas. In this section, the world map is used as an example.
3. In the **Data** area on the right, select a dataset.
4. Select the required map component and configure fields and styles.
5. Click **Save and Publish** or **Save** in the upper right corner of the page.

7.4.2.2 China Map

This section describes the parameters of a China map.

Notes and Constraints

- You can only drag one field to the **Province** area, which is mandatory.
- You can only drag one field to the **Numeric** area.
- You can only drag a maximum of five fields to the **Tooltip/Metric** area.

Prerequisites

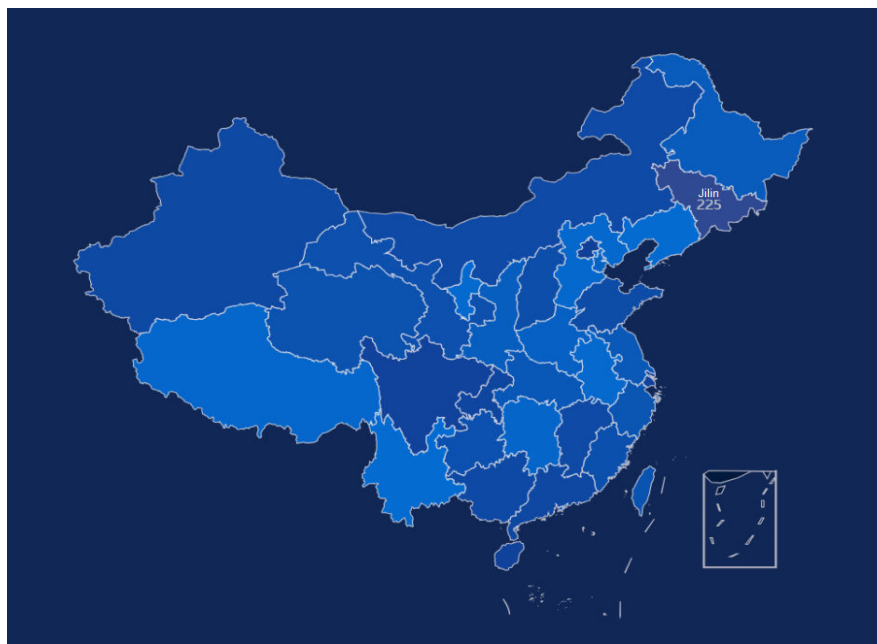
- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. Click the **Maps** icon in the left navigation pane to switch to the map component page.

2. Click or drag a map component to the canvas.
3. In the data configuration area on the right, select a dataset.
4. Set parameters on the **Fields**, **Styles**, and **Interactions** tabs.
5. Click **Update**. The system automatically updates the chart.

Figure 7-79 Example of a China map



6. Click **Save** or **Save and Publish** in the upper right corner of the page to save the large screen.
7. In the displayed **Save Screen** dialog box, enter the large screen name and click **OK**.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
3. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

Set the parameters for creating a China map based on [Table 7-110](#).

Table 7-110 Style parameters

Parameter	Description
Size/ Position	Set the width (W) and height (H) of the chart, in pixels. Set the position of the target on the canvas, in pixels. Adjust the transparency of the chart on the canvas, with a higher proportion resulting in lower transparency.
Global Style	Map Center: Adjust the position of the map center in the layer by setting Top and Left. Zoom Range: Set the zoom ratio of the map center in the layer. The value ranges from 0.1 to 50.
Filling Settings	Transparency: Set the filling transparency. The value ranges from 0 to 1. Borderline Options: Set the color and width of the borderline.
Visual Mapping	By configuring visual mapping, data on the map can be divided into different color intervals, making it easy to visualize the distribution of the data. • Check the checkbox (☒) to display the visual mapping. You can set Direction, Width, Height, Left, Bottom, and Spacing of visual mapping legends. • Mapping Type: Select a mapping type. The options are Continuous and Custom range. – Continuous: Automatically divide data into different color intervals based on the maximum and minimum values, and support setting the color of Maximum Value, Minimum Value, and Out of Range. – Custom range: You need to set Numeric Range, Numeric Color, and Text.
Label	Select the checkbox (☒) to show labels. • Show all: Select this option to show the names of all regions. • Show metrics: Select this option to show the metrics specified on the Fields tab. Set Font, Color, Font Size, and Font Weight.
Selected Style	Set the fill and font colors of the selected area using the mouse.
Tooltip	When the check box is selected (☒), the tooltip is displayed. Similarly, you can set whether to display the data value and data name inside the tooltip. Set the tooltip's padding, background color, border color, border width, text, font weight, and custom size. After completing the settings, click Preview in the upper right corner of the page to view. The corresponding tooltip is displayed when the mouse hovers over a specific area.

Parameter	Description
Zoom Settings	Set whether to enable zooming.
Panning Settings	Set whether to enable panning.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-111](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click **+** next to **Fields to Bound**. The associated field box is displayed.
- Click **→**, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- Select the associated chart and click **OK**.

Table 7-111 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

7.4.2.3 World Map

This section describes the parameters of a world map.

Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-112 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
4. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

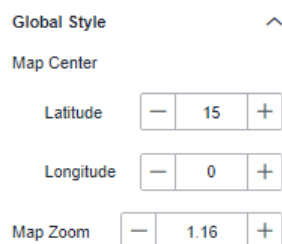
This section describes style parameters of a world map.

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-80 Size/Position

The figure shows a set of UI controls for configuring a world map's size and position. It includes four text input fields: 'W' with the value '580', 'H' with '360', 'X' with '811', and 'Y' with '487'. Below these is an 'Opacity' control consisting of a blue horizontal slider and a text box showing '100%'.

- Global Style
 - **map-perspective**: Pacific and Atlantic perspectives are available.
 - Pacific: Switch the map style to Pacific-centered.
 - Atlantic: Switch the map style to Atlantic-centered.
 - **Map Center**: Set the position of the map center on the canvas.
 - **Latitude**: Set the latitude of the map center. The value ranges from **-180** to **180**.
 - **Longitude**: Set the longitude of the map center. The value ranges from **-180** to **180**.
 - **Map Zoom**: Zoom in or out the map based on the specified longitude and latitude. The zoom range is **0.1** to **50**.

Figure 7-81 Global Style

Global Style ^

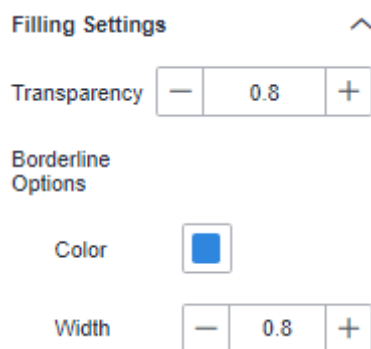
Map Center

Latitude

Longitude

Map Zoom

- Filling Settings
 - **Transparency:** Set the filling transparency. The value ranges from **0** to **1**.
 - **Color:** Set the filling color.
 - **Width:** Set the filling width. The value ranges from **0** to **10**.

Figure 7-82 Filling Settings

Filling Settings ^

Transparency

Borderline Options

Color

Width

- Visual Mapping
 - **ShowVisual Mapping:** Select or deselect the check box to show or hide virtual mapping.
 - **Mapping Type:** Select a mapping type. The value can be **Continuous** or **Custom range**.
 - **Direction:** Select a mapping direction from the drop-down list. The value can be **Vertical** or **Horizontal**.
 - **Width:** Set the width of the visual mapping.
 - **Height:** Set the height of the visual mapping.
 - **Left:** Set the distance between the visual mapping and the left side of the layer.
 - **Bottom:** Set the distance between the visual mapping and the bottom of the layer.
 - **Text:** Set the font color and font size of the text in the visual mapping.
 - **Color:** Set the color range of the visual mapping.

Figure 7-83 Visual Mapping

Visual Mapping ^

☒ ShowVisual Mapping

Direction Vertical ▾

Width — 11 +

Height — 60 +

Left — 6 +

Bottom — 4 +

Text

Color 

Font Size — 14 +

Mapping Type

☐ Continuous

☒ Custom range

[+ Add Range](#)

▾ Range1 [Delete](#)

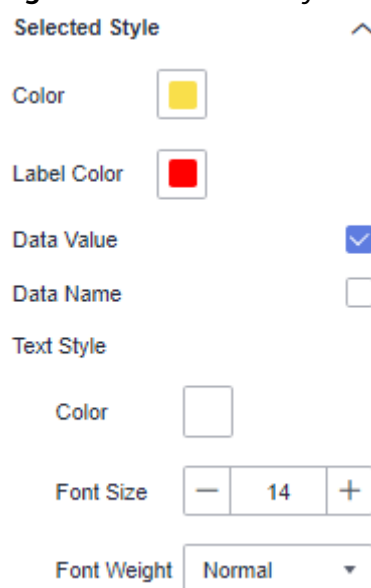
▾ Range2 [Delete](#)

▾ Range3 [Delete](#)

Out of Range 

- Label
 - **ShowLabel:** Select the check box to show only labels with data on the map. If no data is available, no labels are displayed.
 - **Show all:** After this option is selected, the labels without data are also displayed.
 - **Show metrics:** Select this option to show the metrics specified in **Fields**.
 - **Font:** Set the font of the labels.
 - **Color:** Set the color of the labels.
 - **Font Size:** Set the font size of the labels. The value ranges from **10** to **100**.
 - **Font Weight:** Set the font weight of the labels. The options are **Normal**, **Bold**, **Bolder**, and **Lighter**.

- **Selected Style**
 - **Color:** Click the color editor to set the color.
 - **Label Color:** Click the color editor to set the label color.
 - **Data Value:** Select or deselect the check box to show or hide the data value.
 - **Data Name:** Select or deselect the check box to show or hide the data name.
 - **Text Style:** Set the text color, font size, and font weight.

Figure 7-84 Selected Style

- **ShowZoom Settings:** Select or deselect the check box to show or hide the zoom function on the preview and view pages.
- **ShowPanning Settings:** Select or deselect the check box to show or hide the panning function on the preview and view pages.

Interactions

- **Link**

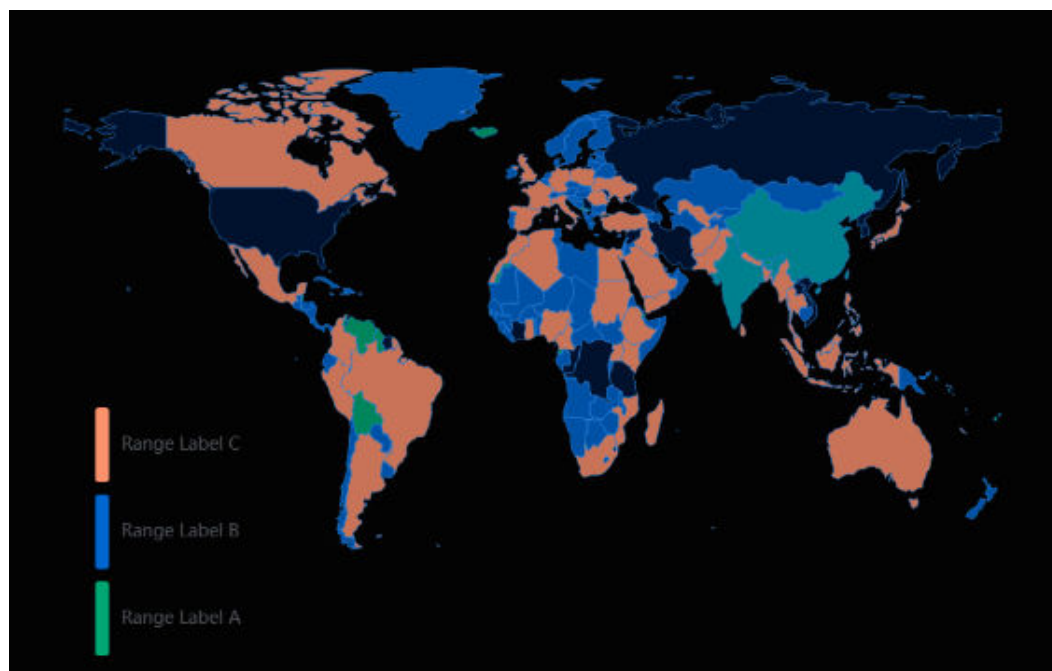
On the **Interactions** tab, choose **Advanced > Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-113](#). For details, see [Example linkage](#).

 - **Filter**
 - i. Click **Filter**. The **Filter** tab is displayed.
 - ii. Click **+** next to **Fields to Bound**. The associated field box is displayed.
 - iii. Click **▼**, select the field to be bound, select the associated chart, and click **OK**.
 - **Shown/Hidden**
 - i. Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
 - ii. Select the associated chart and click **OK**.

Table 7-113 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

Chart Display

Figure 7-85 Example of a world map

7.4.2.4 Custom Map

This section describes the parameters of a custom map.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.

- a. Find the data field you need in the dimension and metric lists within the data column.
- b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
- c. Click **OK**.

Table 7-114 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.

4. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

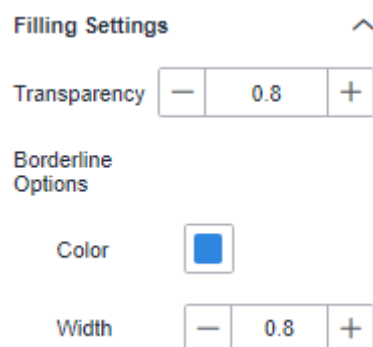
This section describes parameters of a custom map.

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

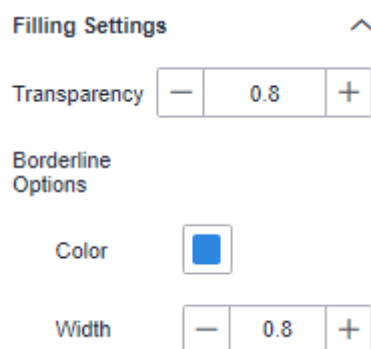
Figure 7-86 Size/Position

The figure shows a set of UI controls for configuring a map's size and position. It includes four input boxes for width (W: 580), height (H: 360), horizontal position (X: 811), and vertical position (Y: 487). Below these is an opacity control consisting of a blue slider bar and a text box showing '100%'.

- Global Style
 - **Map Center**: Set the position of the map center on the canvas.
 - **Top**: Set the top of the map center. The value ranges from **0** to **200**.
 - **Left**: Set the left of the map center. The value ranges from **0** to **200**.
 - **Zoom Range**: Set the zoom ratio of the map center in the layer. The value ranges from **0.1** to **50**.
 - **Boundary Data Source**: Set the source of the map data. The options are **Link** and **Materials**.
 - **Link**: Copy a link to the **URL Address** text box to obtain boundary data.
 - **Materials**: Select or upload your own JSON file to obtain boundary data.

Figure 7-87 Global Style

- Filling Settings
 - **Transparency:** Set the filling transparency. The value ranges from **0** to **1**.
 - **Borderline Options:** Set the color and width of the borderline.
 - **Color:** Set the filling color.
 - **Width:** Set the filling width. The value ranges from **0** to **10**.

Figure 7-88 Filling Settings

- Visual Mapping
 - **ShowVisual Mapping:** Select or deselect the check box to show or hide virtual mapping.
 - **Direction:** Select a mapping direction from the drop-down list. The value can be **Vertical** or **Horizontal**.
 - **Mapping Type:** Select a mapping type. The value can be **Continuous** or **Custom range**.
 - **Width:** Set the width of the visual mapping.
 - **Height:** Set the height of the visual mapping.
 - **Left:** Set the distance between the visual mapping and the left side of the layer.
 - **Bottom:** Set the distance between the visual mapping and the bottom of the layer.
 - **Spacing:** Set the spacing between mappings.
 - **Text:** Set the font color and font size of the text in the visual mapping.
 - **Mapping Type:** The value can be **Continuous** or **Custom range**. You can set the value range, color, and text.

- **Out of Range:** Set the color for the mapping out of the range.

Figure 7-89 Visual Mapping

The screenshot shows the 'Visual Mapping' configuration panel. At the top, there is a title 'Visual Mapping' with an expand/collapse arrow. Below it is a checked checkbox labeled 'ShowVisual Mapping'. The 'Direction' is set to 'Vertical' in a dropdown menu. The 'Width' is 11, 'Height' is 60, 'Left' is 6, and 'Bottom' is 4, each with minus and plus buttons for adjustment. Under the 'Text' section, the 'Color' is represented by a grey square, and the 'Font Size' is 14 with minus and plus buttons. The 'Mapping Type' section has two radio buttons: 'Continuous' (unselected) and 'Custom range' (selected). Below this is a '+ Add Range' button. There are three range configuration boxes: 'Range1', 'Range2', and 'Range3'. Each box has a dropdown arrow on the left and a 'Delete' button on the right. At the bottom, the 'Out of Range' color is represented by a teal square.

- **Label**
 - **ShowLabel:** Select or deselect the check box to show or hide labels for the map.
 - **Show all:** After this option is selected, all labels are displayed.
 - **Show metrics:** Select this option to show the metrics specified in **Fields**.
 - **Font:** Set the font of the labels.
 - **Color:** Set the color of the labels.
 - **Font Size:** Set the font size of the labels. The value ranges from **10** to **100**.

- **Font Weight:** Set the font weight of the labels. The options are **Normal**, **Bold**, **Bolder**, and **Lighter**.
- Selected Style
 - **Color:** Click the color editor to set the color.
 - **Data Value:** Select or deselect the check box to show or hide the data value.
 - **Data Name:** Select or deselect the check box to show or hide the data name.
 - **Text Style:** Set the text color, font size, and font weight.
 - **Padding:** Set the padding of the tooltip. The value cannot be smaller than **0**.
 - **Background Color:** Set the background color of the tooltip.
 - **Custom Size:** Set the size of the tooltip.
 - **Border Color:** Set the border color of the tooltip.
 - **Border Width:** Set the border width of the tooltip. The value cannot be smaller than **0**.

Figure 7-90 Selected Style

Selected Style ^

Color

Data Value ☒

Data Name ☐

Text Style

Color

Font Size 14

Font Weight Normal ▾

Tooltip

Padding 5

Background Color

Border Color

Border Width 0

Custom Size ☐

Width 160

Height 30

- **ShowZoom Settings:** Set whether to enable zoom.
- **ShowPanning Settings:** Set whether to enable panning.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-115](#). For details, see [Example linkage](#).

 - **Filter**
 - Click **Filter**. The **Filter** tab is displayed.
 - Click **+** next to **Fields to Bound**. The associated field box is displayed.
 - Click **▾**, select the field to be bound, select the associated chart, and click **OK**.
 - **Shown/Hidden**

- i. Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- ii. Select the associated chart and click **OK**.

Table 7-115 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

Scenario: Creating a Map of Jiangsu Province

- Prerequisites
 - A project has been created.
 - A data source has been created.
 - A dataset has been created.
 - A screen has been created.
- Procedure
 - a. Log in to the DataArts Insight management console.
 - b. Click the project name to access the project.
 - c. Click **Create** and select **Create Screen**.
 - d. Click the **Maps** icon in the navigation pane and click **Custom Map**. Choose **Styles > Global Style** and set **Boundary Data Source**. Click **Link** and enter a link in **URL Address**. The map of Jiangsu province is displayed.

Figure 7-91 Link

Fields Styles Interac ▾

W 680 H 350

X 762 Y 492

Opacity 100%

Global Style ^

Map Center

Top

Left

Zoom Range

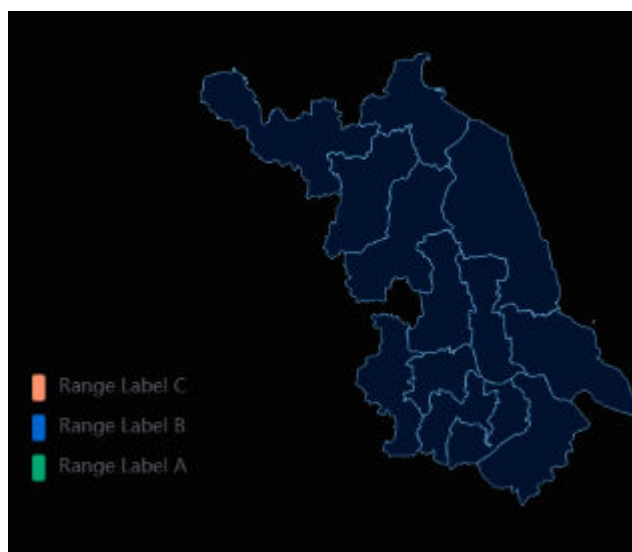
Boundary Data Source

☒ Link ☐ Materials

URL Address

- e. Select **ShowLabel**. The labels of each city are displayed on the map.

Figure 7-92 Map of Jiangsu province



- f. Set the visual mapping and preview the GDP distribution of each city in Jiangsu province.

- i. Select the new dataset.
- ii. Set the fields (**Geographical Location/Dimension** to **City** and **Numeric/Metric** to **GDP**) and click **Update**.
- iii. Set the mapping range (custom range). Then, different colors are displayed on the map to distinguish the GDP distribution of each city in Jiangsu province. For details, see [Figure 7-92](#).

Figure 7-93 Setting the value range

Mapping Type

☐ Continuous

☒ Custom range

[+ Add Range](#)

Range1 [Delete](#)

Numeric Range

≤n<

Numeric Color

Text

Range2 [Delete](#)

Numeric Range

≤n≤

Numeric Color

Text

Range3 [Delete](#)

Numeric Range

<n≤

Numeric Color

Text

7.4.2.5 Multi-Layered Map

You can create a multi-layered map and overlay multiple bubble charts and jump line charts on it, to present various types of data. This section describes the parameters of a multi-layered map.

Prerequisites

- A project has been created by referring to [Creating a Project](#).

- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. Click the **Maps** icon in the left navigation pane to switch to the map component page.
2. Click or drag a map component to the canvas.
3. In the data configuration area on the right, select a dataset.
4. Set parameters on the **Field** and **Styles** tabs.
5. Click **Update**. The system automatically updates the chart.

Figure 7-94 Multi-layered map



Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-116 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
4. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

5. After settings the fields, select **Boundary Data Source** in the style, and click **Update**. The system will automatically update the chart.

Styles

Table 7-117 Style parameters

Parameter	Description
Size/ Position	Set the width (W) and height (H) of the chart, in pixels. Set the position of the target on the canvas, in pixels. Adjust the transparency of the chart on the canvas, with a higher proportion resulting in lower transparency.
Sublayer - Bubble Layer	Bubble Style: Set Bubble Color, Bubble Size, Enable Bubble Animation, Bubble Style, and Animation Speed. Label: If selected, labels are displayed on the map. You can set the content, position, and text size of labels. Tooltips: If selected, tooltips appear on the map. You can set Background Color, Text, and Font Weight.
Sublayer - Flight Line Layer	Flight Line Style: In this area, you can set Flight Line Color, Flight Line Style, Flight Line Thickness, and Flight Line Arc. Landing Bubble: When checked, the map will display landing bubbles. You can set Bubble Color, Bubble Size, Enable Bubble Animation, Bubble Style, and Animation Speed. Label: If selected, labels are displayed on the map. You can set the content, position, and text size of labels. Tooltips: If selected, tooltips appear on the map. You can set Background Color, Text, and Font Weight.
Common Configurati on	Global Style • Map Center: Adjust the position of the map center in the layer by setting Top and Left. • Zoom Range: Set the zoom ratio of the map center in the layer. The value ranges from 0.1 to 50. • Boundary Data Source: You can set it to Link or Materials. – Link: Copy a link to the URL Address text box to obtain boundary data. – Materials: Select or upload your own JSON file to obtain boundary data. • Filling Settings: You can set Transparency, Color, and Border Width. • Interactive Settings: You can set Zoom Settings and Panning Settings. Legend • If selected, legends are displayed on the map. You can set Content, Text, Position, and Alignment.

7.4.3 Creating Media

7.4.3.1 Image

This section describes parameters of an image.

Styles

This part describes style parameters of an image.

- **Size/Position**
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-95 Size/Position

W 580 H 360

X 811 Y 487

Opacity 100%

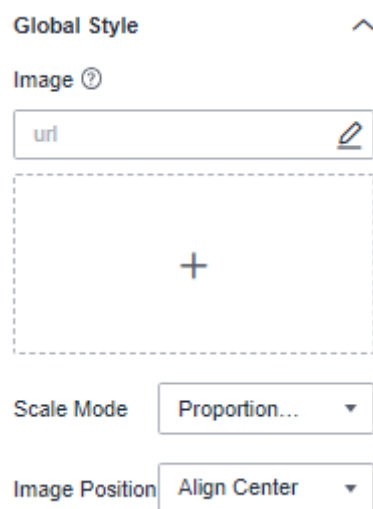
- **Global Style**
 - **Image**: You can load an image to the screen in any of the following ways:
 - Enter the address of the image in the **url** text box.
 - Click the dotted-line box below **Image** to select an image.
 - Drag an image to the dotted-line box below **Image**.

After selecting an image, you can edit or delete it.

NOTE

Use this feature with caution as it may result in the leakage of your background image data.

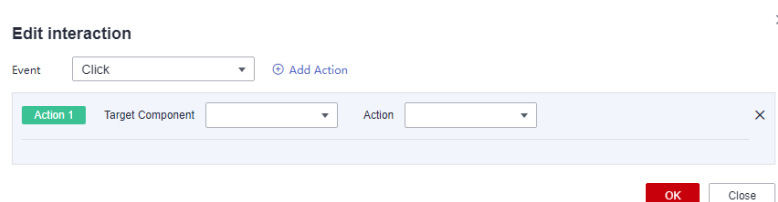
- **Scale Mode**: Select a zoom mode of the image from the drop-down list. The value can be **Retain original image size**, **Proportional scaling**, **Cropping and Scaling**, or **Stretch scaling**.
- **Image Position**: Select a position of the image from the drop-down list. The value can be **Align Center**, **Align Left**, **Align Right**, **Top alignment**, or **Bottom alignment**.

Figure 7-96 Global Style

Interactions

This section describes the parameters of media interactions. Only images support interaction settings.

1. Click **Interactions**.
2. Expand **Interaction Definition** and click **Edit interaction event**.

Figure 7-97 Edit interaction

3. Set **Event** to **Click**.
4. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
5. Click **OK** to complete the setting of the interaction event.

NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.

Chart Display

Figure 7-98 Image effect display



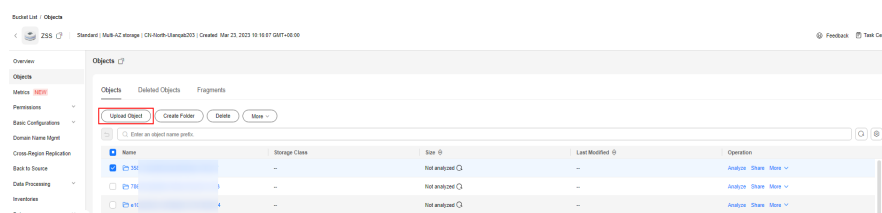
7.4.3.2 Video

This section describes parameters of a video.

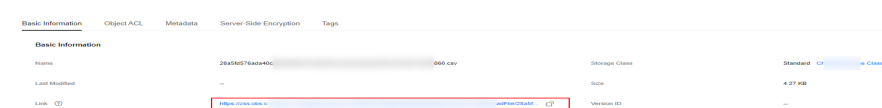
Styles

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

- Video
 - You can enter a URL. For example, to upload a video to an OBS bucket, perform the following steps:
 - i. Log in to the OBS console and create an OBS bucket.
 - ii. After the bucket is created, choose **Buckets** in the navigation pane.
 - iii. Select the created bucket, go to the bucket setting page, and click **Upload Object** to upload files.

Figure 7-99 Uploading an object

- iv. After the upload is successful, refresh the page.
- v. Click the object name to access its details page, and copy the link to the **url** text box of **upload_video** on **Create Screen > Media > Video > Styles > Video**.

Figure 7-100 Objects**NOTE**

Note that the video link must be accessible to the browser and comply with the content security policy.

- Upload a file.
- Play settings
 - Autoplay
 - Select or deselect the check box to show or hide autoplay.
 - Loop Playback
 - Select or deselect the check box to show or hide loop playback.
 - Controls
 - Select or deselect the check box to show or hide controls.
 - Mute
 - Select or deselect the check box to show or hide the mute function.

7.4.4 Preparing a Text

7.4.4.1 Creating a Text

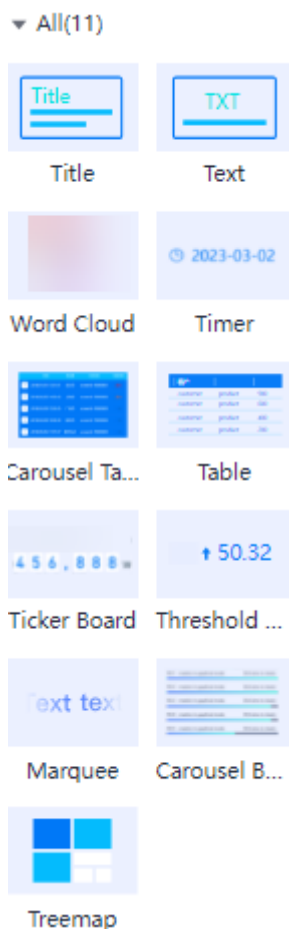
The text component enhances the data report page by providing descriptive text in a textual format.

Prerequisites

- You have subscribed to DataArts Insight.
- A project for managing data sources has been created. For details, see [Creating a Project](#).
- You have obtained data. For details, see [Creating a Data Source](#).
- You have prepared the required dataset. For details, see [Creating a Dataset Through Visual Configuration](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. In the displayed dialog box, select a project and click **Confirm**.
6. Hover over the fourth icon (which means texts) in the navigation pane to switch to the text component page.

Figure 7-101 Text component page

7. Drag or double-click a text template to the canvas area.
8. In the right pane, set related parameters for the target text.

Title: Expand **Text Style** in the right pane and enter a title in the text box under **Text Settings** and enter the link to be redirected in the **Redirect** text box.

Text: Enter a text in the text box under **Text Content** on the **Fields** page.

Word Cloud: On the **Fields** page, drag and drop the required category axis/dimension and axis value/metric to add them to the **Class Axis/Dimension**, **Axis Value/Metric**, and **Filter** areas.

Timer: You do not need to set it.

Carousel Table: On the **Fields** page, drag and drop the required category axis/dimension and axis value/metric to add them to the **Table Columns/Dimensions or Metrics**, **Filter**, and **Sorting** areas.

Ticker Board: On the **Fields** page, drag and drop the required axis value/metric to add it to the **Numeric/Metric** and **Filter** areas.

Marquee: On the **Fields** page, enter a text in the **Text Content** text box. After the setting is successful, the rolling effect is automatically displayed.

Carousel Bar Chart: On the **Fields** page, drag and drop the required axis value/metric to add it to the **Class Axis/Dimension**, **Axis Value/Metric**, and **Filter** areas.

9. Once the large screen fields and style are configured, click **Save and Publish** or **Save** in the upper right corner of the page.

Parameter Description

Table 7-118 Parameter description

Component	Description	Parameter
Title	Title, which is used together with other components.	None
Text	Text, which describes the components.	Text
Word Cloud	A visual representation of text data, where words are displayed in a cloud-like, colorful graph.	Class Axis/Dimension
Timer	The timer synchronizes with standard time to display the current time.	None
Carousel Table	Data is presented in a rotating table format, with rows and columns.	Table Columns/Dimensions or Metrics
Table	Data is displayed in a table, with rows and columns.	Table Columns/Dimensions or Metrics
Ticker Board	The ticker board allows customization of the title, number, prefix, and suffix styles. Flippers are typically used in conjunction with other components to visually represent real-time data changes.	Axis Value/Metric
Threshold Board	Similar to the ticker board, the threshold board allows for style customization and is used to display real-time data changes in visual applications.	Axis Value/Metric
Marquee	The marquee offers options to customize text content, color, and animation effects. Overflow text can be displayed as a scrolling animation within the component.	Text Content

Component	Description	Parameter
Carousel Bar Chart	A table-like component that visualizes data through bar lengths proportional to their values and supports scrolling text animation and multi-page content display.	Category Axis/Dimension and Axis Value/Metric
Treemap	The treemap diagram is suitable for representing hierarchical data, the treemap diagram provides an intuitive comparison of data at the same level and makes efficient use of space to show proportions.	Color Block Label/Dimension and Color Block Size/Metric

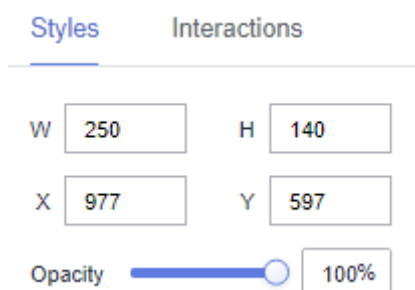
7.4.4.2 Title

This section describes the parameters of a title component.

Styles

- Size/Position
 - W**: width of the target, in pixels.
 - H**: height of the target, in pixels.
 - X**: position of the target on the canvas, in pixels.
 - Y**: position of the target on the canvas, in pixels.
 - Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-102 Size/Position



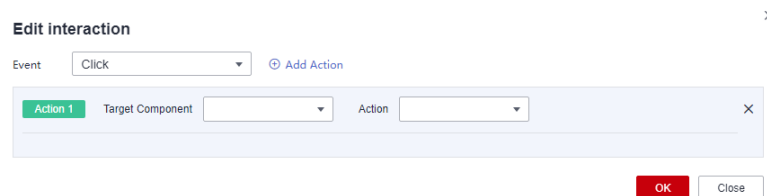
- Text style
 - Text Settings**: Enter a title.
 - Font**: Select a font.
 - Font Size**: Set the font size.

- **Text Spacing:** Set the spacing of the text in the title.
- **Color:** Select a font color.
- **Font Weight:** Set the font width of the title text.
- **Alignment:** Select the alignment mode of the title text. The value can be **Center Horizontally**, **Left**, or **Right**.
- **Align Top and Bottom:** Select the alignment mode of the title text. The value can be **Center**, **Align Top**, or **Align Bottom**.

Interactions

- Interaction Definition
 - a. Click **Interactions**.
 - b. Choose **Interactions** > **Interaction Definition** > **Edit interaction event**. The interaction editing page is displayed.

Figure 7-103 Edit interaction page



- c. Set **Event** to **Click**.
- d. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
- e. Click **OK** to complete the setting of the interaction event.

NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.
- You can modify global parameters during interaction. During each interaction, global parameters are modified first, and then data associated with components is requested based on the global parameter values.
 - To associate a target, you need to set global parameters. Click  in the upper right corner of the large screen to set global parameters.
 - After setting global parameters, edit the interaction in the title or text component. You can select global parameters for the target component.
- Advanced (Redirect)

- a. Click **Interactions**.
- b. Under **Advanced**, click  next to **Redirect**. The chart redirection page is displayed.
- c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**.

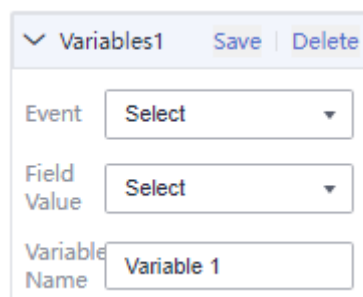
Table 7-119 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .
Associated Parameters	Set Effective Parameters of This Screen . • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

- d. Example of redirection with parameters: Take the example of a sales product data table for a store and demonstrate how to filter data based on location.
- i. On screen A, create a single-select dropdown and a title component. The title will display the selected filter condition from the dropdown, and clicking it will take us to screen B.
- 1) Dropdown: Select **region**. The control variable will be set up as shown below.

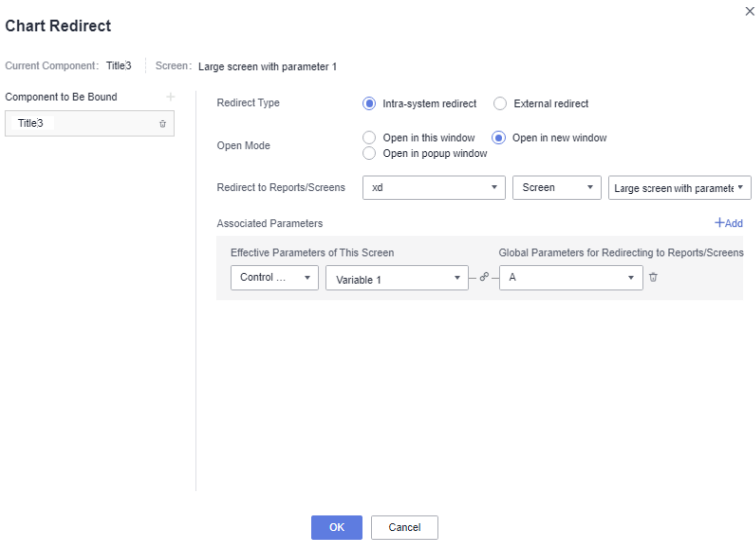
Figure 7-104 Setting a control variable



- 2) **Title:** Click **Styles**, choose **Text Style > Text Settings**, and enter **region** in the field box.

- ii. Create a bar chart on large screen B. Set **Class Axis/Dimension** to **region** and **Axis Value/Metric** to **age**. Set a global variable, name it **A** and select the table for it to take effect. Then, choose **region** as the associated field.
- iii. Set the title redirection. Click **Interactions**. Under **Advanced**, click  next to **Redirect**.

Figure 7-105 Text redirection



- iv. Set redirection parameters and click **OK**. Preview the large screen. Select **YUNNAN** from the drop-down list and click **Title** to go to large screen B.
- The title carries the condition from the dropdown list and redirects to large screen B.

Figure 7-106 Setting the redirection parameter

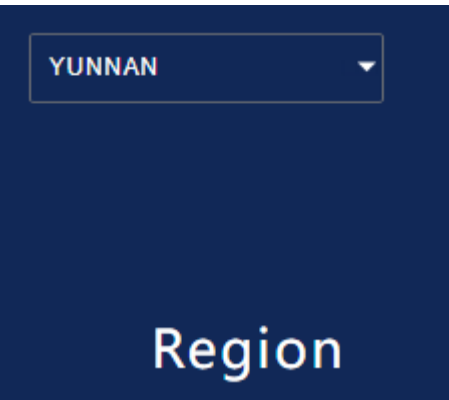


Figure 7-107 Data filtered after redirection

region	age
YUNNAN	1158

10 Total Records: 1 < 1 >

7.4.4.3 Text

This section describes the parameters of a text component.

Fields

- **Manual input:** Enter a text in the **Text Content** text box.
- Dynamic fields

In the category axis/dimension and axis value/metric lists, select fields and drag and drop them to the **Text Settings/Dimensions or Metrics** area.

The **Fields** tab also offers the following parameters to help you analyze data:

- Set the field display content (**Category Axis/Dimension**).

Click  in the column, select **Field Display Content** and click to modify the field display content on the displayed page. Click **OK**.

- Set the aggregation mode (**Axis Value/Metric**).

Click  of the field in the column and select an aggregation mode. No aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, and sample variance are supported.

- **Filter:** If you have a large amount of data, you can enable the filter function to filter out the required data categories from the dataset. Filters can filter character, numeric, and date data.

Filter Settings: Click  next to the field you wish to filter and you will be directed to the filter settings page.

- Filter field selection dimension
 - Non-time fields

Table 7-120 Filter parameters

Parameter	Description
Dataset	The dataset selected for constructing the large screen component.
Selected Field	The fields selected for filtering (non-time fields).
Filter Mode	When the selected field is a dimension, filtering can be done by condition or enumeration.
Condition Type	When the selected field is a dimension and filtering is done by condition, both AND and OR conditions are supported. When the selected field is a dimension and filtering is done by enumeration, single or multiple selections are supported.

Parameter	Description
Filter Criteria	When the selected field is a dimension and filtering is done by condition, the following conditions can be set: exact match, contains, starts with, does not match, does not contain, is empty, is not empty, etc. When the selected field is a dimension and filtering is done by enumeration, the corresponding field can be selected.

- Time fields

Table 7-121 Filter parameters

Parameter	Description
Dataset	The dataset selected for constructing the large screen component.
Selected Field	The fields selected for filtering (time fields).
Filter Mode	When the selected field is a dimension, filtering can be done by single value, range value, or condition.
Filter Criteria	When the selected field is a dimension and filtering is done by single value or range value, the filtering conditions support both absolute and relative time. When the selected field is a dimension and filtering is done by condition, both AND and OR conditions are supported.

- Filter field selection metric

Table 7-122 Filter parameters

Parameter	Description
Dataset	The dataset selected for constructing the large screen component.
Selected Field	Select the fields to be filtered.
Condition Type	When the selected field is a metric and filtering is done by condition, both AND and OR conditions are supported.

Parameter	Description
Filter Criteria	When the field to be set is a metric, filtering conditions support settings such as >, ≥, <, ≤, =, ≠, is empty, is not empty, etc. It also supports settings before and after data aggregation.

- **Sorting:** Sorts the dragged class axis/dimension fields in ascending or descending order.

Sorting settings: Click  of the sorting field and choose the desired order.

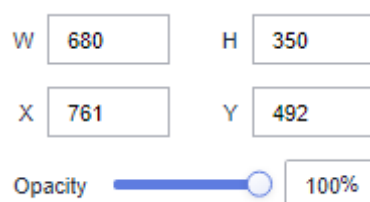
NOTE

- **Sorting by dimension:** Drag and drop dimension fields into the sorting slots to display them in the chart.
- **Sorting by metric:** Metric fields in the sorting slots are not displayed in the chart by default. To display them, drag and drop them into the metric slots.
- Set **Maximum Query Results**. The value ranges from 1 to 5000.
- **Auto Update:** Set the time for data refresh, which can be **1 minute**, **5 minutes**, **15 minutes**, **30 minutes**, or **Not update**.
- Click **Update** to automatically update the chart.

Styles

- **Size/Position**
 - **W:** width of the target, in pixels.
 - **H:** height of the target, in pixels.
 - **X:** position of the target on the canvas, in pixels.
 - **Y:** position of the target on the canvas, in pixels.
 - **Opacity:** Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-108 Size/Position



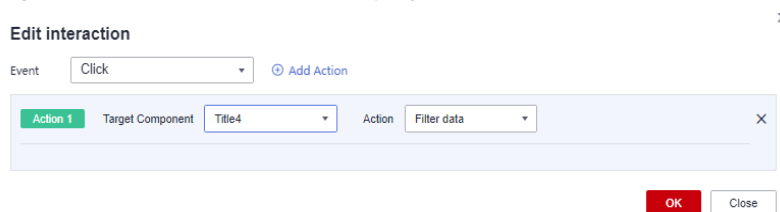
- **Global Style**
 - **Overflow Scrolling:** Once selected, the system plays the text in rotation if the text overflows.
 - **Scrolling Time:** Enter a value or click the buttons to set the text scrolling duration. **Scrolling Time** is available only when **Overflow Scrolling** is selected.

- Text style
 - **Delimiter:** Set the text separator.
 - **Font:** Select a font.
 - **Font Size:** Set the font size.
 - **Text Spacing:** Set the spacing of the text in the title.
 - **Color:** Select a font color.
 - **Font Weight:** Set the font width of the title text.
 - **Alignment:** Select the alignment mode of the title text. The value can be **Center Horizontally**, **Left**, or **Right**.
 - **Align Top and Bottom:** Select the alignment mode of the title text. The value can be **Center**, **Align Top**, or **Align Bottom**.
 - **Row Height:** Enter a value to adjust the spacing between lines in the text.
 - **First Line Indentation:** Enter a value to adjust the first line indent of the text.
- Value Settings: You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.

Interactions

- Interaction Definition
 - a. Click **Interactions**.
 - b. Expand **Interaction Definition** and click **Edit interaction event**.

Figure 7-109 Edit interaction page



- c. Set **Event** to **Click**.
- d. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
- e. Click **OK** to complete the setting of the interaction event.

 NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.
- You can modify global parameters during interaction. During each interaction, global parameters are modified first, and then data associated with components is requested based on the global parameter values.
 - To associate a target, you need to set global parameters. Click  in the upper right corner of the large screen to set global parameters.
 - After setting global parameters, edit the interaction in the title or text component. You can select global parameters for the target component.
- Advanced (Redirect)
 - a. Click **Interactions**.
 - b. Under **Advanced**, click  next to **Redirect**. The chart redirection page is displayed.
 - c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For an example, see [Redirection with Parameters](#).

Table 7-123 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.

Parameter	Description
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect.
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

7.4.4.4 Word Cloud

This section describes parameters of a word cloud component.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-124 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.

Type	Parameter	Description
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

- Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
- Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

- Size/Position
 - W**: width of the target, in pixels.
 - H**: height of the target, in pixels.
 - X**: position of the target on the canvas, in pixels.
 - Y**: position of the target on the canvas, in pixels.
 - Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-110 Size/Position

The screenshot shows the 'Styles' tab in a configuration interface. It contains input fields for 'W' (680), 'H' (350), 'X' (762), and 'Y' (530). Below these is an 'Opacity' slider set to 100%.

- Global Style
 - Font**: Select a font.
 - Maximum Font Size**: Enter a value to set the maximum font size of the component text. It defines the maximum text size with the largest value in the data.

- **Minimum Font Size:** Enter a value to set the minimum font size of the component text. It defines the text size with the smallest value in the data.
- **Spacing:** Enter a value to adjust the spacing between lines in the text.

7.4.4.5 Timer

This section describes parameters of a timer component.

Styles

- Size/Position
 - **W:** width of the target, in pixels.
 - **H:** height of the target, in pixels.
 - **X:** position of the target on the canvas, in pixels.
 - **Y:** position of the target on the canvas, in pixels.
 - **Opacity:** Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-111 Size/Position

The image shows a set of UI controls for configuring the size and position of a target. It includes four input fields for width (W), height (H), horizontal position (X), and vertical position (Y). The values entered are 680, 350, 761, and 492 respectively. Below these is an opacity control consisting of a blue slider bar and a text box showing '100%'.

W	680	H	350
X	761	Y	492
Opacity <input type="range"/> 100%			

- Icon Style
 - **Show Icon Style:** Set whether to display the icon style.
 - **Font Size:** Set the font size.
 - **Color:** Select a color.
 - **Right Margin:** Enter a value to adjust the margin between the icon and the left side of the text.
- Timer
 - **Font:** Select a font.
 - **Font Size:** Set the font size.
 - **Color:** Select a font color.
 - **Font Weight:** Select a font width.
 - **Formatting:** Set a time display format.

7.4.4.6 Carousel Table

This section describes parameters of a carousel table component.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-125 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.

Type	Parameter	Description
	Condition	You can select And condition or Or condition as the condition type and select filter condition like $>$, $\geq$, $<$, $\leq$, and $=$. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.

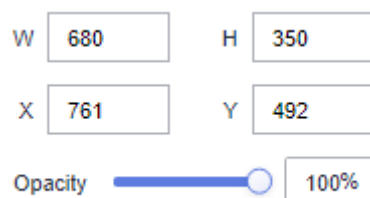
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-112 Size/Position



W 680 H 350

X 761 Y 492

Opacity  100%

- Global Style
 - **Rows**: Enter a value to set the number of rows to be displayed in the table.

- **Carousel:** Select this option to show table content in rotation. If not selected, the table content remains static. If the table has more rows than the specified limit, a scroll bar appears for viewing.
 - **Animation Type:** Select an animation type. The value can be **Flipping**, **Marquee**, or **Bouncing**.
 - **Interval:** Enter a value or click the buttons to set the interval for rotating the table content.
 - **Borderline:** Set the width and color of the borderline.
- Table Header
 - **ShowTable Header:** Select this to show the table header.
 - **Header Row Height:** Enter a value to set the row height of the table header.
 - **Background Color:** Select a background color.
 - **Alignment:** Select the alignment mode of the text in the table header. The value can be **Center Horizontally**, **Left**, or **Right**.
 - Text
 - **Font:** Select a font.
 - **Font Color:** Select a font color.
 - **Font Size:** Select a font size.
 - **Font Weight:** Select a font width.
- Row Configuration
 - **Row Height:** Set the row height. The value cannot be less than **45**.
 - **Background Color of Odd-Numbered Row:** Select a background color for odd-numbered rows.
 - **Background Color of Even-Numbered Row:** Select a background color for even-numbered rows.
 - Text: This area contains parameters about the font size, color, and weight.
 - Row Divider
 - **Style:** Select the style of the line divider. The options are **Solid**, **Dashed**, and **Dotted**.
 - **Weight:** Enter a value to set the thickness of the row divider.
 - **Row Color:** Select a color for the row divider.
- Sequence Number
 - **ShowSequence Number:** Select this to show the sequence number (SN).
 - **Background Color:** Select a background color.
 - **Round Corner:** Enter a value or click the buttons to set the round corner angle of the SN icon.
 - **Column Width Ratio (%):** Enter a value or click the buttons to set the width of the SN column.
 - **Radius:** Enter a value to set the radius size.

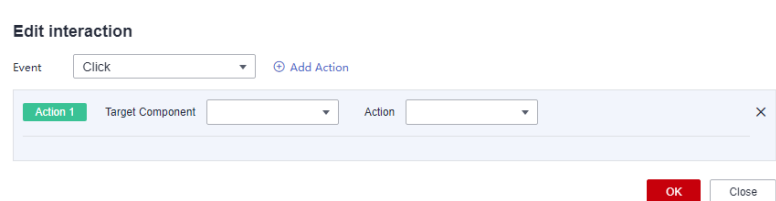
- **Font Color:** Select the font color.
- **Font Size:** Enter a value or click the buttons to set the font size.
- **Font Weight:** Select the font width of the text in the SN column.

Interactions

This part describes the interaction parameters of the carousel table component.

1. Click **Interactions**.
2. Expand **Interaction Definition** and click **Edit interaction event**.

Figure 7-113 Edit interaction



3. Set **Event** to **Click**.
4. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
5. Click **OK** to complete the setting of the interaction event.

NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.

7.4.4.7 Table

Tables use a structured layout of rows and columns to organize and present data, making it easier for you to identify and understand the relationships between different data points. This helps to make the information clearer and more comprehensible. This section describes how to create a table.

Prerequisites

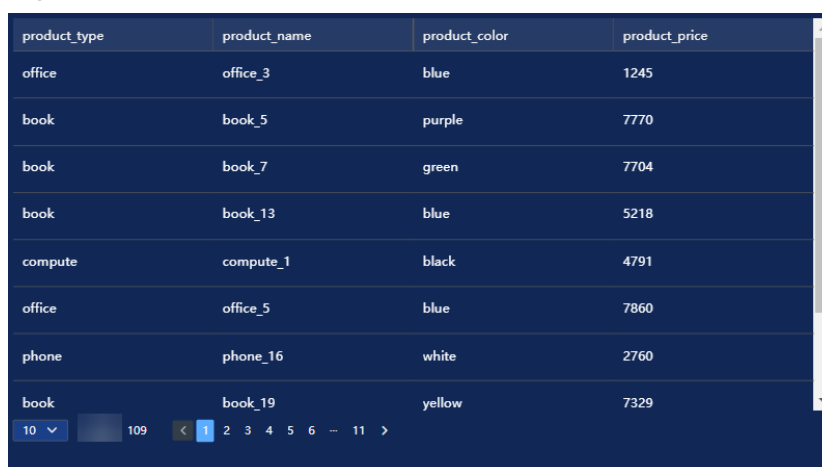
- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).

- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. On the **Comps** tab of the large screen page, click the text icon and click **Table**.
2. Select the dataset to analyze from the **Data** area on the right of the dashboard creation page.
3. Set the parameters on the [Fields](#), [Styles](#), and [Interactions](#) tab pages.
4. Click **Update** on the **Fields** tab. The chart data is automatically updated.

Figure 7-114 Table



product_type	product_name	product_color	product_price
office	office_3	blue	1245
book	book_5	purple	7770
book	book_7	green	7704
book	book_13	blue	5218
compute	compute_1	black	4791
office	office_5	blue	7860
phone	phone_16	white	2760
book	book_19	yellow	7329

5. Click **Save** or **Save and Publish** in the upper right corner to save the large screen.
6. In the **Save Screen** dialog box that appears, enter the large screen name and click **OK**.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-126 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

Table 7-127 Size/Position

Parameter	Description
W	Width of the target, in pixels.
H	Height of the target, in pixels.
X	Position of the target on the canvas, in pixels.
Y	Position of the target on the canvas, in pixels.
Opacity	Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Table 7-128 Global Style

Parameter	Description
Table Layout	You can adjust the proportions of the table. The options are Automatic adjustment and Proportional distribution .
Pagination Display	You can set Rows , Font , Font Color , Font Size , Font Weight , and more of the table.
Filter	By selecting this option,  appears in the table header, allowing you to filter the data.
Sort	You can sort the data in the following ways: • Sorting by dimension: Drag and drop dimension fields into the sorting slots to display them in the chart. • Sorting by metric: Metric fields in the sorting slots are not displayed in the chart by default. To display them, drag and drop them into the metric slots.

Parameter	Description
Export	After selecting this option, the Export Data and Export History buttons will appear above the table, allowing you to export the table from the large screen to your local host. • Export Data: Clicking Export Data will prompt you to enter a task name and storage period to create a table export task. • Export History: The created export tasks can be viewed on this tab. Clicking Download will export the table to your local host. NOTE • The Export Data and Export History buttons will be grayed out if the table cannot be exported. • Administrators, developers, and analysts have the permission to use this function, while read-only users cannot export the table. • Masked data cannot be exported. For details about how to set data masking, see Data Masking Rule. • When sharing and collaborating, the shared members need to have the permission to export the large screen to use this function. For how to grant the export permission, see Sharing a Large Screen. • All data can be exported, regardless of the number of records displayed in the table. For how to set the number of records, see Maximum Query Results. • The storage period can be customized through the maximum retention period in the import and export settings. For specific configurations, see Configuring an OBS Bucket.
Borderline	Set the weight and color of the table borders.

Table 7-129 Table Header

Parameter	Description
Show Table Header	Click this checkbox (☒) to show the table header. Uncheck it (☐) to hide the table header.
Header Row Height	Enter a value to set the height of the header row.
Background Color	Select a background color.
Alignment	Set the alignment of the header text, choose from Center Horizontally , Left , or Right .
Text	Set Font , Font Color , Font Size , and Font Weight .

Parameter	Description
Show Column Header Groups	You can set the table to display multiple rows of headers, with a maximum combination of 50. • Adding a group: Check this option and click . In the dialog box that appears, click + Add Group. • Naming a group: Click  next to a created group and name it. • Adding content to a group: Drag and drop columns into a desired group. • Deleting a group: Click  next to a group to delete it. The columns within the group will not be deleted. • Showing table header group: Click this option (☒) to show the table header group. Uncheck it (☐) to hide the table header group. • Changing group order: Drag and drop the groups on the header group page to change their order.

Table 7-130 Row Configuration

Parameter	Description
Row Height	Set the row height, the input value cannot be less than 45 .
Background Color of Odd-Numbered Row	Click the color editor to set the background color of odd rows in the table.
Background Color of Even-Numbered Row	Click the color editor to set the background color of even rows in the table.
Background Color of Selected Row	Set the color of the row where the linked field is located.
Alignment	Row configuration alignment types include Center Horizontally , Left , and Right .
Automatic Line Break	Set whether to wrap text. When set, the cell content will automatically wrap when it exceeds the cell width.
Text	Set the font, font color, font size, and font type of the row.
Row Divider	Set the style, weight, and color of the row divider.

Table 7-131 Series settings

Parameter	Description
Select Series	Choose a series based on your alignment requirements for table headers and column content.
Auto Alignment	Check this option to enable alignment settings for table headers and content.
Table Header	Set the alignment for table headers. Alignment options are Auto , Align Left , Center , and Align Right .
Content	Set the alignment for table content. Alignment options are Auto , Align Left , Center , and Align Right .

Table 7-132 Parameters

Parameter	Description
Condition Format	Select Series: Select configuration fields based on the fields displayed in the chart.
	Quick style. • Select a quick icon from the existing styles. • Color inversion: Turn on color inversion to swap the colors of the quick icon. Turn it off to restore the original colors.

Parameter	Description
	Custom style: • Text – Condition selection: Choose between comparing with a fixed value or a dynamic value. – Filter Condition Types: Includes greater than, greater than or equal to, equal to, less than or equal to, less than, not equal to, greater than A and less than or equal to B, greater than or equal to A and less than B, greater than A and less than B, greater than or equal to A and less than or equal to B. Fixed comparison values can be customized, while dynamic field comparison values are system-selected. – Color Scheme: After setting the filter conditions, click the color button to customize the color. – Add Rule: Click + to add a filter condition. – Delete: Click - to delete a filter condition. • Icon – Condition selection: Choose between comparing with a fixed value or a dynamic value. – Icon Style: Choose from pre-selected icons or set a custom icon after the filter conditions. – Filter Condition Types: Includes greater than, greater than or equal to, equal to, less than or equal to, less than, not equal to, greater than A and less than or equal to B, greater than or equal to A and less than B, greater than A and less than B, greater than or equal to A and less than or equal to B. Fixed comparison values can be customized, while dynamic field comparison values are system-selected. – Add Rule: Click + to add a filter condition. – Delete: Click - to delete a filter condition.

Interactions

- **Link**

On the **Interactions** tab, choose **Advanced** > **Link**. In the **Chart Linkage Configuration** dialog box that appears, set parameters by referring to [Table 7-133](#). For details, see [Example linkage](#).

- **Filter**

- Click **Filter**. The **Filter** tab is displayed.
- Click + next to **Fields to Bound**. The associated field box is displayed.
- Click ▾, select the field to be bound, select the associated chart, and click **OK**.

- **Shown/Hidden**

- i. Click **Show/Hidden**. The **Shown/Hidden** tab is displayed.
- ii. Select the associated chart and click **OK**.

Table 7-133 Chart linkage configuration parameters

Parameter	Description
Filter	• Fields to Bound: Select the fields to be bound. • Associated Charts: Set linked associated charts. You can select charts from the same dataset or different datasets.
Shown / Hidden	Select the required fields first and then select the charts to be associated with them. You can select all charts on the large screen. • Click Show/Hidden. The Shown/Hidden tab is displayed. • Select the associated chart.

- **Redirect**

- a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
- b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
- c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

 NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-134 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.

Parameter	Description
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect.
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

7.4.4.8 Ticker Board

This section describes parameters of a ticker board component.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-135 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
4. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-115 Size/Position

W 680 H 350

X 761 Y 492

Opacity 100%

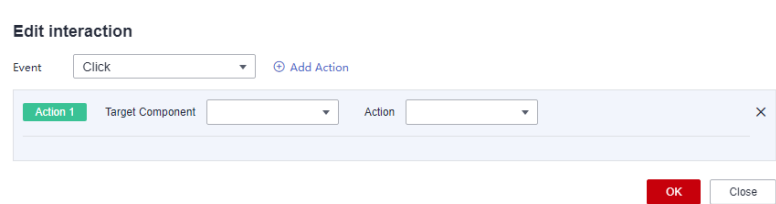
- Global Style
 - **Alignment**: Select an alignment method for the ticker board. The value can be **Center Horizontally**, **Left**, or **Right**.
 - **Spacing**: Enter a value or click the buttons to set the distance between the numbers and the upper edge of the target.
 - **Always Animate**: After this function is enabled, the number on the ticker board changes dynamically as the data changes.
 - **Animation Duration**: Enter a value or click the buttons to set the duration for playing animation once. The unit is milliseconds.
- Title
 - **ShowTitle**: Select this to show the title of the ticker board.
 - **Title Name**: Enter a title for the ticker board.
 - **Alignment**: Select an alignment method for the title. The value can be **Top center**, **Top left**, **Top right**, **Bottom Center**, **Bottom Left**, or **Bottom Right**.
 - **Font**: Select a font for the title.
 - **Font Size**: Set the font size for the title.
 - **Color**: Select a font color for the title.
 - **Font Weight**: Set the font width of the title text.
- Numeric
 - **Decimal Control**: Select this to further set the **Decimal** and **Delimiter** parameters.
 - **Thousand Separator**: Set a value's thousand separator for easier readability.
 - **Font**: Select a font.
 - **Font Size**: Set the font size.

- **Color:** Select a font color.
 - **Font Width:** Set the font width.
 - **Digit Spacing:** Enter a value or click the buttons to set the interval between digits.
 - **Left and Right Padding:** Set the alignment distance between the left and right.
 - **Top and Bottom Padding:** Adjust the padding to set the space between content and the top and bottom margins.
 - **Background Color:** Select a background color.
 - **Borderline options:** You can set the style, width, rounded corners, and color of the borderline.
- **Growth Trend**
 - **Custom Icon:** Upload an icon by entering a URL or selecting a file from your local computer.
 - **Content:** Input a symbol to represent the trend of growth.
 - **Font:** Select a font.
 - **Font Size:** Set the font size.
 - **Color:** Select a color to indicate the growth.
 - **Font Weight:** Set the font width.
- **Decline Trend**
 - **ShowDecline Trend:** Select this to further set the following parameters.
 - **Custom Icon:** Upload an icon by entering a URL or selecting a file from your local computer.
 - **Content:** Input a symbol to represent the trend of decline.
 - **Font:** Select a font.
 - **Font Size:** Set the font size.
 - **Color:** Select a color to indicate the decline.
 - **Font Weight:** Set the font width.
- **Prefix/Suffix**
 - **Content:** Enter the prefix/suffix.
 - **Font:** Select a font.
 - **Font Size:** Set the font size.
 - **Color:** Select a color.
 - **Font Weight:** Set the font width.

Interactions

This section describes the parameters of interactions. Only images support interaction settings.

1. Click **Interactions**.
2. Expand **Interaction Definition** and click **Edit interaction event**.

Figure 7-116 Edit interaction

3. Set **Event** to **Click**.
4. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
5. Click **OK** to complete the setting of the interaction event.

NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.

7.4.4.9 Threshold Board

This section describes parameters of a threshold board component.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-136 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
4. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-117 Size/Position

W 680 H 350

X 761 Y 492

Opacity 100%

- Global Style
 - **Alignment**: Select an alignment method for the ticker board. The value can be **Center Horizontally**, **Left**, or **Right**.
 - **Align Top and Bottom**: Select **Align Top**, **Center**, or **Align Bottom**.
 - **Always Animate**: After this function is enabled, the number on the ticker board changes dynamically as the data changes.
 - **Animation Duration**: Enter a value or click the buttons to set the duration for playing animation once. The unit is milliseconds.
 - **Font**: Select a font.
 - **Font Size**: Set the font size.
 - **Color**: Select a font color.
 - **Font Weight**: Set the font width.
 - **Truncate if too Long**: Enable this option to abbreviate content that exceeds the length limit.
- Range Settings
 - **Add Range**
 - **Numeric Range**: Select **Numeric Interval**, **Negative infinity-Numeric**, or **Numeric-Positive infinity** to set the numeric range.
 - **Numeric Color**: Select a color.
 - **Select Icon**: Select an icon.
 - **Numeric Display**: Select this to show the digits in the threshold board.
 - **Text Display**: Select this to show the brief description of the threshold board.
 - **Icon**: Select this to show the icon.

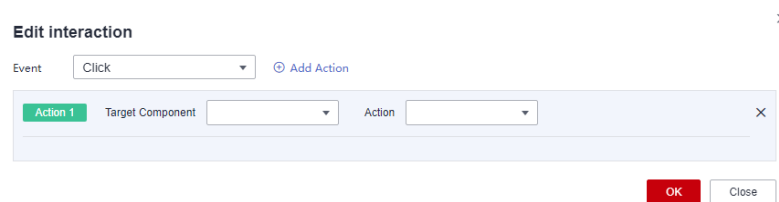
- Unit
 - **ShowUnit:** Select this to show the unit and further set the following parameters.
 - **Content:** Enter the unit.
 - **Font:** Select a font.
 - **Font Size:** Set the font size.
 - **Does not change with numeric:** Select this to allow unit conversion alongside numerical digit changes.
 - **Color:** Select a color that indicating the numeric change.
 - **Font Weight:** Set the font width for the unit.

Interactions

This section describes the parameters of interactions. Only images support interaction settings.

1. Click **Interactions**.
2. Expand **Interaction Definition** and click **Edit interaction event**.

Figure 7-118 Edit interaction



3. Set **Event** to **Click**.
4. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
5. Click **OK** to complete the setting of the interaction event.

NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.

7.4.4.10 Marquee Parameters

This section describes parameters of a marquee component.

Fields

Enter a text in the text box under **Text Content** on the **Fields** page. After the setting is successful, the rolling effect is automatically displayed.

Style

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-119 Size/Position

The screenshot shows the 'Styles' tab selected, with the 'Size/Position' section. It contains four input fields for W (680), H (350), X (762), and Y (530). Below these is an 'Opacity' slider set to 100%.

- Global Style
 - **Color**: Select a color for the marquee.
 - **Font Size**: Enter a value or click the buttons to set the font size. The value ranges from **10** to **100**.
 - **Font**: Select a font type. The default font is Microsoft YaHei.
 - **Font Weight**: Set the text width.
 - **Carousel**: Set the carousel duration.
 - **Interval**: Set the play interval.
 - **Fixed-Speed Playback**: Set the playback speed.

7.4.4.11 Carousel Bar Chart

This section describes parameters of a carousel bar chart component.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.

- b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
- c. Click **OK**.

Table 7-137 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.

4. Set automatic refresh.

The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-120 Size/Position

The image shows a user interface for configuring a component's style. At the top, there are two tabs: 'Fields' and 'Styles', with 'Styles' being the active tab. Below the tabs, there are four input fields arranged in a 2x2 grid: 'W' with the value '680', 'H' with '350', 'X' with '762', and 'Y' with '530'. Below these fields is an 'Opacity' control consisting of a horizontal slider bar and a text box showing '100%'.

- Global Style
 - **Font**: Select a font.
 - **Quantity**: Set the limited number of characters.
- Sequence Number
 - **ShowSequence Number**: Select this to show the sequence number (SN).
 - **Font Size**: Enter a value ranging from 10 to 100 to set the font size.
 - **Color**: Select a color.
 - **Font Weight**: Select the font width of the text in the SN column.
 - **Column Width Ratio (%)**: Enter a value or click the buttons to set the width of the SN column.
- Content
 - **Text**: text style of the component, including the font size, color, and width.
 - **Marquee**: Select this to make sure the text is scrolled in marquee mode.
- Bar style
 - **Background**: Select a background color.
 - **Color**: Select a color for the columns.
 - **Height**: Enter a value to set the column height.
- Stream Light

- **Color:** Select a color for the stream light.
- **Length:** Set the length of the stream light.
- **Height:** Set the height of the stream light.
- Value Labels
 - **ShowValue Labels:** Select this to ensure that the data's value fields are displayed as chart labels.
 - **Font Size:** Select a font size for the value tag.
 - **Color:** Select a font color for the value tag.
 - **Font Weight:** Set the font width for the value tag.

7.4.4.12 Treemap

This section describes the parameters of a treemap chart.

Notes and Constraints

- Only one field can be dragged to **Class Block Label/Dimension**.
- Only one field can be dragged to **Class Block Size/Metric**.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-138 Filter parameters

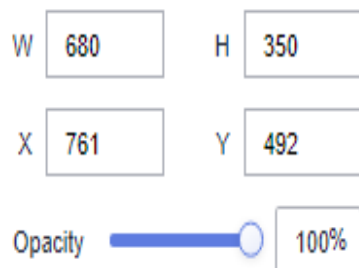
Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .

Type	Parameter	Description
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

- Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
- Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

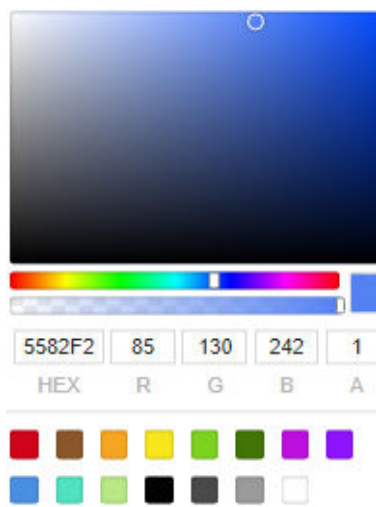
- Size/Position
 - W**: width of the target, in pixels.
 - H**: height of the target, in pixels.
 - X**: position of the target on the canvas, in pixels.
 - Y**: position of the target on the canvas, in pixels.
 - Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-121 Size/Position

- **Global Style:** Set a font type.
- **Basic Chart Style**
 - **Merge Data into Other:** Selecting this option will display a combined number of data blocks in the rectangle tree, as opposed to the raw number returned by the field.
 - **Blocks After Merge:** Customize the number of data blocks to merge, with a minimum of two required. If the combined total exceeds the query return limit, the displayed number in the rectangle tree will match the query return limit.
 - **Block Name:** Enter a name.
- **Label**
 - **Text:** Set the font, color, and font width. The font size ranges from **10** to **100**.
 - **Proportion:** Set the proportion color of the treemap chart. The value ranges from **0** to **10**.
 - **Metric:** Select this to display measures in a treemap chart.
Value Settings: Set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
- **Tooltips**
 - **ShowTooltips:** Select or deselect the check box to show or hide the tooltips when you preview or view a published component.
 - You can set the font size, color, and font width. The font size ranges from 10 to 100.
- **Series**
 - **Color Scheme:** Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes.

Figure 7-122 Color scheme

- **Series:** Set the colors (solid) of the series.

Figure 7-123 Series color settings

- Total
 - **ShowTotal:** Select or deselect this to show or hide the total statistics.
 - **Custom Name:** Enter a name.
 - You can set the font size, color, and font width. The font size ranges from 10 to 100.

Interactions

- linkage
 - a. Choose **Advanced > Link**. The **Chart Linkage Configuration** page is displayed. Set parameters by referring to [Table 7-139](#).

Table 7-139 Chart linkage configurations

Parameter	Description
Filter	Select the fields to be bound first and then select the charts to be associated. You can select the two-dimensional charts on the screen.
Shown / Hidden	Select the required fields first and then select the charts to be associated. You can select all charts on the screen.

- b. Click **OK**.
- **Redirect**
 - a. On the **Interactions** tab, click the edit icon next to **Redirect** under **Advanced**.
 - b. In the **Chart Redirect** dialog box that appears, click **+** next to **Component to Be Bound**.
 - c. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. For details, see [Redirect Example](#).

 NOTE

- You can redirect with parameters. For specific examples, refer to [Example of Redirection with Parameters](#).
- To set up redirection, drag the desired fields to the **Fields** tab. Then, navigate to the chart redirection page to configure the bound fields. Failure to do so will result in unsuccessful redirection.

Table 7-140 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .
Associated Parameters	Set Effective Parameters of This Screen . • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

7.4.5 Adding Materials

The materials component is used to add materials to data reports.

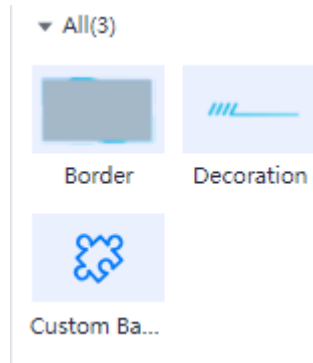
Prerequisites

- You have subscribed to DataArts Insight.
- A project for managing data sources has been created. For details, see [Creating a Project](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. In the displayed dialog box, select a project and click **Confirm**.

- Click the **Materials** icon in the navigation pane to switch to the materials component page.

Figure 7-124 Materials

- Drag a materials component to the canvas.
- Configure **styles** for the materials on the right of the page.
- Click **Save and Publish** or **Save** in the upper right corner of the page.

Styles

- Size/Position
 - W**: width of the target, in pixels.
 - H**: height of the target, in pixels.
 - X**: position of the target on the canvas, in pixels.
 - Y**: position of the target on the canvas, in pixels.
 - Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-125 Size/Position

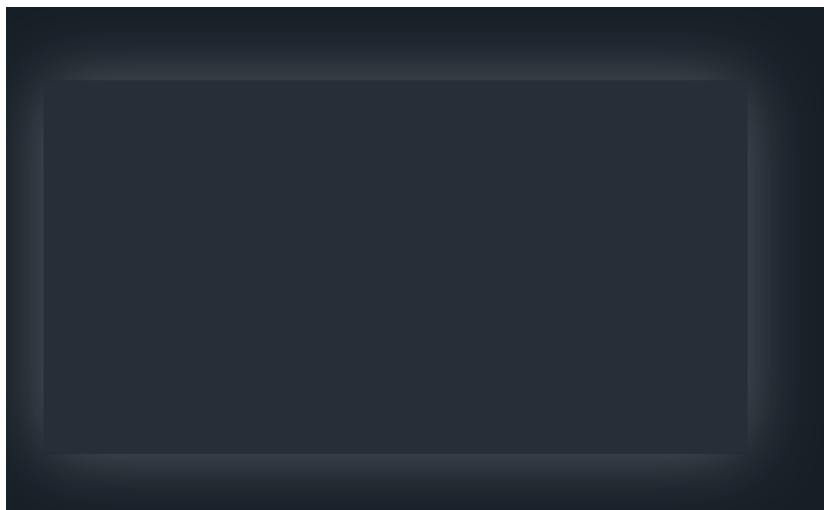
- Border styles
 - Fill
 - Style**: Various styles are provided for borders.
 - Custom
 - Image**: You can set an image URL or upload a local image.

- **Border Width:** You can set the top, right, bottom, and left borders to adjust the display style. The value ranges from **0** to **500**.
- **border-slice:** You can set the top, right, bottom, and left borders to adjust the display style. The value ranges from **0** to **500**.
- Decoration styles
 - **Scale Mode:** The value can be **Retain original image size**, **Proportional scaling**, **Cropping and Scaling**, and **Stretch scaling**.
 - **Style:** Various styles are provided for decorations.
- Custom Background Component
 - Effect
 - **Background Color:** Set the background color of the custom background component.
 - **Feathering:** Set feathering for the custom background component. The value ranges from **0** to **100**.

Figure 7-126 No feathering effect



Figure 7-127 Feathering effect



- **Blurriness:** Set blurriness for the custom background component. The value ranges from **0** to **100**.
- **Brightness:** Set brightness for the custom background component. The value ranges from **0** to **200**.
- **Hue Rotation:** Set hue rotation for the custom background component. The value ranges from **0** to **360**.
- **Opacity:** Set opacity for the custom background component. The value ranges from **0** to **100**.
- Borderline Options
 - **Style:** Select the solid line, dotted line, or dotted line.
 - **Width:** Set the width of borderlines. The value cannot be smaller than **0**.
 - **Color:** Set the color of borderlines.
- Round Corner
 - **Upper Left Corner:** Set the upper left corner of the rounded corner. The value cannot be smaller than **0**.
 - **Upper Right Corner:** Set the upper right corner of the rounded corner. The value cannot be smaller than **0**.
 - **Lower Right Corner:** Set the lower right corner of the rounded corner. The value cannot be smaller than **0**.
 - **Lower Left Corner:** Set the lower left corner of the rounded corner. The value cannot be smaller than **0**.

Figure 7-128 All rounded corners being 0

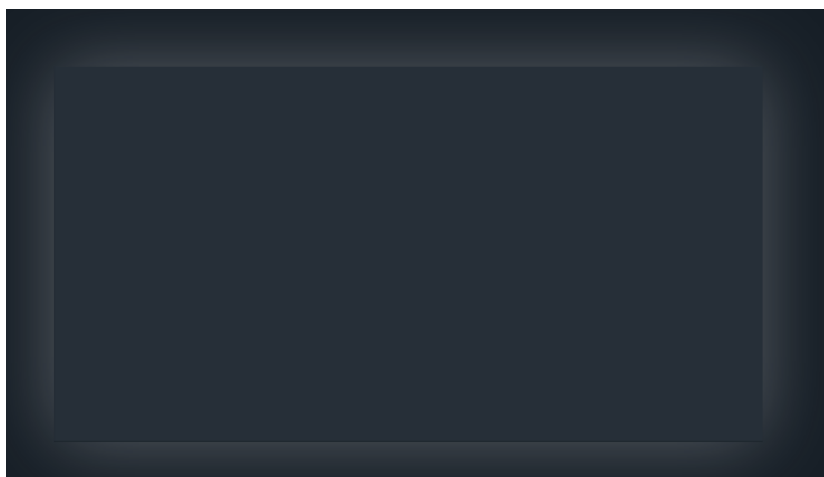
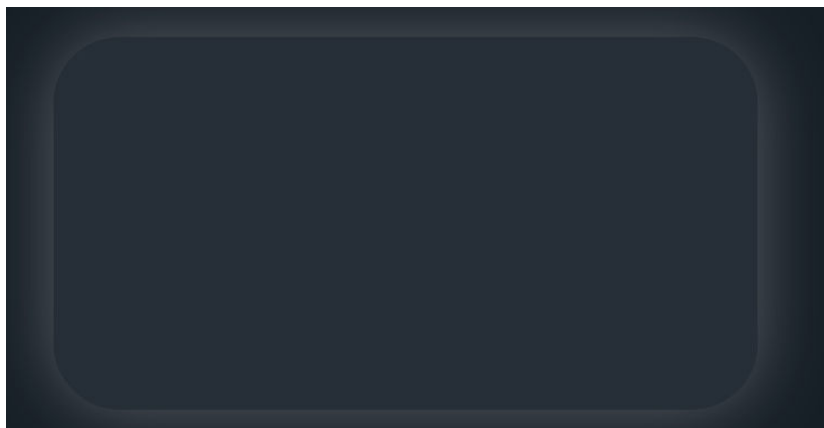
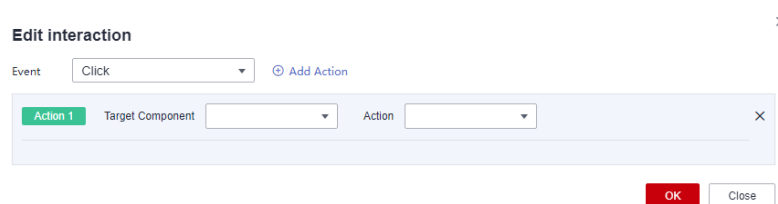


Figure 7-129 All rounded corners being 90

- Fill
 - Use materials: Add preset background images to facilitate highly frequent reuse of background images.
 - Custom background
 - **Image:** You can add an image URL or upload a local image.
 - **Scale Mode:** The value can be **Retain original image size**, **Proportional scaling**, **Cropping and Scaling**, and **Stretch scaling**.
 - **Image Position:** The value can be **Align Center**, **Align Left**, **Align Right**, **Top alignment**, or **Bottom alignment**.

Interactions

1. Click **Interactions**. Expand **Interaction Definition** and click **Edit interaction event**. The **Edit interaction** page is displayed. You can add the custom background component.

Figure 7-130 Edit interaction

2. Set **Event** to **Click**.
3. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
4. Click **OK** to complete the setting of the interaction event.

 NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.

7.4.6 Creating Interactions

The interactions component is used to add interactions to data reports.

Prerequisites

- You have subscribed to DataArts Insight.
- A project for managing data sources has been created. For details, see [Creating a Project](#).
- You have obtained data. For details, see [Creating a Data Source](#).
- You have prepared the required dataset. For details, see [Creating a Dataset Through Visual Configuration](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. In the displayed dialog box, select a project and click **Confirm**.
6. Click the **Interactions** icon in the navigation pane to switch to the interactions component page.
7. Drag an interactions component to the canvas.
8. In the right pane, set related parameters for the interactions component.

Interactions Component Types

Table 7-141 Interactions components

Type	Description	Data Element
Full Screen	Used to control the full-screen display of the screen.	None
iFrame	Used to add the iFrame content to the screen.	Link
Search	Used to add a search box to the screen.	Control variables
Single-Select Dropdown List	Used to select one option from multiple data options in a drop-down list.	Options/Dimensions and control variables
Tabs	Used to display multiple screens as tab pages.	Control variables
Multi-Option Drop-Down List	Used to select several options from multiple data options in a drop-down list.	Options/Dimensions and control variables

Fields

- iFrame: Enter a link by yourself.
- Single-Select Dropdown List/Multi-Option Drop-Down List:
 - a. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
 - b. Set a filter.
 - i. Find the data field you need in the dimension and metric lists within the data column.
 - ii. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - iii. Click **OK**.

Table 7-142 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

- c. Set sorting.
 - i. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - ii. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - iii. To cancel sorting, click  next to the sorting field.

- d. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
- e. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-131 Size/Position

The image shows a user interface for configuring styles. It has two tabs: 'Fields' and 'Styles', with 'Styles' being the active tab. Below the tabs, there are input fields for 'W' (width) set to 680, 'H' (height) set to 350, 'X' (position) set to 762, and 'Y' (position) set to 530. Below these is an 'Opacity' slider set to 100%.

- Full Screen
 - Global Style
 - **Full Screen**: You can enter an image URL or upload a local image.
 - **Exit Full Screen**: You can enter an image URL or upload a local image.
 - **Background Color**: Set the background color of the full screen.
 - **Round Corner**: Set the round corner of the full screen.
 - **Display Mode**: Select **Always** or **Mouse hover**.
- Search
 - Styles
 - **Tooltips**: Set the text, font size, and color.
 - **Font Size**: Set the font size for search.
 - **Font Weight**: Set the font weight for search.

- **Font Color:** Set the font color for search.
- **Background Color:** Set the background color for search.
- **Search Button Color:** Set the color of the search button.
- **Border:** Set the width, color, and type of the border. The border type can be **Solid**, **Dotted**, or **Dashed**.
- Single-Select Dropdown List
 - Styles
 - **Background Color:** Set the background color of the single-select drop-down list.
 - **Border:** Set the width, rounded corners, color, and type of the border.
 - **Arrow:** Set the color, size, and right margin of the arrow.
 - **Font Style:** Set the font size, font weight, font color, card corner angle, and background color.
 - Result Box Style
 - **Maximum Height:** Set the maximum height of the single-select drop-down list.
 - **Font Size:** Set the font size of the single-select drop-down list.
 - **Font Weight:** Set the font weight of the single-select drop-down list.
 - **Font Color:** Set the font color of the single-select drop-down list.
 - **Hover Option Color:** Set the color of a hover option in the single-select drop-down list.
 - **Selected Option Color:** Set the color of a selected option in the single-select drop-down list.
 - **Background Color:** Set the background color of the single-select drop-down list.
 - **Select Configuration:** If you select **Allow Deselect**, the single-select drop-down list allows users to cancel the selection, and the tooltip text can be set. If you do not select **Allow Deselect**, the single-select drop-down list does not allow users to cancel the selection, and the tooltip text cannot be set.

If no initial value is set and **Select Configuration** is not selected, the data in the first row of the bound field is entered by default. If the bound dataset has no data, the drop-down list displays no data available.
 - **Initial Value:** You can set an initial value for the single-select drop-down list. The value can be **Fixed** or **Dynamically obtained**.
 - **Fixed:** When **Initial Value** is set to **Fixed**, you can set the initial field of the single-select drop-down list.
 - If you do not set the initial field and allow deselection, the initial value is not set.

- If you do not set the initial field and do not allow deselection, the data in the first row of the bound field is entered by default.
- **Dynamically obtained:** When **Initial Value** is set to **Dynamically obtained**, you can set the field index of the single-select drop-down list.
 - If you enter an index value, the initial value will be obtained dynamically. If you enter **0**, the first row of data will be selected by default. If the index value exceeds the data range, the last row of data will be selected.
 - Negative numbers are not allowed.
- Multi-Option Drop-Down List
 - Styles
 - **Background Color:** Set the background color of the multi-option drop-down list.
 - **Border:** Set the width, rounded corners, color, and type of the border.
 - **Arrow:** Set the color, size, and right margin of the arrow.
 - **Card Style:** Set the font size, font weight, font color, card corner angle, and background color.
 - Result Box Style

Maximum Height: Set the maximum height of the multi-option drop-down list.
 - Initial Settings
 - **Initial Value:** You can set an initial value for the multi-option drop-down list. The value can be **Fixed** or **Dynamically obtained**.
 - **Fixed:** When **Initial Value** is set to **Fixed**, you can set the initial field of the multi-option drop-down list. Separate multiple fields by semicolons (;).
 - **Dynamically obtained:** When **Initial Value** is set to **Dynamically obtained**, you can set the field index of the multi-option drop-down list. Separate multiple indexes by semicolons (;).

The index value is used to dynamically obtain the initial value. If the index value is **0**, the data in the first row is selected by default. If the index value exceeds the data range, the last row of data will be selected.

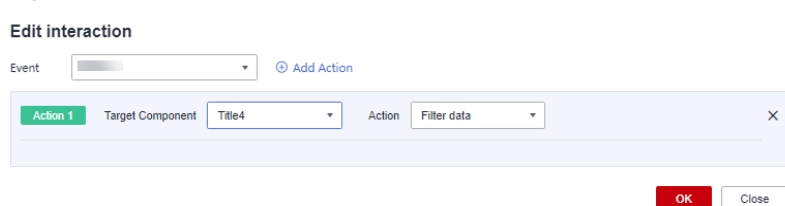
Deduplication of index values: If two duplicate index values are entered, a single index value is used as the initial value. If multiple index values are entered and exceed the actual data range, the fields in the data range are displayed based on the index value rule.
 - **Tooltip Text:** Set the tooltip text for options in the drop-down list.
 - **Text Size:** Customize the size.

- Tabs
 - Global Style
 - **Font:** Set the font for tabs.
 - **Rows:** Set the number of rows in the tabs. The value cannot be smaller than **1**.
 - **Border Width:** Set the border width of the tabs. The value cannot be smaller than **0**.
 - **Select Type:** Set the type of the tabs.
 - **Tab Configuration:** Set the content and values of the tabs.
 - Label Configuration
 - **Font Size:** Set the font size. The value ranges from **10** to **100**.
 - **Font Color:** Set the label color.
 - **Font Weight:** Set the font weight. The value can be **Normal**, **Bold**, **Bolder**, or **Lighter**.
 - **Background Color:** Set the background color of the labels.
 - **Corner Radius:** Set the rounded corner radius of labels. The value ranges from **0** to **50**.
 - **Selected Text Color/Selected Background Color/Hover Border Color:** Customize the color.
 - Single-Select Carousel
 - **Carousel Switch:** Select or deselect the check box to enable or disable carousel.
 - **Carousel Interval:** Set the carousel interval. The value cannot be smaller than **3000**.

Interactions

- Interaction Definition
 - a. Click **Interactions**.
 - b. Choose **Interactions > Interaction Definition > Edit interaction event**. The interaction editing page is displayed.

Figure 7-132 Edit interaction



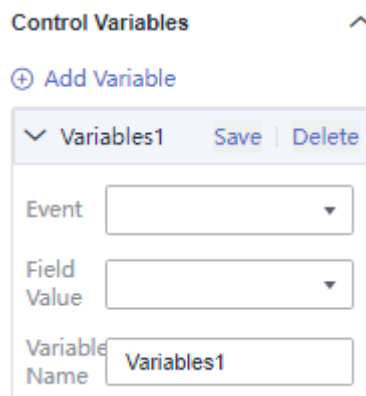
-
-
- c. You can set events.

- d. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
- e. Click **OK** to complete the setting of the interaction event.

 NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.
- Control Variables
 - a. Click **Interactions**. Expand **Control Variables** and click **Add Variable**.

Figure 7-133 Add Variable



- b. Select the event, field value, and variable name, and click **Save**.

7.4.7 Using More Components

7.4.7.1 Creating a Component

The **More** component is used to add more components to data reports.

Prerequisites

- You have subscribed to DataArts Insight.
- A project for managing data sources has been created. For details, see [Creating a Project](#).
- You have obtained data. For details, see [Creating a Data Source](#).
- You have prepared the required dataset. For details, see [Creating a Dataset Through Visual Configuration](#).

Procedure

1. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
2. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
3. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
4. In the displayed dialog box, select a project and click **Confirm**.
5. Click the **More** icon in the navigation pane to switch to the corresponding component page.
6. Drag or click a component to the canvas.
7. In the right pane, set related parameters for the component.

7.4.7.2 Date Selector

This section describes the parameters for a date selector.

Style

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-134 Size/Position



Fields	Styles
	W 680
	H 350
	X 762
	Y 530
	Opacity <input type="range" value="100%"/>

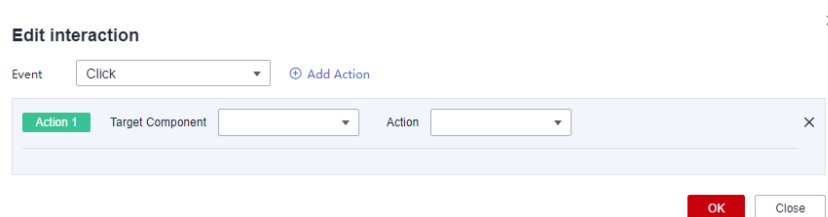
- Global Style
 - **Background Color**: custom background color of the date selector.
 - **Border Color**: custom border color of the date selector.
 - **Style**: border type, including solid line, dotted line, and hyphen.
 - **Width**: border width.
 - **Rounded Corner**: rounded corner of the border.

- **Font Size:** font size of the progress bar.
- **Color:** font color of the progress bar.
- **Formatting:** date format.

Interactions

- Interaction Definition
 - a. Choose **Interactions > Interaction Definition > Edit interaction event**. The interaction editing page is displayed.

Figure 7-135 Edit interaction

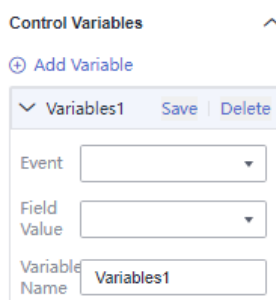


- b. Set **Event** to **Click**.
- c. Click **Add Action** to add an action. Actions can be changed between hidden and visible states, with different action values displayed depending on the selected widget.
- d. Click **OK** to complete the setting of the interaction event.

NOTE

- Data filtering operators are categorized by string, number, and date types.
 - String operators support exact matches, inequalities, inclusions, exclusions, prefixes, suffixes, and checks for emptiness.
 - Number operators allow for equality, inequality, range comparisons, and checks for emptiness.
 - Date operators support equality and range comparisons.
- Interactions support the use of SQL placeholders to bind datasets dynamically.
 - To enable global parameter effects, edit the SQL statements within the associated dataset and add dynamic parameters.
 - Go to the component editing page and click **Interactions** to set related parameters.
- Control Variables
 - a. Click **Interactions**. Expand **Control Variables** and click **Add Variable**.

Figure 7-136 Add Variable



- b. Select the event, field value, and variable name, and click **Save**.

7.4.7.3 Funnel Chart

This section describes the parameters for a funnel chart.

Notes and Constraints

- Only one field can be dragged to **Class Axis/Dimension**.
- Only one field can be dragged to **Axis Value/Metric**.
- Only one field can be dragged to **Color Legend**.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.

Table 7-143 Parameters on the Fields tab

Parameter	Description
Field display content	Click  in the column and click Field display content to modify the field display content on the displayed page. Click OK .
Aggregation Mode	Select Aggregation Method and click to support setting of no aggregation, sum, count, distinct count, maximum value, minimum value, average value, population standard deviation, sample standard deviation, sample variance, range start value, and range end value.

Parameter	Description
Drilldown	You can enable drilldown for dimension fields. For example, you can view data at different levels of granularity, ranging from years down to quarters, months, weeks, days, hours, minutes, and even seconds, depending on the time dimension. - Click the field () in the column and drag the field of the target location to be drilled down to the Drilldown area. - Click Update to test whether the drilldown function is set successfully. NOTE - Drill-down is only supported for dimension fields, not for metric fields. - You can only select one field as the starting point for drill-down. - When drilling down on time, the system will automatically add the subdivided time periods to the drill-down order list and include them in the sorting field (fields that are already in the sorting field will not be added again). - Drill-down icons should be highlighted for fields that have already been drilled down. If you remove the drill-down field from the dimension, the entire drill-down function box will disappear.

- Set the color legend: Drag the desired field into **Color Legend** (dimensions only) on the **Field** tab. After setting, the chart will use different colors to distinguish data based on dimensions.
- Set the tooltips and metric: Drag the desired field into **Tooltips/Metric** (metrics only) on the **Field** tab. After setting, the field will appear in the chart's tooltip box.
- Set a filter.
 - Find the data field you need in the dimension and metric lists within the data column.
 - Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - Click **OK**.

Table 7-144 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

5. Set sorting.
 - a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - c. To cancel sorting, click  next to the sorting field.

6. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
7. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Styles

This section describes the style parameters of a funnel chart.

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-137 Size/Position

The image shows a set of UI controls for configuring the size and position of a target. It includes four input boxes for W (580), H (360), X (811), and Y (487). Below these is an Opacity control consisting of a blue slider bar and a text box showing 100%.

- Global Style
 - **Layout Type**: The value can be **Align Center**, **Align Left**, or **Align Right**.
 - **Chart Position**: Set the horizontal position of the funnel chart. The value ranges from **0** to **100**.
 - **Padding**: Set the distance between the top and bottom of the funnel chart. The value ranges from **0** to **50**.
- **Range**: Set the data mapping range.
 - **Range of values**: Set the value range for the funnel chart. If this option is not selected, data is automatically adjusted. If this option is selected, you can manually adjust the value range.
 - **Width Ratio**: Set the width ratio at the bottom and top of the funnel chart.
- Legend
 - **ShowLegend**: Select or deselect the check box to show or hide the legend of the funnel chart.
 - **Text Style**: Set the font size, color, and font weight of the legend.
 - **Layout**: Set the legend direction, position, top and bottom spacing, and legend spacing.

- The horizontal and vertical directions are supported.
- **Position:** The value can be **Top center**, **Top left**, **Top right**, **Left of center**, **Right of center**, **Bottom Center**, **Bottom Left**, or **Bottom Right**.
- **Top and Bottom Spacing:** Set the spacing between the top and bottom of the legend. The value ranges from **0** to **50**.
- **Legend Spacing:** Set the legend spacing. The value ranges from **0** to **36**.
- **Label**
 - **ShowLabel:** Select or deselect the check box to show or hide labels of the funnel chart.
 - **Position:** The value can be **Chart Center**, **Chart Left**, or **Chart Right**.
 - **Category Label:** Set the font size, color, and font weight of the labels.
 - **Value Label:** Set the values displayed on the funnel chart. Select or deselect the check box to show or hide value labels of the funnel chart.
 - **Content:** The options are **Conversion Rate** and **Metric Value**.
 - **Conversion Rate Calculation Method:** This parameter is available only when **Conversion Rate** is selected for **Content**.
Conversion Rate Calculation Method can be set to **Percentage of previous layer** or **Percentage of first layer**.
- **Tooltips:** After setting the tooltips, click **Preview** to go to the preview page. Hover the cursor on the component to display the tooltips.
 - **ShowTooltips:** Select or deselect the check box to show or hide the tooltips when you preview or view a published component.
 - **Content:** The options are **Percentage of previous layer** and **Percentage of first layer**.
 - Set the background color, text size and color, and font weight. The font size ranges from **10** to **32**.
- **Value Settings:** You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
- **Series**
 - **Color Scheme:** Select default, classic, comfort, intelligence, data, art, or SaaS specifications color schemes.

Figure 7-138 Color scheme

Color Scheme



- **Series:** Set the colors (solid) of the series.

Figure 7-139 Series color settings

Interactions

1. Click **Interactions**.
2. Choose **Advanced** > **Redirect**. The chart redirection page is displayed.
3. Click the field to be bound.
4. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**. 6 provides an example.

Table 7-145 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .

Parameter	Description
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

7.4.7.4 Dashboard

This section describes the parameters for a dashboard.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-146 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.

Type	Parameter	Description
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box.
The default value is **1000**.
4. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-140 Size/Position

The image shows a user interface for configuring a dashboard's style. At the top, there are two tabs: 'Fields' and 'Styles', with 'Styles' being the active tab. Below the tabs, there are four input fields arranged in a 2x2 grid. The first row contains 'W' (Width) with a value of 680 and 'H' (Height) with a value of 350. The second row contains 'X' (X-position) with a value of 762 and 'Y' (Y-position) with a value of 530. Below these fields is an 'Opacity' control, which consists of a horizontal slider bar and a text box showing '100%'.

- Global Style
 - **Font**: font size of the dashboard.
 - **Dashboard Size**: size of the dashboard.
 - **Divisions**: scale of the dashboard.
- Title
 - **Title**: title of the dashboard.
 - **Font Size**: font size of the title.
 - **Font Width**: font width of the title.

- **Color:** custom title color.
- **Axis Color:** color and range of the axis.
- Axis Attribute
 - **Coordinate Axis:** width of the axis.
 - **Axis Scale:** length, width, and color of the axis scale.
 - **Divider:** length, width, and color of the divider.
 - **Axis Label:** size, font size, font width, color, and position of the axis label.
- **Pointer:** pointer attributes. You can select whether to display the pointer on the dashboard. If the pointer is displayed, you can set the pointer length, width, and color.
- Value Labels
 - **Converting numeric to %:** You can customize the value conversion.
 - **Unit/Font Size/Font Width/Color:** You can customize the unit, font size, font width, and color.
 - **Position:** custom position. The horizontal and vertical positions range from -100 to 100.

7.4.7.5 Progress Bar

This section describes the parameters for a progress bar.

Field

In the **Data** area, select values from the **Category Axis/Dimension** list and **Axis Value/Metric** list.

- **Manual input:** You need to manually enter the target value and progress value.
- **Dynamic input:** The **Fields** tab also offers the following parameters to help you analyze data:
 - a. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
 - b. Set a filter.
 - i. Find the data field you need in the dimension and metric lists within the data column.
 - ii. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - iii. Click **OK**.

Table 7-147 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration. Condition Type: The options are And condition and Or condition. Filter Condition: The options are Exact match, Contain, Start with, End with, Not match, Not contain, Null, and Not null.
	Enumeration	Query Mode: The options are Single-select and multi-select. Filter Condition: The options are >, ≥, <, ≤, =, ≠, Null, and Not null.
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

- c. Set sorting.
 - i. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
 - ii. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
 - iii. To cancel sorting, click  next to the sorting field.

- d. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
- e. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-141 Size/Position

The image shows a user interface for configuring a large screen. It has two tabs: 'Fields' and 'Styles'. The 'Styles' tab is selected. Under 'Styles', there are four input fields: 'W' with value 680, 'H' with value 350, 'X' with value 762, and 'Y' with value 530. Below these is an 'Opacity' slider. The slider is a blue bar with a white circle at the right end, and a text box next to it showing '100%'.

- **Progress Bar**: The bar width, radius of rounded corners, background color, and progress bar color can be customized.
You can select a pure color or a gradient color for the progress bar. Gradient colors can be set with start and end colors, and the start and end colors can also be swapped.
- Proportion
 - **Show Proportion**: You can determine whether to display the proportion.
 - **Decimal Places**: There can be up to 10 decimal places.
 - **Proportion Text**: The font type, numerical color, numerical font size, and font weight can be customized.
 - **Offset**: The horizontal offset ranges from -1000 to 1000.
- Value labels
 - **Show Value Labels**: If the checkbox is selected (☒), value labels are displayed. If the checkbox is not selected (☐), value labels are not displayed.
 - **Current Value Name**: name of the current value.

- **Target Value Name:** name of the target value.
- **Alignment:** The options include **Left/Right** and **Top/Bottom**.
- **Arrangement:** The options are **Top**, **Right**, **Inside**, **Left**, **Bottom**, **Upper Left Corner**, **Lower Left Corner**, **Upper Right Corner**, and **Lower Right Corner**.
- **Text:** You can set the font, color, font size, and font weight of the value tag.

Figure 7-142 Value labels

Value Tag ^

☒ Show Value Tag

Current Value Name

Target Value Name

Alignment

Arrangement

Text

Font

Color

Font Size

Font Weight

- Animation
 - **Show Animation:** If the checkbox is selected (☒), animations are displayed. If the checkbox is not selected (☐), animations are not displayed.
 - **Intro Animation Duration (ms):** duration of the first rendering of the component, in ms.
 - **Animation Effect:** The system provides multiple common animation slow-moving effects.
 - **Update Duration (ms):** animation duration when the component data is updated, in ms.
 - **Start from Previous Position:** If this option is selected, the animation is played from the position of the previous data when the component data is updated. If this option is deselected, the animation is played from the initial position when the component data is updated.

Figure 7-143 Animation

Animation ^

☒ ShowAnimation

Intro Animation Duration (ms) — 1,000 +

Animation Effect cubicInOut ▾

Update Animation (ms) — 300 +

Start from Previous Position ☒

7.4.7.6 Industry Distribution Map

This section describes the configuration items of the industry distribution chart.

Fields

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.
 - a. Find the data field you need in the dimension and metric lists within the data column.
 - b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
 - c. Click **OK**.

Table 7-148 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .

Type	Parameter	Description
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are >, ≥, <, ≤, =, ≠, Null, and Not null. You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation, data is filtered before aggregation. If you select After aggregation, data is filtered after aggregation. For aggregation concepts, see Creating a Dataset. You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like >, ≥, <, ≤, and =. You can click Create Filter Condition to set multiple filter criteria.

3. Set the maximum number of query results.

Enter the maximum number of records that can be returned in the text box. The default value is **1000**.

4. Set automatic refresh.

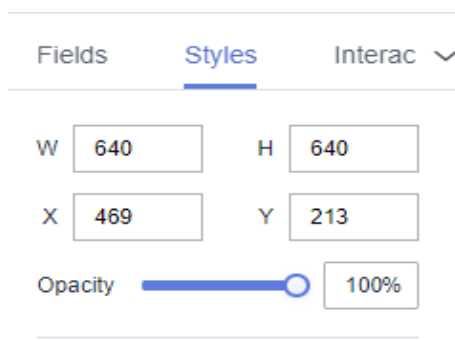
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This section describes the style parameters of a funnel chart.

- Size/Position
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-144 Size/Position

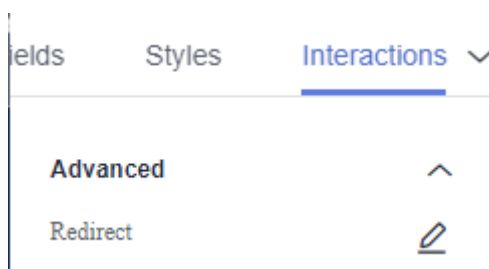


- Circular ring
 - **Rings sum:** The number of rings in the industry distribution chart. The value ranges from 1 to 3.
 - Ring settings:
 - **Max. Card Num:** The number of cards displayed on the ring. The value ranges from 0 to 100.
 - The rotation direction can be clockwise or anticlockwise.
- Card Style
 - **Text:** You can customize the color, font size, and font width of the text in the card.
 - **Icon:** You can customize the color and icon type.
 - **Value Settings:** You can set the context, units, scientific notation, use of thousand separators, and decimal places for numerical values.
- **Animation:** You can set the rotational speed and blinking duration of the industry distribution chart.
 - **Rotational Speed:** Set a value from 0.1 to 2.
 - **Blinking Duration (s):** Set a value from 1 to 10.

Interactions

1. Click **Interactions**.
2. Choose **Advanced** > **Redirect**. The chart redirection page is displayed.

Figure 7-145 Edit interaction



3. Click the field to be bound.
4. Set **Redirect Type**, **Open Mode**, **Redirect to Reports/Screens**, and **Associated Parameters**, and click **OK**.

For details, see [Bar chart example](#).

Table 7-149 Parameters

Parameter	Description
Redirect Type	Intra-system redirect: Redirect to the internal screen and dashboard projects. External redirect: Redirect to a link that is not in the software.
Open Mode	Open in this window: After you click the chart with redirection set, the target chart is opened in the current window. Open in new window: After you click the chart with redirection set, the target chart is opened in a new window. Open in popup window: After you click the chart with redirection set, the target chart is opened as a pop-up window. The size of the pop-up window is customizable.
Redirect to Reports/Screens	1. Select a project first. 2. Select a dashboard/screen. NOTE This step is mandatory when Redirect Type is set to Intra-system redirect .
Associated Parameters	Set Effective Parameters of This Screen. • Associated Parameters: Carry associated fields to the chart that you are redirecting to. • Enter a fixed value: The chart that you redirect to only filters the fixed value. For example, if the fixed value is set to city, the chart that you redirect to displays the filtered city field. • Control Variables: Each value selected in the drop-down box, search, or tab list is a variable value set by the control variable. For example, if you select city in the drop-down box, the variable value of the control variable is city, and the chart that you redirect to filters out the city field. • Global Parameters: Carry the values in the global variables to the chart that you redirect to.

Parameter	Description
Carry condition	When Redirect Type is Intra-system redirect, null values can be carried. Carrying null values is mainly used for filtering null values in data tables, making it easier for users to analyze data. • Prerequisites: Set up two large screens, A and B, with screen A linking to screen B. • Procedure – Configure global parameters in screen B and ensure that the same fields exist in screen A. – Set the redirect parameters in screen A, select screen B as the target, and choose associated fields from the global parameters. – Select Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and filter out rows with null fields. The URL of screen B will display the param parameter. – Deselect Carry null value and click OK. – The bound field in screen A will be underlined. Click it to redirect to screen B and display all chart data. The URL of screen B will not display the param parameter.

7.4.7.7 Milestone

This section describes the configuration items of the milestone.

Notes and Constraints

- **Timeline-Time Dimension:** Support only one field.
- **Node Label-Dimension:** If there are no metrics, up to three dimensions are supported. If there are metrics, up to one dimension is supported.
- **Node Label-Metric:** If there are no dimensions, up to three metrics are supported. If there are dimensions, up to one metric is supported.
- **Status-Dimension:** Only one field can be dragged to this area and it will be used in the condition format.
- Only the time type field (day, week, month, quarter, and year) can be dragged to the time dimension. The second, minute, and hour types are not supported.

Field

1. In the **Data** area on the right, select a dataset, and double-click or drag required dimension and metric fields to the corresponding areas on the **Fields** tab.
2. Set a filter.

- a. Find the data field you need in the dimension and metric lists within the data column.
- b. Click  next to the field you wish to filter and you will be directed to the filter settings page.
- c. Click **OK**.

Table 7-150 Filter parameters

Type	Parameter	Description
string	Condition	Filter Mode: The options are Condition and Enumeration . Condition Type: The options are And condition and Or condition . Filter Condition: The options are Exact match , Contain , Start with , End with , Not match , Not contain , Null , and Not null .
	Enumeration	Query Mode: The options are Single-select and multi-select . Filter Condition: The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null .
Metric	Condition Type	The options are And condition and Or condition .
	Filter Condition	The options are > , ≥ , < , ≤ , = , ≠ , Null , and Not null . You can select Before aggregation and After aggregation for data. NOTE If you select Before aggregation , data is filtered before aggregation. If you select After aggregation , data is filtered after aggregation. For aggregation concepts, see Creating a Dataset . You can click Create Filter Condition to set multiple filter criteria.
Date	Range value	Select a time range for filtering.
	Single value	Set a single time for filtering.
	Condition	You can select And condition or Or condition as the condition type and select filter condition like > , ≥ , < , ≤ , and = . You can click Create Filter Condition to set multiple filter criteria.

3. Set sorting.

- a. Drag and drop required data fields from the **Dimension** and **Metric (Indicator)** areas under **Data** to the **Sorting** area.
- b. Click  next to a field in the **Sorting** area and select a sorting mode. The sorting modes are **Ascending**, **Descending**, and **Custom**.
- c. To cancel sorting, click  next to the sorting field.
4. Set the maximum number of query results.
Enter the maximum number of records that can be returned in the text box. The default value is **1000**.
5. Set automatic refresh.
The auto refresh interval supports the following options: no refresh, 1 minute, 5 minutes, 15 minutes, and 30 minutes.

Style

This section describes the style parameters of a funnel chart.

- **Size/Position**
 - **W**: width of the target, in pixels.
 - **H**: height of the target, in pixels.
 - **X**: position of the target on the canvas, in pixels.
 - **Y**: position of the target on the canvas, in pixels.
 - **Opacity**: Adjust the transparency of the target on the canvas using a slider or by manually entering a percentage. A higher percentage means lower transparency.

Figure 7-146 Size/Position



The screenshot shows the 'Styles' tab selected. It contains four input fields for size and position: W (680), H (350), X (449), and Y (358). Below these is an 'Opacity' slider with a blue bar and a circle handle, and a text box showing '100%'.

- **Basic Chart Style**
 - The chart switch type can be **Milestone** or **Interval**.
 - **Node**
 - **Color Scheme**: You can select **Singel color** or **By node**. The color can be customized.
 - **Size**: The node size can be customized. The value ranges from 8 to 48.
 - **Distance**: You can select **Proportional** or **Equal division**.

- **Line:** width and color can be customized. The width of the line ranges from 1 to 48.
- Node label
 - **Show Node Label:** You can determine whether to display the node label.
 - Label
 - **Label Layout:** staggered, above-axis, and below-axis.
 - **Alignment:** left-aligned, center-aligned, and right-aligned.
 - **Show Timeline Field:** You can determine whether to display the timeline field on the chart.
 - **Show Label Field:** You can determine whether to display the node label on the chart.
 - **Show Today:** You can determine whether to display the label of the current day (today) on the milestone.
- Condition Format

The series in **Conditional Format** is defined by the **Status-Dimension** on the **Fields** tab page. You can set the style of different states.

 - To set the condition format, perform the following steps:
 - i. Select a series from the drop-down list.
 - ii. Select **Custom Style** and click the pen icon on the right of **Custom Style**. The **Custom Style** page is displayed.
 - iii. Click **Add Rule**, select a status, and set the node color, status icon, node icon size, line color, and line width.
 - iv. After setting the parameters, click **OK**. The condition format is set successfully.
 - v. Click **Preview** in the upper right corner to view the configured condition format.

The configured status will be displayed based on the condition format. The status that is not configured will be displayed based on the global demonstration.

7.5 Previewing a Large Screen

This section describes how to preview a large screen.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
2. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
3. In the navigation pane on the left, choose **Data Analytics > Large Screen**.
4. On the displayed page, locate the large screen you want to preview and click **Preview** in its **Operation** column. You can also preview the large screen on the creation or editing page.

7.6 Publishing a Large Screen

This section describes how to publish a large screen after saving it.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. In the navigation pane on the left, choose **Data Analytics > Large Screen**.
6. Click an unpublished screen to access its editing page.
7. Click **Save and Publish** in the upper right corner. A message is displayed, indicating that the screen is published successfully.
8. If you have edited the screen content, click **Republish** in the upper right corner. A message is displayed, indicating that the screen is published successfully.

7.7 Copying a Large Screen

This section describes how to copy a large screen.

Prerequisites

- A project has been created by referring to [Creating a Project](#).

- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. In the navigation pane on the left, choose **Data Analytics > Large Screen**.
6. Locate the target screen, click **More** and select **Copy** in the **Operation** column. In the **Copy screen** dialog box that is displayed, rename the screen and click **Confirm**. The screen is copied successfully. The screen becomes in the unpublished state. For details about how to publish the screen, see [Publishing a Large Screen](#).

7.8 Sharing a Large Screen

DataArts Insight allows you to grant the permission to edit and use datasets to other users or user groups. This section describes how to authorize others to use your large screens.

- **Edit Authorization:** After enabling it, you can grant edit permissions to members. The permissions include the ability to create, edit, replace, and delete screens. It also supports data analysis based on the screens.
- **Export Authorization:** After enabling it, you can grant export permissions to members. This permission only supports data analysis based on the screens.
- **View Authorization:** After enabling it, you can grant the view permission to members. This permission only supports data analysis based on the screens.

Prerequisites

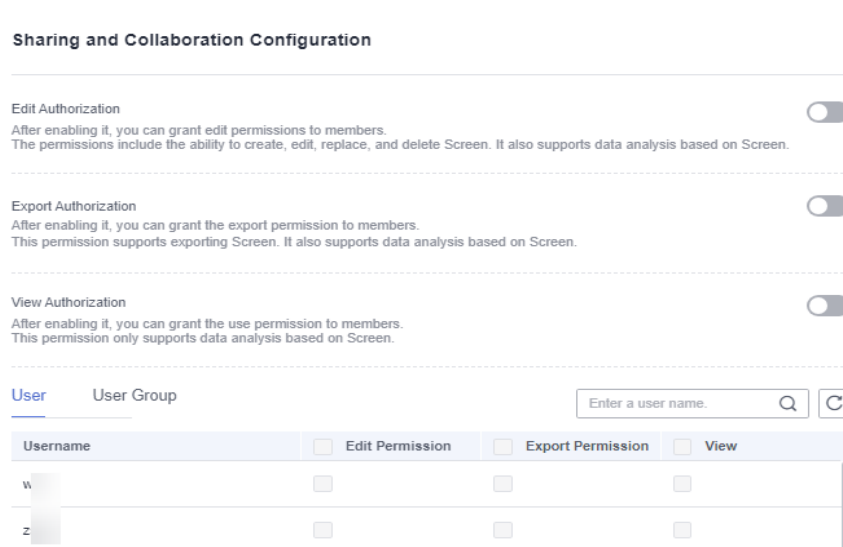
- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#). The sharing and collaboration permissions of the data source have been enabled.
- A dataset has been created by referring to [Creating a Dataset](#). The sharing and collaboration permissions of the dataset have been enabled.
- A large screen has been created by referring to [Creating a Large Screen](#).

Procedure

1. Log in to the DataArts Insight console.

2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. In the navigation pane on the left, choose **Data Analytics > Large Screen**.
6. Locate the target screen, click **More**, and select **Sharing and Collaboration** in the **Operation**.
7. On the **Sharing and Collaboration Configuration** page, assign the permissions to the screen.
 8. Select the permissions that you want to assign.
 - **Edit Authorization**: Enabling this allows you to grant edit permissions to members, including editing and deleting large screens, as well as performing data analysis based on large screens.

Enabling the permission to edit the screen will assign the use and view permissions by default.
 - **Export Authorization**: After enabling it, you can grant export permissions to members. This permission supports exporting the screen. It also supports data analysis based on the screen.
 - **View Authorization**: After enabling it, you can grant the view permission to members. This permission only supports data analysis based on the screen.
9. Select the objects that you want to authorize.
 - **User**: Grant a user the permission to edit the large screen.
 - **User Group**: After a user group is authorized, all users within the group will have the relevant permissions on the large screen.
10. Select the users and user groups that you want to authorize.

Figure 7-147 Sharing and Collaboration Configuration

Sharing and Collaboration Configuration

Edit Authorization ☒
After enabling it, you can grant edit permissions to members.
The permissions include the ability to create, edit, replace, and delete Screen. It also supports data analysis based on Screen.

Export Authorization ☒
After enabling it, you can grant the export permission to members.
This permission supports exporting Screen. It also supports data analysis based on Screen.

View Authorization ☒
After enabling it, you can grant the use permission to members.
This permission only supports data analysis based on Screen.

User **User Group**

Username	☐ Edit Permission	☐ Export Permission	☐ View
w	☐	☐	☐
z	☐	☐	☐

7.9 Managing a Large Screen

This section describes how to edit, favorite, and delete a large screen.

Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Creating a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A large screen has been created by referring to [Creating a Large Screen](#).

Editing a Screen

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Data Analytics > Large Screen**. On the displayed page, click **Create Screen** in the upper right corner.
5. In the navigation pane on the left, choose **Data Analytics > Large Screen**.
6. Locate the target screen and click **Edit** in the **Operation** column. On the displayed page, edit the basic information about the screen.
7. After the editing is complete, click **Save and Publish**.

Taking a Screen Offline

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner to select a region.
3. In the lower left corner of the navigation pane, select an enterprise project from **Enterprise Project**.
4. In the **My Projects** area on the right, select or search for a project and access it.
5. Choose **Big Screen** under **Data Analysis**.
6. Locate a published screen and click **Edit** or **Preview** in the **Operation** column.
On the editing/preview page that is displayed, click  in the upper right corner to take the screen offline.

Deleting a Screen

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner to select a region.
3. In the lower left corner of the navigation pane, select an enterprise project from **Enterprise Project**.

4. In the **My Projects** area on the right, select or search for a project and access it.
5. Choose **Big Screen** under **Data Analysis**.
6. Locate the target screen, click **More**, and select **Delete** in the **Operation** column. In the displayed dialog box, click **OK** to delete the screen.

8 Custom Components

8.1 Overview

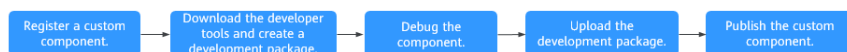
In addition to offering built-in chart components, DataArts Insight also supports custom components. This allows you to develop unique components tailored to your specific needs, eliminating the need to duplicate the development of similar components. Once custom components are developed, they can be used in large screens and dashboards, creating more intuitive and personalized data display interfaces.

Notes and Constraints

- Custom components can be used across projects.
- You can create a maximum of 50 custom components.
- You must have developer permissions to view the list of custom components, download the developer toolkit, and perform debugging operations.
- You must have administrator permissions to register, edit, delete, publish custom components, and set preloading.

Process for Using a Custom Component

Figure 8-1 Flowchart for creating a custom component



8.2 Creating a Custom Component

This section describes how to register, debug, and publish a custom component.

Step 1: Register a Custom Component

Step 1 Log in to the DataArts Insight console.

- Step 2** Click  in the upper left corner of the management console to select a region. Then, click **Project** on the top menu of the console. On the displayed page, click the name of the desired project.
- Step 3** Click the name of the desired project in the **My Projects** area in the right pane.
- Step 4** In the navigation pane on the left, choose **Work Management > Custom Component**.
- Step 5** Click **Register Component** in the upper right corner of the page.
- Step 6** In the displayed dialog box, set parameters and click **OK**.

Table 8-1 Parameters for registering a component

Parameter	Description
Component Name	Enter a component name, which cannot be changed once registered.
Icon	Component display icon, which can be customized. If you do not select one, the default icon will be used.
Application Scope	You can only select Screen or Dashboard .
Applicable Platform	You can only select PC .
Development Buddle	Upload the developed package, which should be in zip format and no larger than 40 MB.
Description	Description of the custom component. You can enter a maximum of 200 characters.

----End

Step 2: Download the Developer Tools and Create a Development Package

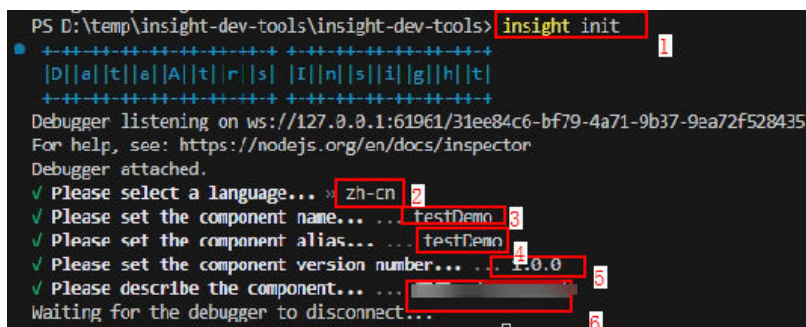
- Step 1** Click **Download Developer Tool** in the upper right corner of the developer platform page to download the development package and save it to the local host.
- Step 2** Extract the package and configure it. For details, see [Custom Component Development Package](#).

NOTE

To create a custom component, use Node.js 20 or later and npm 10.5.0 or later.

- Step 3** Go to the **insight-dev-tools** folder and open the command line as a Windows system administrator.
- ```
npm install
```
- Step 4** Perform internal linking within the component.
- ```
npm link
```
- Step 5** Initialize the component.
- ```
insight init
```

Figure 8-2 Initialization



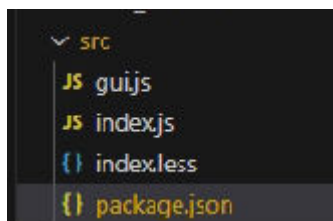
```
PS D:\temp\insight-dev-tools\insight-dev-tools> insight init
+-----+
|D|a|t|a|A|t|r|s| |I|n|s|i|g|h|t|
+-----+
Debugger listening on ws://127.0.0.1:61961/31ee84c6-bf79-4a71-9b37-9ea72f528435
For help, see: https://nodejs.org/en/docs/inspector
Debugger attached.
✓ Please select a language... » zh-cn
✓ Please set the component name... » testDemo
✓ Please set the component alias... » testDemo
✓ Please set the component version number... » 1.0.0
✓ Please describe the component...
Waiting for the debugger to disconnect...
```

**NOTE**

- 1 indicates the initialization command.
- 2 indicates that the language.
- 3 indicates the component name, which can be customized.
- 4 indicates the component alias, which can be customized.
- 5 indicates the component version, which can be customized.
- 6 indicates the component description, which can be customized.

**Step 6** After initialization, the **src** directory will appear in the **insight-dev-tools** folder, which contains the configuration directory for the component.

Figure 8-3 src directory

**NOTE**

- **gui.js**: component configuration, including the style, data, and interaction.
- **index.js**: implementation configuration file.
- **index.less**: style configuration file.
- **package.json**: dependency package file.

**Step 7** Enter the **src** directory, build the component, and a **dist** folder will appear in the **src** directory after building (the **index.js** in **dist** refers to the current implementation of the component package).

1. Go to the **src** directory.  
`cd .\src\`
2. Build the component.  
`insight build`

----End

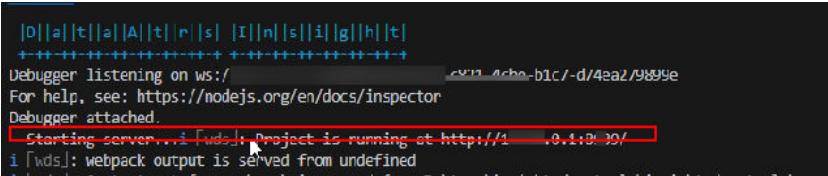
### Step 3: Debug the Component

**Step 1** Once the development package is created, connect the local component to the console to debug it.

**Step 2** Debug the component on the local host and obtain the debugging port.

```
insight start
```

Figure 8-4 Debugging port



**Step 3** On the developer platform page, click **Debug** in the **Operation** column of the component. In the displayed dialog box, set parameters. (Set **Debug Port** to the value obtained in [Figure 8-4](#).)

Table 8-2 Parameters for debugging a custom component

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Component Name    | Custom component name.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Debug Target      | <b>Local Bundle</b> : development package obtained from the local host.                                                                                                                                                                                                                                                                                                                                                                                                            |
| Application Scope | The value can be <b>Screen</b> or <b>Dashboard</b> .                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Project           | Select a project for debugging, and use the data from that project for debugging purposes.                                                                                                                                                                                                                                                                                                                                                                                         |
| Screen/Dashboard  | Select a large screen or dashboard for debugging.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Debug Port        | Enter the debugging port and validate it by only entering numbers. <ul style="list-style-type: none"><li>Specify different ports to debug different development packages on the local development server.</li><li>Debugging port is only required for local package debugging, and is not needed for the release package mode.</li><li>In local package mode, if the debugging port is not filled in, clicking <b>Debug</b> will prompt you to enter the debugging port.</li></ul> |

**Step 4** Click **OK**. On the displayed page, debug the component.

**Step 5** Build the component.

```
insight build
```

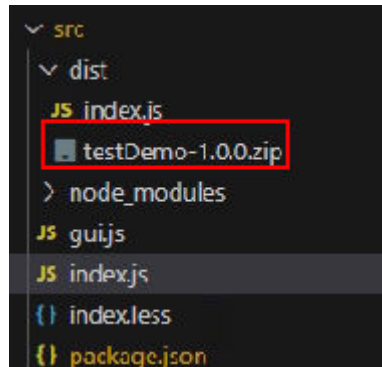
----End

## Step 4: Upload the Development Package

- Step 1** Once the debugging is complete on the console, package the custom component locally and a zip file will appear in the **list** folder.

insight pack

Figure 8-5 ZIP file



- Step 2** Go to the developer platform page, select the custom component whose development package has not been uploaded, and click **Edit** in the **Operation** column. In the displayed **Edit Component** dialog box, upload the local development package.

- Step 3** Click **OK**.

----End

## Step 5: Publish the Custom Component

- Step 1** In the custom component list, locate the row containing the created custom component and click **Publish** in the **Operation** column.
- Step 2** The custom component changes to the **Published** state. Return to the **Workspace** page and select an enterprise project in **Enterprise Project**.
- Step 3** Click the name of a project in the **My Projects** area on the right. In the navigation pane on the left, choose **Data Analytics > Large Screen** or **Dashboard**. On the displayed page, click **Create Screen** or **Create Dashboard** in the upper right corner.
- Step 4** On the displayed page, click **Custom** on the left. The published components are displayed in the list. Drag a custom component to the canvas for configuration. For details, see [Creating a Large Screen/Creating a Dashboard](#).

----End

## 8.3 Managing Custom Components

This section walks you through on how to edit and delete a custom component.

### Editing a Custom Component

1. Log in to the DataArts Insight console.

2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
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 **Work Management > Custom Component**.
5. On the displayed page, locate your desired custom component and click **Edit** in the **Operation** column. In the displayed dialog box, edit related parameters, confirm the settings, and click **OK**.
6. Republish the edited custom component.

**Table 8-3** Parameters for creating a custom component

| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status             | <p>The options include <b>Developing</b>, <b>To Be Published</b>, and <b>Published</b>. Different statuses are marked with different colors.</p> <ul style="list-style-type: none"><li>• <b>Developing</b> (gray): The component is registered but the development package is not uploaded.</li><li>• <b>To Be Published</b> (blue): The development package has been uploaded, but the component has not been published.</li><li>• <b>Published</b> (green): The custom component has been published. You can check and use the component in the large screen or dashboard component list.</li></ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• If a custom component is not published, it will not appear in the list of large screen or dashboard components.</li><li>• Once a custom component is published and its information is edited and confirmed, even if manually changed back, the publish button will change from grayed out to highlighted.</li><li>• If the development package is deleted, the component cannot be published.</li><li>• Edited components need to be republished.</li></ul> |
| Development Buddle | <p>Status of a development package. The options include <b>To Be Uploaded</b> or <b>Uploaded</b>.</p> <ul style="list-style-type: none"><li>• <b>To Be Uploaded</b>: The component is registered but the development package is not uploaded.</li><li>• <b>Uploaded</b>: The development package has been uploaded.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| Parameter   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Show or Not | <ul style="list-style-type: none"><li>• Enabled: The component is in the default state, but can only be seen in the component list after it has been published.</li><li>• Disabled: The component is hidden in the list.</li></ul> <b>NOTE</b><br>Hiding a published component will not affect the large screens or dashboards that have already used it. The hidden component will not be visible in the custom component list of the large screen or dashboard. |

## Deleting a Custom Component

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
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 **Work Management > Custom Component**.
5. On the displayed page, locate your desired custom component and click **Delete** in the **Operation** column. In the displayed dialog box, click **OK**.

### NOTE

Before deleting a custom component, check if the component is in use. If it is, an error will be reported on the large screen or dashboard that uses the component once it is deleted.

## 8.4 Custom Component Development Package

### 8.4.1 Component Development Package Files

This section describes the file structure that developers must comply with when developing custom components.

After you run the **insight init** command to generate a component package, the component package contains the following files:

**Table 8-4** Development package files

| File     | Description                                                              |
|----------|--------------------------------------------------------------------------|
| gui.json | Configuration file, recording the style, data, and interaction settings. |
| Index.js | Main entry file.                                                         |

| File       | Description             |
|------------|-------------------------|
| Index.less | CSS configuration file. |

## 8.4.2 Index.js File

The **Index.js** file is a component's main entry file that provides an example component and describes the lifecycles and related functions of common components.

The example is a text component that displays the values of metric fields and allows for text styling.

**Table 8-5** Functions

| Function              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| refresh()             | Default rendering function, which is called when a component is initialized and redrawn.                                                                                                                                                                                                                                                                                                                                                                |
| resize(attr)          | Scaling function, which is called when a component is dragged or zoomed.<br><b>attr</b> : component size and location information. For details, see <a href="#">attr parameter description</a> .                                                                                                                                                                                                                                                        |
| loadData()            | Data loading function, which is called when a component loads data.                                                                                                                                                                                                                                                                                                                                                                                     |
| eventEmit(eventParam) | <ul style="list-style-type: none"><li>Optional method that triggers component interaction events. Call the method <b>this.eventEmit(eventParam)</b> within the function that requires interaction triggering. Component interaction events must be configured in the <b>gui.json</b> file for this method to work.</li><li><b>eventParam</b>: interaction parameter. For how to use this function, see <a href="#">eventEmit description</a>.</li></ul> |

**Table 8-6** attr parameter description

| Parameter | Mandatory | Type   | Description                     |
|-----------|-----------|--------|---------------------------------|
| w         | No        | Number | Component width (unit: pixel).  |
| h         | No        | Number | Component height (unit: pixel). |

- Description of the **eventParam** parameter.



**Table 8-7** eventParam parameter description

| Parameter | Mandatory | Type                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | select, drive, and link | <ul style="list-style-type: none"><li>• <b>select</b>: Allows components to define interaction events through interactive editing in the interaction panel. This type cannot be configured simultaneously with <b>drive</b> or <b>link</b>.</li><li>• <b>drive</b>: Allows components to configure linkage in the interaction panel. This type cannot be configured simultaneously with <b>select</b>.</li><li>• <b>link</b>: Allows components to configure redirections in the interaction panel.</li></ul> |
| params    | Yes       | Object                  | Event triggering field and its value. For details, see <a href="#">params description</a> .                                                                                                                                                                                                                                                                                                                                                                                                                   |

Description of **params** in the **eventParam** parameter.

**Table 8-8** params description

| Parameter | Mandatory | Type            | Description                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String          | ID of the data field that initiates the interaction. If it is a select type, the value is <b>value</b> .                                                                                                                                                                                                       |
| value     | Yes       | String   Number | Value of the data field that initiates the interaction.                                                                                                                                                                                                                                                        |
| isReset   | No        | Boolean         | The default value is <b>false</b> , which indicates whether it is the first time to initiate an interaction or to cancel the previous interaction. For example, when a bar chart initiates an interaction, the bar is highlighted, and after canceling the interaction, the bar returns to its original state. |

- eventEmit usage

This method is an interactive event method that is called in the function that triggers the interaction, such as when clicking text.

To trigger an interaction of the **select** type, set **type** to **select** in **event** of **gui.json**, and call the method as follows:

```
// click is the method used to trigger the interaction and is a user-defined method. To ensure that the this context remains unchanged, use an arrow function.
click = () => {
 // Trigger the interaction.
 this.eventEmit({
 key: 'select',
 params: [
 {
 key: 'value', // The value is fixed at value.
 value: xxx, // Value that triggers the interaction.
 },
],
 });
};
```

To trigger an interaction of the **driver** type, set **type** to **drive** in **event** of **gui.json**, and the parameters are as follows:

```
click = () => {
 // Trigger the interaction.
 this.eventEmit({
 key: 'drive',
 params: [
 {
 key: 'xxxxxxx', // ID of the field that initiates the linkage.
 value: xxx, // Value that triggers the interaction.
 },
],
 });
};
```

To trigger an interaction of the **link** type, set **type** to **link** in **event** of **gui.json**, and the parameters are as follows:

```
click = () => {
 // Trigger the interaction.
 this.eventEmit({
 key: 'link',
 params: [
 {
 key: 'xxxxxxx', // ID of the field that initiates the linkage.
 value: xxx, // Value that triggers the interaction.
 },
],
 });
};
```

- Obtaining data related to custom components

Users can obtain the latest style configuration values, data values, and bound dataset fields from the development package of custom components. The relevant data is stored in the **config** variable of the development package.

**Table 8-9** Data related to custom components

| Parameter | Type   | Description                                                                                                                                                                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| styledata | Object | The style configuration corresponds to the configuration in <b>gui.json</b> . For example, to obtain the style value of <b>name</b> whose value is <b>fontSize</b> in <b>gui.json</b> , use <b>this.config.styledata.fontSize</b> . |

| Parameter | Type   | Description                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| jsonData  | Object | Value of the data field that initiates the interaction. For details, see <a href="#">jsonData description</a> . |

**Table 8-10** jsonData description

| Parameter             | Type  | Description                                                                                                                     |
|-----------------------|-------|---------------------------------------------------------------------------------------------------------------------------------|
| dataBind.<br>dataArea | Array | Field information bound to the data panel and is in an array structure. For details, see <a href="#">dataArea description</a> . |
| originData            | Array | Data value obtained in real time. For details, see <a href="#">originData description</a> .                                     |

**Table 8-11** dataArea description

| Parameter  | Type   | Description                                                                                                                                                                        |
|------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| areald     | Object | Data slot type configured in <b>gui.json</b> . For the options, see <a href="#">Areald description</a> .                                                                           |
| columnList | Array  | Fields dragged to the data panel slot when the component is used to create a large screen or dashboard. For details about the fields, see <a href="#">columnList description</a> . |

- columnList description

The values are in an array, with each item corresponding to a field in the dataset.

**Table 8-12** Data slot fields

| Parameter | Type   | Description                                                                                            |
|-----------|--------|--------------------------------------------------------------------------------------------------------|
| id        | String | Unique field ID, which needs to be passed in when the eventEmitter function is called for interaction. |
| caption   | String | Field name.                                                                                            |

| Parameter | Type                    | Description                                                                                |
|-----------|-------------------------|--------------------------------------------------------------------------------------------|
| type      | 'dimension'   'measure' | Field type. <b>dimension</b> indicates a dimension, and <b>measure</b> indicates a metric. |

- originData description

It stores real-time data values obtained through **this.config.jsondata.originData**.

**originData** is a two-dimensional array. The first row is the table header, which stores fields and does not have specific values. The second row and beyond store data.

Each data item in a data row corresponds to a field in the slot of the data panel. For the data items, see [Table 8-13](#).

**Table 8-13** originData data items

| Parameter    | Type            | Description                                        |
|--------------|-----------------|----------------------------------------------------|
| id           | String          | Field ID.                                          |
| caption      | String          | Field name.                                        |
| cellRawValue | String   Number | Field value.                                       |
| cellValue    | String   Number | Value of a field formatted based on dataset rules. |

#### Example **Index.js**:

```
import gui from './gui.json';
import './index.less';
class App extends CustomBaseChart {
 constructor(props) {
 super(props);
 this.el.innerHTML = this.renderHtml();
 }
 refresh() {
 this.loadData();
 }
 loadData() {
 this.el.innerHTML = this.renderHtml();
 this.el.querySelector(".insight-text-inner").addEventListener('click', this.click, false);
 }
 renderHtml() {
 return `
 <div class="insight-text-inner" style="color: ${this.config.styledata.color}
 ";font-size: ${this.config.styledata.fontSize}px;font-weight: $
 {this.config.styledata.fontWeight}">
 ${this.data[1]?.[0]?.cellRawValue ?? "No Data"}
 </div>
 `;
 }
 resize(attr) {
```

```
 this.attr = { ...attr };
 }
 click = () => {
 // Trigger the interaction.
 this.eventEmit({
 key: 'drive',
 params: [
 {
 key: this.data[1]?.[0]?.id,
 value: this.data[1]?.[0]?.cellRawValue,
 },
],
 });
 };
}
App.gui = gui;
export default App;
```

### 8.4.3 gui.json File

**gui.json** is a component's configuration file. This section describes the fields in **gui.json**. You can modify the file and customize the component configuration panel based on the field description in this document.

Example **gui.json**:

```
{
 "name": "newCom",
 "style": [...],
 "data": {},
 "dataSlot": {...},
 "event": {...}
}
```

**Table 8-14** Parameters in gui.json

| Parameter | Mandatory | Type                                  | Description                                                                                           |
|-----------|-----------|---------------------------------------|-------------------------------------------------------------------------------------------------------|
| name      | Yes       | String                                | Component name.                                                                                       |
| style     | Yes       | Array of <a href="#">Style</a> object | Style panel configuration.                                                                            |
| data      | Yes       | {}                                    | Stores updated component data. Retain the value {}. Do not delete it.                                 |
| dataSlot  | No        | Object                                | Data panel configuration. For details, see <a href="#">Configuring Component Data</a> .               |
| event     | No        | Object                                | Interaction panel configuration. For details, see <a href="#">Configuring Component Interaction</a> . |

### Configuring the Component Style

```
"style": [
 {
 "label": "Global style",
 "labelId": "global_style",
 "isExpand": true,
 "children": [
 {
```

```
{
 "label": "Font size",
 "name": "fontSize",
 "type": "number",
 "min": 12,
 "max": 32,
 "value": 12
},
{
 "label": "Font weight",
 "name": "fontWeight",
 "type": "select",
 "options": [
 {
 "key": "Normal",
 "value": "normal"
 },
 {
 "key": "Bold",
 "value": "bold"
 }
],
 "value": "normal"
},
{
 "label": "Color",
 "name": "color",
 "type": "color",
 "value": "#ffffff"
}
],
}
```

The **Style** parameter is an array that contains configuration items for styling. Each data element in the array can also include related sub-configuration items, with a maximum of two layers. Here are the specific parameter details:

**Table 8-15** Style parameter description

| Parameter | Mandatory | Type                                     | Description                                                                                                                                                                   |
|-----------|-----------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label     | Yes       | String                                   | Label name of a configuration item.                                                                                                                                           |
| isExpand  | No        | Boolean                                  | Whether sub-configuration items are expanded. The options are: <ul style="list-style-type: none"><li>• <b>true</b>: expanded.</li><li>• <b>false</b>: not expended.</li></ul> |
| name      | Yes       | String                                   | Key value of the configuration item, which must be unique for the current component.                                                                                          |
| Other     | No        | -                                        | UI types have different attribute parameters. For details, see <a href="#">UI Types</a> .                                                                                     |
| children  | No        | Array of <a href="#">children</a> object | Sub-configuration items of the configuration item. The <b>Global Style</b> area contains configurations like <b>Font</b> and <b>Color</b> .                                   |

**Table 8-16** children parameter description

| Parameter | Mandatory | Type            | Description                                                                                                                  |
|-----------|-----------|-----------------|------------------------------------------------------------------------------------------------------------------------------|
| label     | Yes       | String          | Label name of a sub-configuration item.                                                                                      |
| type      | Yes       | String          | Type of the text box for style configuration. For the UI types supported by DataArts Insight, see <a href="#">UI Types</a> . |
| name      | Yes       | String          | Key value of the sub-configuration item, which must be unique for the current component.                                     |
| value     | Yes       | String   Number | Style value of the sub-configuration item.                                                                                   |
| Other     | Yes       | -               | UI types have different attribute parameters. For details, see <a href="#">UI Types</a> .                                    |

Example:

Figure 8-6 Style example

Global Style

Text Style 1

Delimiter

Font

Font Size

Text Spacing

Color

Font Weight

Alignment

Align Top and Bottom

Row Height

First Line Indentation

-

31

+

-

2

+

Normal

Align Top

-

40

+

-

36

+

Value Settings

Table 8-17 Example style panel

| No. | Description                                                                                                        |
|-----|--------------------------------------------------------------------------------------------------------------------|
| 1   | The corresponding field is <b>isExpand</b> .                                                                       |
| 2   | The corresponding field is <b>label</b> .                                                                          |
| 3   | The corresponding field is <b>type</b> , with options including <b>number</b> , <b>select</b> , and <b>color</b> . |

Configuring Component Data

**dataSlot**: component's data panel slot configuration.

An example is shown below:

```
"data": {
 "version": "2.0"
 "dynamicData": {
 "slots": [...],
 "filter": true,
```

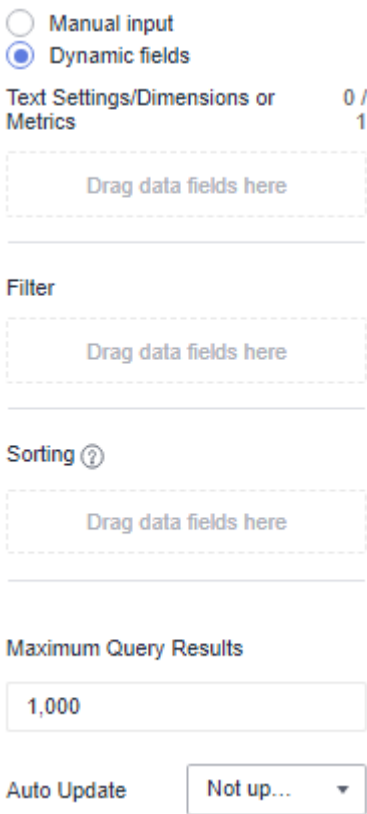


```
"sort": true
},
}
```

Table 8-18 dataSlot parameter description

| Parameter | Mandatory | Type    | Description                                                                                               |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------|
| version   | Yes       | "2.0"   | The value is fixed at <b>2.0</b> .                                                                        |
| slots     | Yes       | Slot[]  | Data configuration area in the data panel. For details, see <a href="#">slots parameter description</a> . |
| filter    | Yes       | Boolean | Whether to display filter slots on the data panel.                                                        |
| sort      | Yes       | Boolean | Whether to display sorting slots on the data panel.                                                       |

Figure 8-7 Data panel



- Example dataSlot configuration  
In the example, the **dataSlot** parameter is as follows:

```
"dataSlot": {
 "version": "2.0",
```

```
"dynamicData": {
 "slots": [
 {
 "areald": "area_value",
 "label": "Metric slot",
 "rule": {
 "maxColNum": 1,
 "minColNum": 0,
 "needAggregator": true
 }
 }
],
 "filter": true,
 "sort": true
},
```

The definition of **slots** is as follows:

**Table 8-19** slots parameter description

| Parameter | Mandatory | Type   | Description                                                                                           |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------|
| areald    | Yes       | String | Data slot type. For the options, see <a href="#">Areald description</a> .                             |
| label     | Yes       | String | Display name of a data slot.                                                                          |
| rule      | No        | Object | Rules and constraints for configuring data slots. For details, see <a href="#">rule description</a> . |

- Areald description

**Areald** identifies the slot type of the data panel. The values include:

**Table 8-20** Areald value description

| Value       | Description                                                                     |
|-------------|---------------------------------------------------------------------------------|
| area_column | Column slot, which supports dimensions and metrics.                             |
| area_type   | Dimension slot, which only supports dimension fields.                           |
| area_value  | Metric slot, which only supports metric fields.                                 |
| area_color  | Color legend slot, which supports only dimensions and is used to classify data. |

- rule description

**rule** indicates the slot rules of the data panel. The **rule** parameter is as follows:

**Table 8-21** rule value description

| Value        | Mandatory | Type     | Description                                                                                                                                                                                                                          |
|--------------|-----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| minColNum    | No        | Number   | Minimum number of fields required for a slot on the data panel.                                                                                                                                                                      |
| maxColNum    | No        | Number   | Maximum number of fields supported by a slot on the data panel.                                                                                                                                                                      |
| dataType     | No        | String[] | Supported field type. The options are <b>STRING</b> , <b>DATE</b> , and <b>NUMBER</b> . If this parameter is not set, it will default to the type that matches <b>Areald</b> . For details, see <a href="#">Areald description</a> . |
| typeErrorTip | No        | String   | Prompt message displayed when the field type dragged to the data panel slot does not match the slot type.                                                                                                                            |

## Configuring Component Interaction

**event**: component interaction configuration.

An example is shown below:

```
"event": {
 "eventConfig": [
 {
 "type": "select"
 }
]
}
```

The **Event** parameter is an object in the form of key-value pairs. The **key** represents the name of the interaction event, and the **value** contains the relevant configuration for the interaction event. The details are as follows:

**Table 8-22** event value parameter description

| Parameter   | Mandatory | Type  | Description                                       |
|-------------|-----------|-------|---------------------------------------------------|
| eventConfig | Yes       | Array | Interaction configuration. The value is an array. |

Table 8-23 eventConfig parameter description

| Parameter | Mandatory | Type                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | select, drive, and link | <ul style="list-style-type: none"><li>• <b>select</b>: Allows components to define interaction events through interactive editing in the interaction panel. This type cannot be configured simultaneously with <b>drive</b> or <b>link</b>.<ul style="list-style-type: none"><li>– <b>isMultivalue</b>: When set to <b>true</b>, the operator can only be <b>in</b>, which is suitable for multi-select dropdowns. When set to <b>false</b>, the operator can include <b>=</b>, <b>≠</b>, <b>&gt;</b>, and more, which is suitable for single-select dropdowns. As shown in <a href="#">Figure 8-9</a>, the value of <b>isMultivalue</b> is <b>true</b>.<p><b>NOTE</b><br/>The <b>select</b> and <b>isMultivalue</b> options are only available for large screens.</p></li></ul></li><li>• <b>drive</b>: Allows components to configure linkage in the interaction panel. This type cannot be configured simultaneously with <b>select</b>.</li><li>• <b>link</b>: Allows components to configure redirections in the interaction panel.</li></ul> |

Figure 8-8 Interaction entry with type of being select

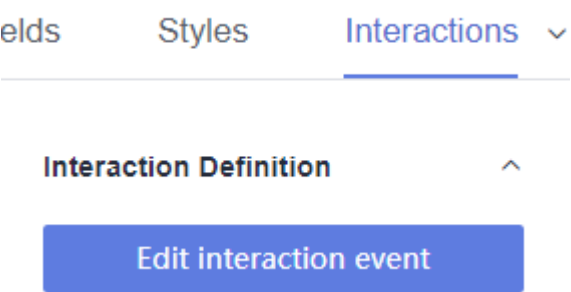
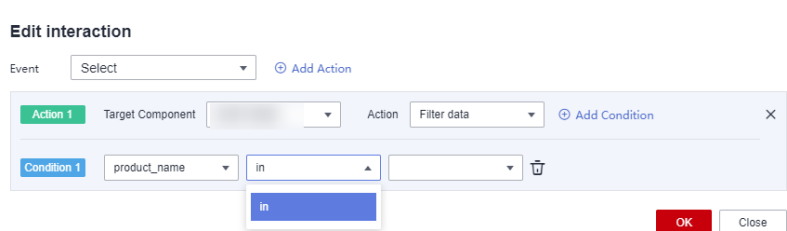
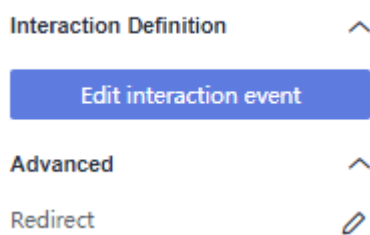


**Figure 8-9** Example when type is set to select**Figure 8-10** Example when type is set to link or drive

## 8.4.4 UI Types

This section describes the controls (component style configuration items) that are supported by a custom component. You can use the **type** field defined in the **gui.json** file to define the control type and configuration.

### Supported Types

The options of **type** are:

- **input**: text input box. See [Text Input Box](#).
- **number**: numeric control, which supports input and customization of maximum and minimum values. See [Numeric Control](#).
- **select**: drop-down list, which supports enabling filtering and custom input. See [Drop-Down List](#).
- **color**: color selector. See [Color Selector](#).
- **checkbox**: check box. See [Check Box](#).

### Text Input Box

**Table 8-24** Parameter description

| Field | Man<br>dato<br>ry | Type   | Description            |
|-------|-------------------|--------|------------------------|
| value | Yes               | String | Value in the text box. |

An example is shown below:

```
{
 "label": "Init value",
 "name": "initvalue",
 "type": "input",
 "value": ""
}
```

## Numeric Control

Numeric control

**Table 8-25** Parameter description

| Field | Mandatory | Type   | Description                                                   |
|-------|-----------|--------|---------------------------------------------------------------|
| value | Yes       | Number | Value of the numeric control. The default value is <b>0</b> . |
| min   | No        | Number | Minimum value.                                                |
| max   | No        | Number | Maximum value.                                                |
| step  | No        | Number | Adjustment range. The default value is <b>1</b> .             |

An example is shown below:

```
{
 "label": "Size",
 "name": "size",
 "type": "number",
 "min": 0.1,
 "max": 1.5,
 "step": 1,
 "value": 14
}
```

## Drop-Down List

**Table 8-26** Parameter description

| Field   | Mandatory | Type          | Description                                                                                       |
|---------|-----------|---------------|---------------------------------------------------------------------------------------------------|
| value   | Yes       | String        | Value selected from the drop-down list. The value corresponds to <b>value</b> in <b>options</b> . |
| options | Yes       | Array<Object> | All the options contained in the drop-down list.                                                  |

Example data:

```
{
 "label": "Font weight",
 "name": "fontWeight",
 "type": "select",
 "options": [
 {
 "key": "Normal",
 "value": "normal"
 },
 {
 "key": "Bold",
 "value": "bold"
 }
],
 "value": "normal"
}
```

## Color Selector

**Table 8-27** Parameter description

| Field | Man<br>dator<br>y | Type   | Description                           |
|-------|-------------------|--------|---------------------------------------|
| value | Yes               | String | Value selected by the color selector. |

An example is shown below:

```
{
 "label": "Color",
 "name": "color",
 "type": "color",
 "value": "rgba(70,94,212,1)",
 "gradient": true
},
```

## Check Box

**Table 8-28** Parameter description

| Field | Man<br>dator<br>y | Type    | Description                                                            |
|-------|-------------------|---------|------------------------------------------------------------------------|
| value | Yes               | Boolean | Value of the check box. The value can be <b>true</b> or <b>false</b> . |

An example is shown below:

```
{
 "label": "Checked",
 "name": "checked",
 "type": "checkbox",

```

```
"value": true
}
```



# 9 Intelligent Analysis Assistant

---

## 9.1 Overview

### What Is an Intelligent Analysis Assistant?

Traditional data analysis tools often require users to have a technical background to perform complex analyses and generate charts. This not only limits the accessibility of data analysis but also increases the time from data acquisition to decision support. Users often feel overwhelmed by complex data analysis tasks because they need to manually write queries, process data, and generate charts, which are both time-consuming and error-prone.

The Intelligent Analysis Assistant, provided by DataArts Insight, is an innovative tool that uses natural language processing to simplify complex data analysis tasks into simple conversational exchanges. By asking questions in natural language, the Intelligent Analysis Assistant can automatically perform data analysis, generate charts, and provide intelligent insights, significantly simplifying the entire process from data acquisition to decision support, and helping you quickly conduct business intelligence (BI) analysis.

For example, by simply asking "What is the sales volume of a certain product in different regions?" in the dialogue box, the Intelligent Analysis Assistant will automatically generate intuitive charts showing sales data in each region. Additionally, if the initial response does not fully meet your expectations, you can [configure the intelligent analysis assistant](#) to improve its accuracy.

Powered by Pangu models, the Intelligent Analysis Assistant offers a new experience of [Intelligent Data Insight](#), [Intelligent Insights](#), and [Intelligent Building](#). It currently supports a variety of data sources to ensure you can easily access and analyze various data.

- GaussDB(DWS) data source
- ClickHouse data source
- GaussDB data source
- MySQL data source
- PostgreSQL data source

- Doris data source

#### NOTICE

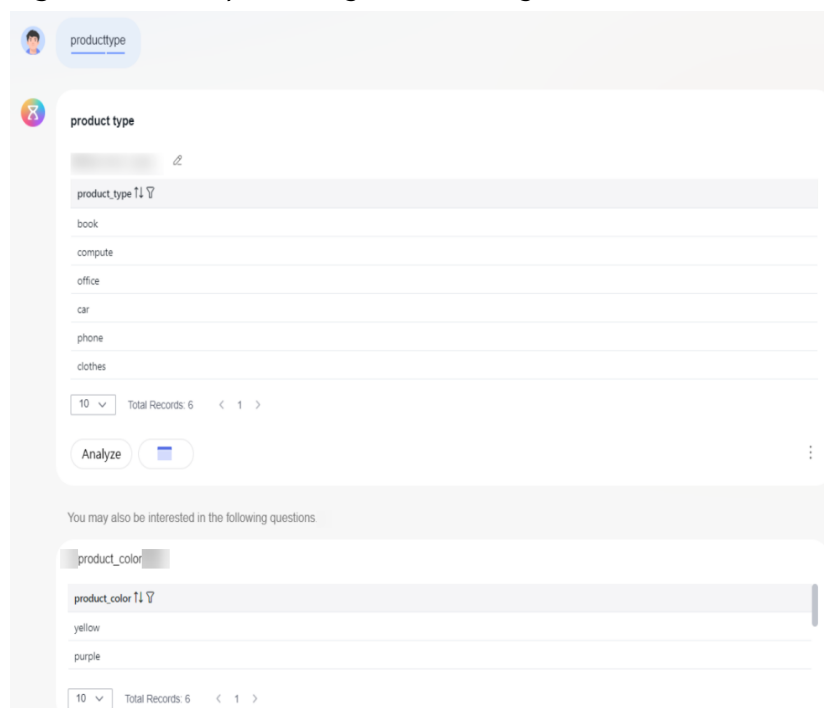
The intelligent analysis assistant provides knowledge search based on the data uploaded by users. Users need to review the answers to prevent pornographic, violent, and images and text violating related laws or regulations. Users shall be responsible for any problems caused by users' data content, third-party data content, or any problems not caused by this product.

## Intelligent Data Insight

Intelligent data insight allows for data to be queried and answered through natural language dialogue, enabling non-experts to easily access and analyze data. As shown in [Figure 9-1](#), the feature has three core capabilities:

- Natural language interaction: Users can ask questions in nature language, and the intelligent analysis assistant will understand and provide answers.
- Instant Q&A: The feature supports instant Q&A and can engage in multi-turn dialogue to explore and solve complex problems.
- Recommended related questions: The feature recommends other questions related to the current query, helping users gain a more comprehensive understanding of the data.

**Figure 9-1** Example intelligent data insight



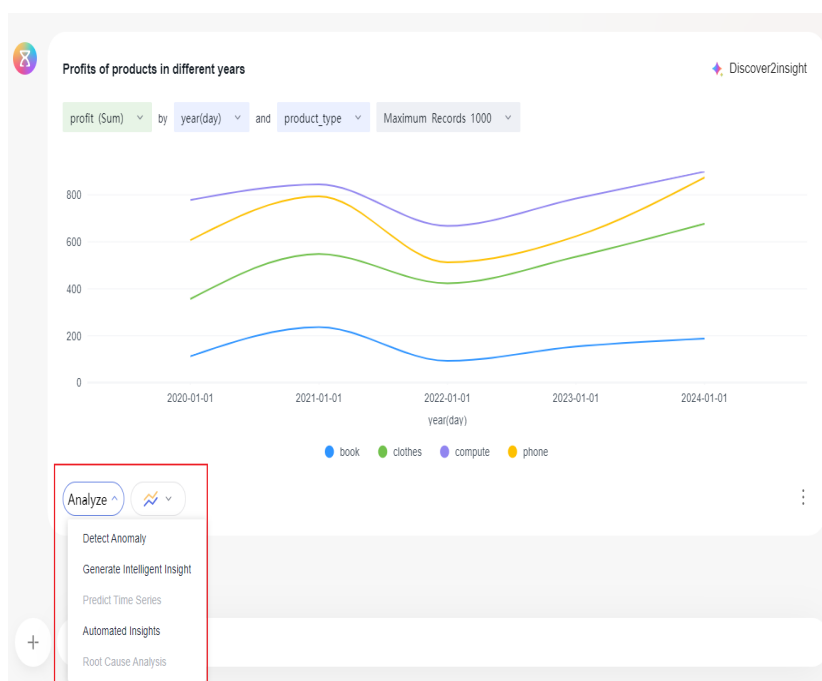
## Intelligent Insights

The intelligent analysis assistant incorporates or integrates industry algorithms to deeply mine data value, automatically generating insights and assisting business

managers in making efficient decisions. Intelligent insights include capabilities such as anomaly detection, root cause analysis, and intelligent insights, as shown in [Figure 9-2](#), which demonstrates the root cause analysis capability of intelligent insights.

- **Anomaly detection:** Detects anomalies in metrics or indicators in data tables, helping you take timely measures to improve business performance.
- **Root cause analysis:** Explores the reasons for fluctuations in dimensions, metrics, or indicators over time, helping you quickly identify problems and take effective measures to optimize business processes.
- **Intelligent insights:** Self-analyzes business data, explores deep-level issues and attributions, and provides targeted business suggestions to help you make better business decisions.

**Figure 9-2** Example intelligent insights



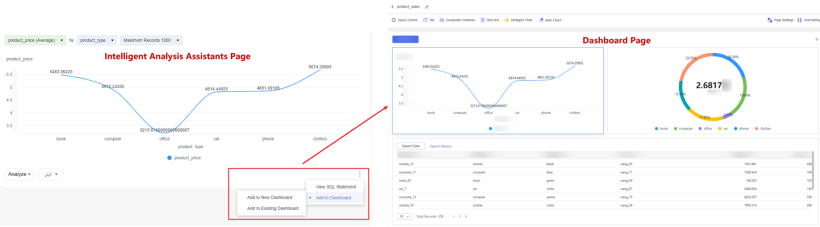
## Intelligent Building

Using the intelligent analysis assistant's generated charts, you can quickly build dashboards, further enhancing the visualization and interactivity of data analysis. Intelligent building includes capabilities such as self-generated charts, switching chart types, and rapid dashboard construction, as shown in [Figure 9-3](#), which demonstrates the self-generated chart and rapid dashboard construction capabilities of intelligent building.

- **Self-generated charts:** Through natural language queries, the intelligent analysis assistant can automatically create intuitive charts, making data visualization easy and convenient.
- **Switching chart types:** Supports free switching of chart types and cluster analysis, achieving dynamic data display.

- Rapid dashboard construction: Supports adding self-generated charts to dashboards, quickly building dashboards, and achieving efficient data visualization.

Figure 9-3 Example intelligent building



## 9.2 Creating an Intelligent Analysis Assistant

The intelligent analysis assistant simplifies the entire process from data acquisition to decision support, helping you easily access and analyze data while effectively reducing your workload. Creating an intelligent analysis assistant involves four steps: creating an assistant, configuring the assistant (optional), synchronizing table structure semantic configuration, and gaining data insights.

### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).

### Process

Figure 9-4 Process of creating an intelligent analysis assistant

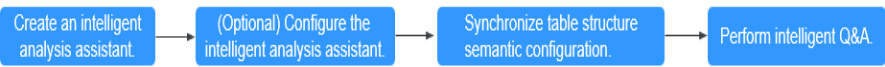


Table 9-1 Process description

| Step                                                                   | Description                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1: Create an Intelligent Analysis Assistant</b>                | To simplify processes such as data acquisition and chart creation, you can create an intelligent analysis assistant.                                                                                                                                              |
| <b>(Optional) Step 2: Configure the Intelligent Analysis Assistant</b> | If the initial response from the intelligent analysis assistant does not fully meet your expectations, you can configure it. Configuring an intelligent analysis assistant includes assistant configuration, knowledge base configuration, and Q&A configuration. |

| Step                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 3: Synchronize Table Structure Semantic Configuration</b> | Synchronize table structure semantic configuration so that the intelligent analysis assistant can gain a deeper understanding of the associated datasets.<br><br>After editing the semantic information of the dataset associated with the intelligent analysis assistant, such as field names, field descriptions, and synonyms, you need to resynchronize the information. Otherwise, gaining intelligent data insights will be impacted. |
| <b>Step 4: Perform Intelligent Q&amp;A</b>                        | When asking questions in the intelligent analysis assistant's Q&A interface, it will automatically return results.                                                                                                                                                                                                                                                                                                                          |

## Step 1: Create an Intelligent Analysis Assistant

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. On the displayed page, click **Create Intelligent Analysis Assistant** in the upper right corner. See [Figure 9-5](#). In the dialog box that appears, enter the name and select the associated dataset. Set the parameters based on [Table 9-2](#).

**Figure 9-5** Creating an intelligent analysis assistant



**Table 9-2** Parameters for creating an intelligent analysis assistant

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Custom Assistant  | <p>You can create a custom assistant as needed to analyze specific datasets.</p> <ul style="list-style-type: none"><li>• <b>Domain Name:</b> Name the intelligent analysis assistant. The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.</li><li>• <b>Associated Dataset:</b> Select one or multiple datasets you want to analyze with the assistant, which serves as the foundation for data analysis.</li><li>• <b>Description:</b> Enter a description for the intelligent analysis assistant. You can enter information like the purpose and use case to facilitate subsequent management. The description can contain up to 1,000 characters.</li></ul>                                         |
| Example Assistant | <p>The example assistant lets you effortlessly experience the Q&amp;A service of the intelligent analysis assistant, requiring no configuration of data sources, datasets, or assistants. The procedure is as follows:</p> <ol style="list-style-type: none"><li>1. In the <b>Create Assistant</b> dialog box, click the <b>Example Assistant</b> tab, select an example assistant, and click <b>OK</b>. The example assistant is successfully created.</li><li>2. On the <b>Intelligent Analysis Assistants</b> page, locate the created example assistant, wait until its <b>Synchronization Status</b> changes to <b>Successful</b>, and click <b>Q&amp;A</b> in the <b>Operation</b> column. You can then use the assistant to gain data insights.</li></ol> |

6. Click **OK**.

## (Optional) Step 2: Configure the Intelligent Analysis Assistant

If the initial response from the intelligent analysis assistant does not fully meet your expectations, you can configure it. Configuring an intelligent analysis assistant includes assistant configuration, knowledge base configuration, and Q&A configuration. For details, see [Configuring an Intelligent Analysis Assistant](#).

## Step 3: Synchronize Table Structure Semantic Configuration

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. See [Figure 9-6](#).
2. On the displayed page, locate the intelligent analysis assistant you created and click its name. On the **Assistant Settings** page, click **Synchronization** in the upper right corner to synchronize the table structure semantic configuration.

As shown in [Figure 9-6](#), if **Synchronization Status** is **Successful**, the table structure semantic configuration has been successfully synchronized.

| Intelligent Analysis Assistants                                                                                                        |                    |                    |                         |                                               |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-------------------------|-----------------------------------------------|
| <input type="text" value="Enter a name"/> <input type="button" value="Q"/> <input type="button" value="C"/> <span>Cloud Connect</span> |                    |                    |                         |                                               |
| Domain Name                                                                                                                            | Associated Dataset | Last Updated       | Synchronization Status  | Operation                                     |
| <a href="#">system_configuration_0310</a>                                                                                              | 3                  | 2025/9/10 21:57:15 | <span>Successful</span> | OKA: Edit <span>Synchronization</span> More ▾ |
| <a href="#">product_sales_wm_0027</a>                                                                                                  | 3                  | 2025/9/27 11:24:30 | <span>Successful</span> | OKA: Edit Synchronization More ▾              |
| <a href="#">product_sales_0025</a>                                                                                                     | 3                  | 2025/9/27 11:05:15 | <span>Successful</span> | OKA: Edit Synchronization More ▾              |

After editing the semantic information of the dataset associated with the intelligent analysis assistant, such as field names, field descriptions, and synonyms, you need to resynchronize the information. Otherwise, gaining intelligent data insights will be impacted.

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
2. Locate the intelligent analysis assistant you trained and click **Q&A** in the **Operation** column.
3. Ask questions on the displayed Q&A page.
  - If the initial response does not meet your expectations, you can **configure the intelligent analysis assistant** to improve its accuracy.
  - If you need to experience the advanced Q&A features of the intelligent analysis assistant (such as anomaly detection, intelligent insight generation, automatic insights), refer to **Intelligent Insights** for details.

If there is ambiguity in the input question, use the question clarification function. Simply click **Clarify Question** to bring up the clarification page, which displays optional results. Select the most appropriate result based on the actual situation.

- Figure 9-7** Example intelligent data insight



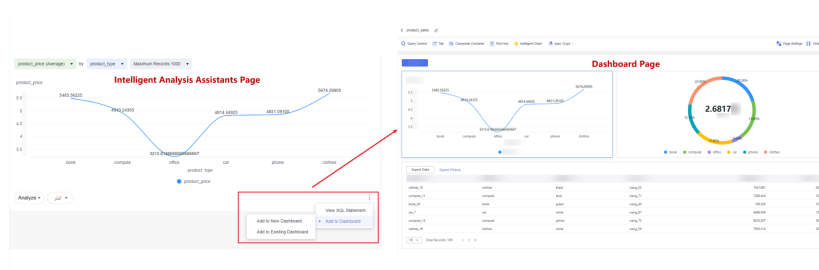
**Insights, Root Cause Analysis** and other functions. The intelligent analysis assistant will automatically generate insights.

**Figure 9-8** Example intelligent insights



- iii. Example intelligent building: Click  in the lower right corner of the chart, and then click **Add to Dashboard** to quickly add the chart generated by the intelligent analysis assistant to the dashboard.

**Figure 9-9** Example intelligent building



## 9.3 Configuring an Intelligent Analysis Assistant

### 9.3.1 Overview

Configuring an intelligent analysis assistant includes assistant configuration, knowledge base configuration, and Q&A configuration.



**Table 9-3** Assistant configuration

| Configuration Item | Description                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model</b>       | <ul style="list-style-type: none"><li>• Supports customizing the models used by the intelligent analysis assistant (NL2SQL) and intelligent insights, allowing you to switch models as needed to choose the one that best fits your business scenarios.</li><li>• Continually optimizing and adjusting the used models can enhance the assistant's Q&amp;A capabilities, making it better at understanding and responding to complex queries.</li></ul> |
| <b>Prompt</b>      | <ul style="list-style-type: none"><li>• Prompts are user inputs to the large model, which generates corresponding responses or outputs based on these prompts.</li><li>• Configuring prompts can guide the model to understand users' specific needs and generate more accurate, relevant, and high-quality outputs, ensuring the model's responses meet the application requirements in different scenarios.</li></ul>                                 |
| <b>Scene</b>       | <ul style="list-style-type: none"><li>• A scene represents a Q&amp;A topic and typically comprises multiple datasets. User questions within the same scene usually pertain to the same topic.</li><li>• By configuring descriptions and some example questions for each scene, you can help business personnel quickly understand how to find the target data in the scene.</li></ul>                                                                   |

**Table 9-4** Knowledge base configuration

| Configuration Item | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Keyword</b>     | <ul style="list-style-type: none"><li>• Configure the actual search content for certain words and sentences in Q&amp;A questions. For instance, set the keyword "From January to March" for "the production of apples from January to March" as "greater than or equal to January and less than or equal to March". The assistant can recognize and understand different expressions in user questions.</li><li>• Configuring keywords helps the assistant understand diverse expressions in user questions, thus improving its comprehension.</li></ul> |

| Configuration Item  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Named Entity</b> | <ul style="list-style-type: none"><li>Configure binding relationships between fields through named entities. For example, associate entity A with fields <b>user_name</b> and <b>product_color</b>. When querying about the <b>user_name</b> field on the Q&amp;A page, it will also display the associated field <b>product_color</b>. For details, see <a href="#">Example Scenario</a>.</li><li>Configuring named entities ensures that specific data entities are recognized and associated during answering, providing more accurate answers.</li></ul> |

Table 9-5 Q&amp;A configuration

| Configuration Item        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Question Templates</b> | <ul style="list-style-type: none"><li>When using the intelligent analysis assistant for Q&amp;A, the system automatically assesses the similarity between the input question and the question template. If the similarity meets the threshold, the intelligent analysis assistant returns the question template.</li><li>By configuring question templates, you can ensure that the responses from the intelligent analysis assistant are more targeted and accurate.</li></ul> |
| <b>Templated Insights</b> | <ul style="list-style-type: none"><li>Configure templated insights for key questions. During Q&amp;A in the assistant interface, you get structured and high-quality intelligent insights as a result.</li><li>Templated insights ensure standard and consistent answers, helping achieve structured and high-quality responses.</li></ul>                                                                                                                                      |

Table 9-6 Other configurations

| Configuration Item | Description                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Synonym</b>     | <ul style="list-style-type: none"><li>Configure synonyms for dataset fields. For example, set <b>product_price</b> as the synonym for <b>product price</b>. When querying product price, the assistant can accurately map it to the <b>product_price</b> field.</li><li>This improves the readability and accuracy of data analysis by allowing the assistant to parse and understand information more precisely.</li></ul> |

| Configuration Item | Description                                                                                                                                                                                                                                                                                                                                            |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Time Limit</b>  | <ul style="list-style-type: none"><li>When the assistant returns results, it not only answers the current question but also shows related questions and their answers.</li><li>Configuring related questions aims to optimize the Q&amp;A process by predicting potential follow-up questions and providing relevant information in advance.</li></ul> |

### 9.3.2 Configuring Models

The system supports customizing the models used by the intelligent analysis assistant (NL2SQL) and intelligent insights, allowing you to switch models as needed to choose the one that best fits your business scenarios. Continually optimizing and adjusting the used models can enhance the assistant's Q&A capabilities, making it better at understanding and responding to complex queries. This section walks you through how to configure and manage models in the system.

#### Notes and Constraints

- You must have developer or administrator permissions to configure models.
- You must have administrator permissions to manage models.

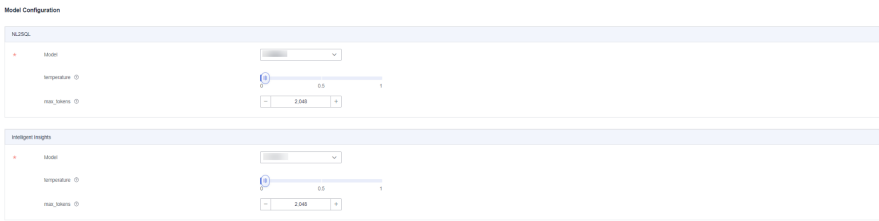
#### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

#### Procedure

- Log in to the DataArts Insight console.
- Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
- On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
- Locate your desired assistant and click **Edit** in its **Operation** column. On the displayed page, click the **Assistant Settings** tab ([Figure 9-10](#)).

Figure 9-10 Model configuration



- 6. Set NL2SQL and intelligent insights parameters based on [Table 9-7](#).
- 7. Click **Save**.

Table 9-7 Parameters for configuring a model

| Parameter   | Description                                                                                                                                                                                                                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model       | Select the model used by NL2SQL or intelligent insights. The models in the dropdown menu are those created in <a href="#">model management</a> .                                                                                                                                                                          |
| temperature | Controls the diversity and creativity of generated text. A value close to <b>0</b> indicates the lowest randomness, while <b>1</b> indicates the highest randomness. Generally, a lower temperature is suitable for deterministic tasks, while a higher temperature, such as <b>0.9</b> , is suitable for creative tasks. |
| max_tokens  | Maximum number of tokens for the generated text. The total length of the input text plus the generated text cannot exceed the maximum length that the model can process.                                                                                                                                                  |

Managing Models

- 1. Log in to the DataArts Insight console.
- 2. Click **Models** on the top menu of the console.
- 3. Click **Create Model Service**. Models of various interface types can be connected. For details about the parameters, see [Table 9-8](#).

Figure 9-11 Creating a model



**Table 9-8** Parameters for creating a model service

| Parameter      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Example Value                                           |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Name           | Model name. The name can contain up to 64 characters and cannot start or end with a space. Only letters, numbers, spaces, underscores (_), and hyphens (-) are allowed.                                                                                                                                                                                                                                                                                                                        | Pangu model test                                        |
| Model Type     | Model type. <ul style="list-style-type: none"><li>• <b>Pangu Large Model (Cloud Base)</b>: large models purchased from and deployed by Pangu Models.</li><li>• <b>Open-source Model (Ascend cloud)</b>: an open source large model deployed by Ascend Cloud.</li><li>• <b>Open-source Large Model (Bare Metal)</b>: an open source large model deployed on a custom bare metal server.</li><li>• <b>Pangu Large Model (Bare Metal)</b>: Pangu model deployed on a bare metal server.</li></ul> | Pangu Large Model (Cloud Base)                          |
| Project        | Project space with permission to use the model. If left blank, it indicates that all spaces have permission to use the model.                                                                                                                                                                                                                                                                                                                                                                  | test                                                    |
| Task Type      | Task type that can be applied to the current access model. Task types: NL2SQL, Intelligent insights                                                                                                                                                                                                                                                                                                                                                                                            | NL2SQL, Intelligent insights                            |
| Network Type   | Model network access method. <ul style="list-style-type: none"><li>• <b>Public network</b>: The model address must be a public network domain name or IP address and can be directly accessed.</li><li>• <b>VPC endpoint service</b>: VPCEP is used to connect DataArts Insight to the large model. This service is mainly used when the large model is deployed on a bare metal server.</li></ul>                                                                                             | Public network                                          |
| Access Address | Address for accessing the large model's Q&A page.                                                                                                                                                                                                                                                                                                                                                                                                                                              | https://test.com/v1/infers/gpt/query?endpoint=infer-app |

| Parameter |                        | Description                                                                                                                                                                                                          | Example Value                                                                                         |
|-----------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Auth Type | IAM authentication     | Tenant name: Huawei Cloud tenant name, that is, the master account name.<br>Username: username with the large model access permission.<br>Password: user login password.<br>Project name: Huawei Cloud project name. | Tenant name: domain_name<br>Username: sub_user_name<br>Password: password<br>Project name: cn-north-4 |
|           | AK/SK authentication   | AK: access key ID.<br>SK: secret access key.<br>Project name: Huawei Cloud project name.                                                                                                                             | AK: test<br>SK: test<br>Project name: cn-north-4                                                      |
|           | AppCode authentication | AppCode: App code of the application in the API Gateway access scenario.                                                                                                                                             | yourAppCode                                                                                           |
|           | Agency authentication  | Account name: name of the delegating account.<br>Agency name: Name of the agency created by the delegating party.<br>Project name: Huawei Cloud project name.                                                        | Account name: domain_name<br>Agency name: agency_name<br>Project name: cn-north-4                     |
|           | Custom authentication  | Header key: request header key.<br>Header value: request header value.                                                                                                                                               | Header key: X-Test-Header<br>Header value: testHeader                                                 |

4. After setting the parameters, click **Connectivity Test**. If the test is successful, click **Confirm**. The model is successfully created.

 **NOTE**

You can set the default model from the **Default NL2SQL Model** or **Intelligent Insights Default Model** drop-down list. After the configuration is complete, the new intelligent analysis assistant NL2SQL and intelligent insights will automatically use the selected default model.

### 9.3.3 Configuring Prompts

Prompts are user inputs to the large model, which generates corresponding outputs based on these prompts. Configuring prompts can guide the model to understand users' specific needs and generate more accurate and high-quality outputs, ensuring the model's responses meet the application requirements in

different scenarios. This section describes how to configure prompts for the intelligent analysis assistant to improve its Q&A quality.

## Notes and Constraints

- You must have developer or administrator permissions to configure and manage prompts.

## Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

## Configuring Prompts

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. Locate your desired assistant and click **Edit** in its **Operation** column. On the displayed page, click the **Assistant Settings** tab ([Figure 9-12](#)).
6. Select the default prompt from the **NL2SQL Prompt Template** and **Intelligent Insights Prompt Template** drop-down lists.

### NOTE

The prompts in the drop-down lists are those added in [prompt management](#).

7. Click **Save**.

**Figure 9-12** Prompt template



## Managing Prompts

1. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
2. In the navigation pane on the left, choose **Q&A Management > Prompt Management**.

3. Click **Add Prompt**. The page for adding a prompt is displayed.
4. Set the parameters based on [Table 9-9](#).

**Figure 9-13** Creating a prompt

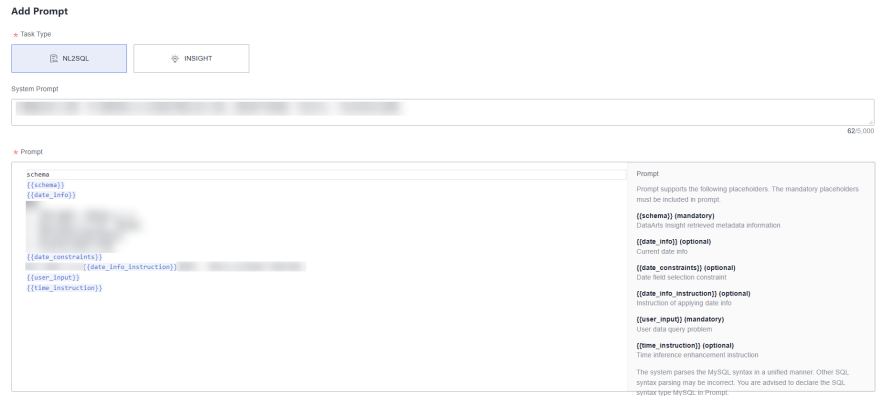


**Table 9-9** Parameters for creating a prompt

| Parameter     | Description                                                                                                                                                                                                                                                                                                                        |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Task Type     | <b>NL2SQL</b> (natural language to SQL): converts user input in natural language to SQL queries, improving data query efficiency.<br><b>INSIGHT</b> : generates corresponding insights based on user queries and the resulting data.                                                                                               |
| System Prompt | Assigns an identity tag to the model, predefining its behavior and style to help the model respond more appropriately to questions or generate content based on this setting.                                                                                                                                                      |
| Prompt        | A prompt is an input text that guides the model to understand the task requirements and generate specific outputs, helping the model respond more accurately to user needs.<br><b>NOTE</b><br>To ensure the model's normal reasoning, the prompt must include "required" placeholders as detailed in <a href="#">Figure 9-13</a> . |

5. Click **Save** in the upper right corner of the page. The prompt is created successfully.

**NOTE**

- You can click **Reset** in the upper right corner of the page to revert to the last saved content.
- Copying a prompt: On the prompt management page, click **Copy**. On the displayed page, click **OK**.
  - Editing a prompt: On the prompt management page, click **Edit**. On the displayed page, set parameters and click **Save**.



- Deleting a prompt: On the prompt word management page, click **Delete**. On the displayed page, click **OK**.

## Example Scenario

By creating a prompt for sales data of a product, you can customize the prompt information for the large model in that scenario. By selecting the appropriate placeholders, you can flexibly inject query-related information into the prompt, such as query-related data fields (schema). Specific prompts allow the intelligent analysis assistant to better understand your needs and provide more accurate analysis results.

1. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
2. In the navigation pane on the left, choose **Q&A Management > Prompt Management**.
3. Click **Add Prompt**. The page for adding a prompt is displayed.
4. Configure the prompt based on the actual situation. This example configures the prompt based on the data in [Table 9-10](#).

Example prompt template:

```
schema
{{schema}}
{{date_info}}
Requirements
1. If grouping and aggregation are used, use group by.
2. Prefer using schema fields and keep it concise.
3. Strictly follow the field description information.
4. The time field must be of date type.
{{date_constraints}}
Based on the above schema{{date_info_instruction}} and requirements, use MySQL syntax to solve
the following problem:
{{user_input}}
{{time_instruction}}
```

Example sales data prompt:

```
schema
[{'table_name': 'my_table', 'table_description': '', 'columns': [['product_type', 'TEXT', 'product type'],
['pay_time', 'date', 'payment time, format: yyyy-mm-dd'], ['sales', 'double', 'sales']]}]
Time information
It is now January 2025, and today is 2025-01-02.
Requirements
1. If grouping and aggregation are used, use group by.
2. Prefer using schema fields and keep it concise.
3. Strictly follow the field description information.
4. The time field must be of date type.
When using the 'sales' field, use the following time field: pay_time.
Based on the above schema, time information, and requirements, use MySQL syntax to solve the
following problem:
The time range for June 30, 2023, is ['2023-06-30 00:00:00', '2023-06-30 23:59:59'].
```

**Table 9-10** Example of sales data

| Field      | Type | Description  |
|------------|------|--------------|
| id         | int  | ID           |
| sale_price | int  | Sales price  |
| sales      | int  | Sales amount |

| Field        | Type   | Description  |
|--------------|--------|--------------|
| pay_time     | int    | Payment time |
| product_name | string | Product name |
| product_type | string | Product type |

### 9.3.4 Configuring Scenes

A scene represents a Q&A topic and typically comprises multiple datasets. User queries within the same scene usually pertain to the same topic. You can configure descriptions and sample questions for each scene to assist business personnel in quickly understanding how to locate the desired data. Once configured, you can click the sample questions in the scene on the intelligent analysis assistant page to facilitate quick Q&A.

#### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

#### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. Locate your desired assistant and click **Edit** in its **Operation** column.
6. Click **Add Scene** in the right pane. On the **Scenes Configuration** area ([Figure 9-14](#)), set **Scene Name**, **Associated Dataset**, and **Scene Description**.
7. Click **Add Question** to add an example question for the scene. For details about the parameters, see [Table 9-11](#).

Figure 9-14 Scene configuration

Scenes Configuration

Product\_Sales\_I...

+

Scene Name

Product\_Sales\_Information

Associated Dataset

user\_product\_info\_0812 x product\_sales\_0919 x user\_info\_0727 x

Scene Description

The sales information of a certain product, including the customer's name, product name, product type, product price, product profit, purchase time, etc.

Example Question

Example Question1

Associated Dataset: user\_info\_0727

1. Query customer-related data

Example: The distribution regions of customers

Example Question2

Associated Dataset: product\_sales\_0919

2. Query product-related data

Example: The sales prices of different types of products in 2022

Example Question3

Associated Dataset: product\_sales\_0919

3. Query product-related data

Example: The sales profits of different types of products in 2022

Table 9-11 Parameters for configuring a scene

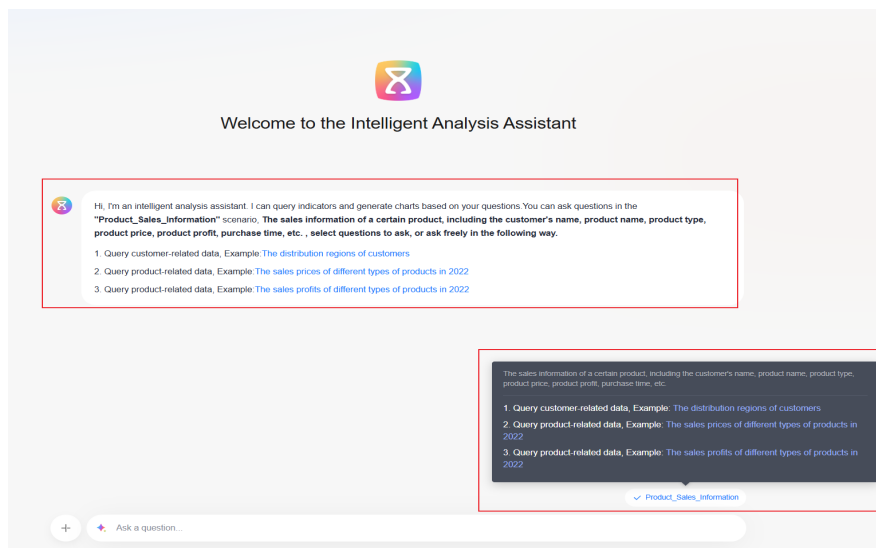
| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scene Name         | Scene name. The name can contain up to 64 characters. Only letters, numbers, underscores (_), and hyphens (-) are allowed.                                                                                                                                                                                                                                                                                                                             |
| Associated Dataset | Dataset associated with the scene. You can only select the dataset that is associated with the intelligent analysis assistant.                                                                                                                                                                                                                                                                                                                         |
| Scene Description  | Description for the scene, which helps business personnel understand the scene. Enter a maximum of 512 characters.                                                                                                                                                                                                                                                                                                                                     |
| Example Question   | <div>Click <b>Add Question</b> to add up to 10 example questions.</div> <ul style="list-style-type: none"><li><b>Associated Dataset:</b> Select the dataset for the example question. You can only select the dataset associated with the scene.</li><li>No. (for example, 1): Add a description for the example question, such as entering the query pattern of the example.</li><li><b>Example:</b> Set the example question of the scene.</li></ul> |

NOTE

Click  in the upper part of the page to add up to 10 scenes.

8. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistant**. On the displayed page, locate the desired intelligent analysis assistant and click **Q&A** in its **Operation** column. The intelligent analysis assistant page is displayed. You can view the configured scenes and click the example questions to quickly perform Q&A.

Figure 9-15 Q&A page



9. To delete a scene, click  and click **Save**.

Figure 9-16 Deleting a scene



### 9.3.5 Configuring Keywords

When asking questions on the intelligent analysis assistant's Q&A page, the professional terms you use are often closely associated with specific nouns or indicators, forming word mappings. This section explains how to achieve this mapping relationship by configuring keywords, thereby making necessary adjustments to your original questions and achieving more accurate analysis and responses in intelligent data insight.

#### Prerequisites

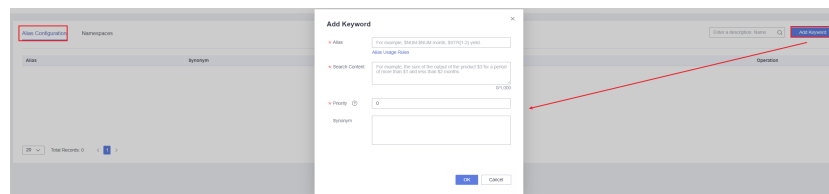
- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).

- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

## Configuring Keywords

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. Locate the intelligent analysis assistant for which you want to configure keywords and click **Edit** in the **Operation** column. On the displayed page, click the **Q&A Search Configuration** tab ([Figure 9-17](#)).

Figure 9-17 Alias Configuration tab



6. Click **Add Keyword** in the upper right corner. In the displayed dialog box, set **Alias**, **Search Content**, **Priority**, and **Synonym** (optional), and click **OK**. For how to set the parameters, refer to [Table 9-12](#).
  - Editing a keyword: On the **Alias Configuration** tab page, locate an alias and click **Edit** in the **Operation** column. In the dialog box that appears, modify the parameters and click **OK**.
  - Removing a keyword: On the **Alias Configuration** tab page, locate an alias and click **Remove** in the **Operation** column. In the displayed dialog box, click **OK**.

**Table 9-12** Parameters for adding a keyword

| Parameter      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alias          | <p>On the Q&amp;A page, you can input aliases, which will be automatically converted by the intelligent assistant into the corresponding actual search content. This allows for precise information retrieval.</p> <ul style="list-style-type: none"><li>• The alias can contain up to 512 characters. The following special characters are not supported: &lt;&gt;\ #= +@;</li><li>• Variable types include <b>\$NUM</b> (numeric type), <b>\$STR{n-m}</b> (string type), and <b>\$ALL</b> (all content in the Q&amp;A, used for adding unified prefixes and suffixes).</li><li>• Variables cannot be used as keywords alone, and combinations of variables and symbols are not allowed. They must be accompanied by necessary descriptions, such as non-symbol characters + variables, variables + non-symbol characters + variables, and variables + non-symbol characters.</li></ul> |
| Search Content | <p>Content that the intelligent analysis assistant searches for when an alias is entered on the Q&amp;A page. \$1, \$2, \$3... are placeholders and cannot exceed 1,000 characters. The number of the placeholders should correspond to the variables in the alias.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Priority       | <p>Used to sort and select when multiple aliases hit the same region.</p> <ul style="list-style-type: none"><li>• A larger number indicates a higher priority. For example, priority 3 is higher than priority 2.</li><li>• When multiple alias hit areas overlap, the highest priority alias is used.</li><li>• When priorities are the same but alias types are different, the non-variable type alias is used.</li><li>• When priorities and alias types are the same (both variable or non-variable), the longer hit length is used.</li></ul>                                                                                                                                                                                                                                                                                                                                       |
| Synonym        | <p>Synonym of the alias.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Example Scenario

When using the intelligent assistant for question and answer purposes, certain words correspond to specific nouns. For example, "January to March" corresponds to "greater than or equal to January and less than or equal to March". However, if it is only configured as "January to March," it cannot adapt to a wider range of application scenarios. Therefore, the intelligent analysis assistant provides an interpolation function for "Variable A – Variable B", which realizes the mapping between "Month A – Month B" and "greater than or equal to Month A and less

than or equal to Month B". This part uses the production volume of a certain type of product in a certain month range as an example.

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
2. Locate the desired intelligent analysis assistant and click **Edit** in the **Operation** column. On the displayed page, click the **Q&A Search Configuration** tab.
3. Click **Add Keyword**.
4. Enter **\$NUM-\$NUMmonth, \$STR{1-2}production** in the **Alias** parameter and **During the period where it is greater than or equal to \$1 and less than or equal to \$2, the output of product \$3.** in the **Search Content** parameter. See [Figure 9-18](#).
5. In **Priority**, enter the priority level to sort and select when multiple aliases hit the same region.
6. Click **OK**. The alias is configured successfully. The alias is mapped to the actual search content.

**Figure 9-18** Adding a keyword

**Add Keyword** ×

★ Alias

[Alias Usage Rules](#)

★ Search Content

113/1,000

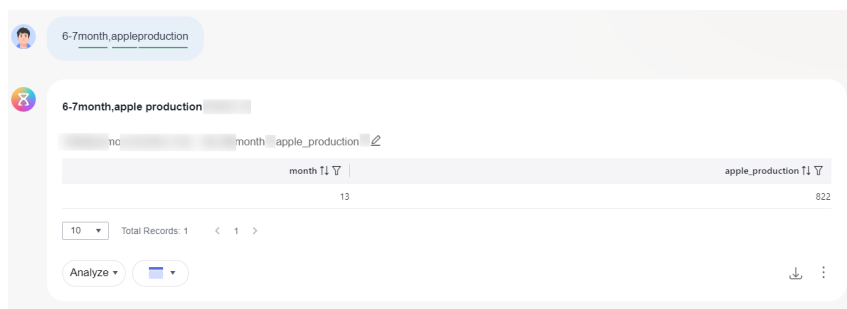
★ Priority ?

Synonym

**OK** Cancel

7. Ask on the intelligent analysis assistant's Q&A page:  
**6-7month.appleproduction.**

**Figure 9-19** Apple production



### 9.3.6 Configuring Named Entities

By using named entities, you can configure binding relationships between fields. When using an intelligent analysis assistant for Q&A purposes, the associated fields set in the named entities will be suggested. This section explains how to set, edit, and delete named entities.

## Notes and Constraints

- You can configure named entities for metric, dimension, and indicator fields.
- Only datasets associated with the intelligent analysis assistant can be selected.

## Prerequisites

- A project has been created by referring to **Creating a Project**.
- A data source has been connected by referring to **Connecting to a Data Source**.
- A dataset has been created by referring to **Creating a Dataset**.
- An intelligent analysis assistant has been created by referring to **Creating an Intelligent Analysis Assistant**.

## Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. On the displayed page, click the name of the desired intelligent analysis assistant. In the navigation pane on the left, choose **Knowledge Base > Name Entity**. See [Figure 9-20](#).



**Figure 9-20** Adding a named entity

**Add Named Entity** [X]

\* Name

\* Datasets  [v]

\* Associated Field  [v] ☐ Marker Field

[+ Adding a field](#)

**OK** **Cancel**

6. On the displayed **Namespaces** tab page, click **Add Named Entity** in the upper right corner. Set the entity name, dataset, and associated fields. For how to set the parameters, refer to [Table 9-13](#).
  - a. If you select **Marker Field**, the associated fields set in the named entity can be suggested when you answer questions on the intelligent analysis assistant's Q&A page.
  - b. If you do not select **Marker Field**, only the Q&A fields are displayed on the intelligent analysis assistant's Q&A page. The associated fields set in the named entity are not suggested.

**Table 9-13** Parameters for adding a named entity

| Parameter        | Description                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name             | Name of the named entity. The name can contain up to 64 characters. Only numbers, letters, and the following special characters are allowed: - _ < > ( ) , . / |
| Datasets         | You can only select the dataset that is associated with the intelligent analysis assistant.                                                                    |
| Associated Field | When you select a field, the intelligent analysis assistant will automatically suggest associated fields when they appear on the Q&A page.                     |

7. Click **OK** to save the named entity and access the intelligent analysis assistant's Q&A page for verification.
  - Editing a named entity: Locate the desired named entity and click **Edit** in the **Operation** column. In the displayed dialog box, set parameters and click **OK**.
  - Deleting a named entity: Locate the desired named entity and click **Delete** in the **Operation** column. In the displayed dialog box, click **OK**.

## Example Scenario

- Scenario 1: By setting the associated fields of entity A as **user\_name** and **product\_color**, and the associated fields of entity B as **user\_name** and **product\_type**, when asking questions on the intelligent analysis assistant's Q&A page with the **user\_name** field, the associated fields **product\_color** and **product\_type** from entities A and B will be suggested in the chart.

Access the Q&A page and ask a question about a user's product price, making sure to include the **user\_name** field to indicate the username.

Figure 9-21 User's product price

| user_name T1 ▾ | product_type T1 ▾ | product_color T1 ▾ |
|----------------|-------------------|--------------------|
| wang_54        | clothes           | white              |
| wang_98        | car               | white              |
| wang_32        | book              | purple             |
| wang_24        | book              | blue               |
| wang_67        | compute           | black              |
| wang_89        | car               | blue               |
| wang_45        | clothes           | white              |
| wang_56        | clothes           | black              |
| wang_66        | compute           | green              |
| wang_68        | compute           | yellow             |

10 ▾

Total Records: 109

< 1 >

Analyze ▾ 

⋮

- Scenario 2: If the associated fields of a named entity are deleted or hidden, they will not be suggested when asking questions on the intelligent analysis assistant's Q&A page.
  - Set the associated fields of entity C as **product\_color**, **product\_type**, and **user\_name**, with all three fields marked as key fields.
  - When asking questions on the intelligent analysis assistant's Q&A page, such as **product\_color**, all associated fields of entity C will be suggested.

Figure 9-22 Product color

 product color

product\_color

| product_color T1 ▾ | product_type T1 ▾ | user_name T1 ▾ |
|--------------------|-------------------|----------------|
| yellow             | office            | li_8           |
| green              | book              | wang_40        |
| blue               | car               | wang_89        |
| black              | car               | wang_66        |
| green              | compute           | wang_77        |
| black              | clothes           | wang_56        |
| black              | car               | wang_86        |
| blue               | book              | wang_24        |
| green              | compute           | wang_64        |
| blue               | compute           | wang_60        |

10 ▾

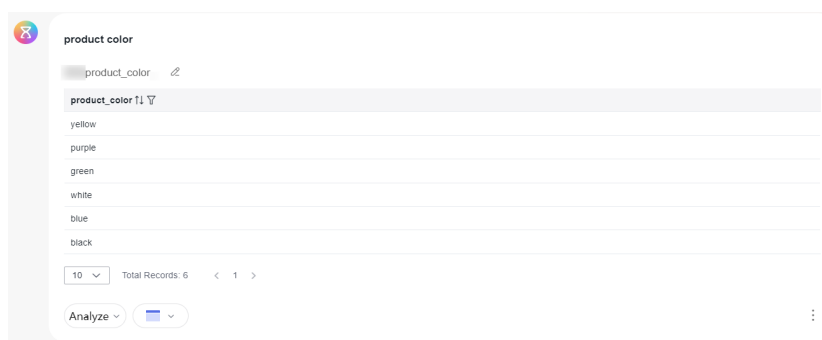
Total Records: 109

< 1 >

Analyze ▾ 

⋮

- Unmark the **user\_name** field and delete the **product\_type** field associated with entity C.
- Access the intelligent analysis assistant's Q&A page and ask: **product\_color**. In this case, only the **product\_color** field is displayed on the Q&A page.

**Figure 9-23** Product color**NOTE**

Deleting **product\_type** from the dataset will affect entity C. After updating the data, entity C will no longer have the associated field **product\_type**.

### 9.3.7 Configuring a Question Template

A question template is a predefined question structure. When using an intelligent analysis assistant for Q&A, it automatically assesses the similarity between the input question and the template. If the similarity meets the threshold, the assistant returns the template. Configuring question templates ensures that the responses from the intelligent analysis assistant are more targeted and accurate.

#### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

#### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. Click the name of the intelligent analysis assistant.
6. In the navigation pane on the left, choose **Q&A Settings > Question Templates**. On the displayed page, click **Add Q&A Template** in the upper right corner. Then, set the parameters based on [Table 9-14](#).

In this example, select **Physical SQL** for **SQL Type** to create a question template named "Product prices in different categories in a region in 2024"

and enter "Product prices in different categories in a region in 2024" in the test question to check whether the similarity between the two questions meets the threshold (95%). If the threshold is met, the question template will be automatically returned during the Q&A with the intelligent analysis assistant.

Figure 9-24 Creating a question template

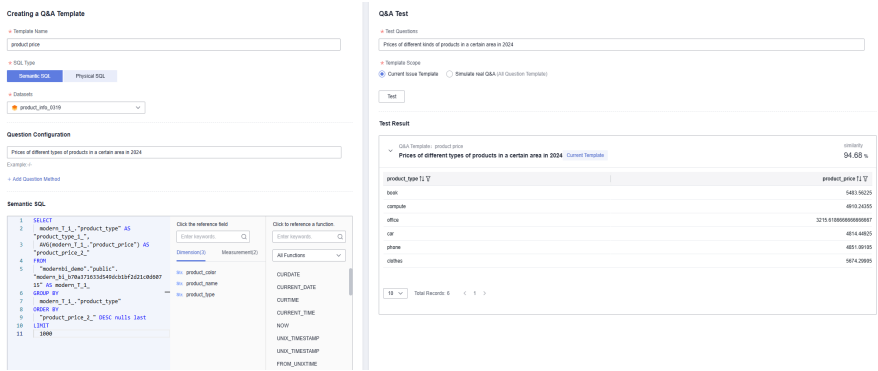


Table 9-14 Parameters for creating a question template

| Parameter              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Template Name          | Template name. The name can contain up to 64 characters.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| SQL Type               | <ul style="list-style-type: none"><li><b>Semantic SQL:</b> Data query requirements are described in natural language, without involving specific database implementation.</li><li><b>Physical SQL:</b> Physical SQL statements are specific SQL statements that can be directly executed in the database during database interaction.</li></ul>                                                                                                                                           |
| Datasets               | Dataset associated with the question template. You can only select the dataset associated with the intelligent analysis assistant.                                                                                                                                                                                                                                                                                                                                                        |
| Question Configuration | Enter a template question. If the similarity between the question asked by the intelligent analysis assistant and the template question reaches 95%, the assistant returns the question template.                                                                                                                                                                                                                                                                                         |
| Q&A Test               | <ul style="list-style-type: none"><li><b>Test Questions:</b> To evaluate the effectiveness of the question template, input the question intended for the intelligent analysis assistant; it will display the similarity to the template question and the answer to the template question.</li><li><b>Template Scope:</b> Selecting <b>Current Issue Template</b> tests only the current question template. Selecting <b>Simulate real Q&amp;A</b> tests all question templates.</li></ul> |

### Configuring Wildcards

1. In the navigation pane on the left, choose **Q&A Settings > Question Templates**. On the displayed page, click the **Wildcard Management** tab.
2. Click **Add Wildcards** in the upper right corner. In the dialog box that appears, set parameters according to [Table 9-15](#). In this example, the wildcard **product** of the custom enumeration value type is configured, and the matching content is set to **phone** and **car**.

Figure 9-25 Adding a wildcard

**Edit Wildcards**

★ Wildcard Name

★ Type

★ Matching Content

OK Cancel

Table 9-15 Parameters for adding a wildcard

| Parameter     | Description                                                                                                                   |
|---------------|-------------------------------------------------------------------------------------------------------------------------------|
| Wildcard Name | Wildcard name. The name can contain up to 32 characters. Only letters, numbers, underscores (_), and hyphens (-) are allowed. |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type      | <p>In addition to built-in wildcards (<b>datePeriod</b>, <b>fieldValue</b>, and <b>num</b>), you can set and use wildcards of the <b>Custom Enumeration value</b>, <b>Field</b>, and <b>Time limit</b> types. After the configuration is complete, you can use the wildcard in question configurations and SQL statements.</p> <ul style="list-style-type: none"> <li>● <b>datePeriod</b>: Automatically matches date ranges. For example, entering <code>\${datePeriod} product price</code> will match phrases like "this year's product price" or "product price over the past three months".</li> <li>● <b>fieldValue</b>: Automatically matches field values. For example, entering <code>\${fieldValue.'product_type'}</code> will match the values contained in the <b>product_type</b> field.</li> <li>● <b>num</b>: Automatically matches numbers. For example, entering <b>product profit in year</b> <code>\${num}</code> will match phrases containing numbers, such as "product profit in year 2022".</li> </ul> <p><b>NOTE</b></p> <p>Note: If the wildcard involves field values, you must enable the "allow search" option for the corresponding field in the dataset's visualization configuration; otherwise, the matching will not be possible.</p> |

3. In the navigation pane on the left, choose **Q&A Settings > Question Templates**. On the displayed page, click **Add Q&A Template** in the upper right corner and use the configured wildcard. After entering *\${product} price* in the question configuration area, the system will automatically match it with "mobile phone price" or "car price" when entered in the intelligent analysis assistant. The intelligent analysis assistant will then return the configured question template.

### Figure 9-26 Adding a wildcard

### Edit Q&A Template

Template Name

product\_price

SQL Type

Standard SQL

Physical SQL

Data Sources

moderdy\_demo\_db22

### Question Configuration

Signature name

Comments

Add Question Method

### Physical SQL

1 SELECT

2 moderdy\_t\_1."product\_type" AS "product\_type\_1",

3 moderdy\_t\_1."product\_price" AS "product\_price\_1",

4 FROM

5 "moderdy\_demo"."public",

6 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

7 moderdy\_t\_1."product\_type"

8 AS moderdy\_t\_1."product\_type",

9 "moderdy\_price\_x"."DESC" AS moderdy\_price\_x,"DESC" AS moderdy\_price\_x,

10 FROM

11 "moderdy\_demo"."public",

12 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

13 moderdy\_t\_1."product\_type"

14 AS moderdy\_t\_1."product\_type",

15 moderdy\_t\_1."product\_price"

16 AS moderdy\_t\_1."product\_price",

17 FROM

18 "moderdy\_demo"."public",

19 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

20 moderdy\_t\_1."product\_type"

21 AS moderdy\_t\_1."product\_type",

22 moderdy\_t\_1."product\_price"

23 AS moderdy\_t\_1."product\_price",

24 FROM

25 "moderdy\_demo"."public",

26 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

27 moderdy\_t\_1."product\_type"

28 AS moderdy\_t\_1."product\_type",

29 moderdy\_t\_1."product\_price"

30 AS moderdy\_t\_1."product\_price",

31 FROM

32 "moderdy\_demo"."public",

33 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

34 moderdy\_t\_1."product\_type"

35 AS moderdy\_t\_1."product\_type",

36 moderdy\_t\_1."product\_price"

37 AS moderdy\_t\_1."product\_price",

38 FROM

39 "moderdy\_demo"."public",

40 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

41 moderdy\_t\_1."product\_type"

42 AS moderdy\_t\_1."product\_type",

43 moderdy\_t\_1."product\_price"

44 AS moderdy\_t\_1."product\_price",

45 FROM

46 "moderdy\_demo"."public",

47 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

48 moderdy\_t\_1."product\_type"

49 AS moderdy\_t\_1."product\_type",

50 moderdy\_t\_1."product\_price"

51 AS moderdy\_t\_1."product\_price",

52 FROM

53 "moderdy\_demo"."public",

54 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

55 moderdy\_t\_1."product\_type"

56 AS moderdy\_t\_1."product\_type",

57 moderdy\_t\_1."product\_price"

58 AS moderdy\_t\_1."product\_price",

59 FROM

60 "moderdy\_demo"."public",

61 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

62 moderdy\_t\_1."product\_type"

63 AS moderdy\_t\_1."product\_type",

64 moderdy\_t\_1."product\_price"

65 AS moderdy\_t\_1."product\_price",

66 FROM

67 "moderdy\_demo"."public",

68 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

69 moderdy\_t\_1."product\_type"

70 AS moderdy\_t\_1."product\_type",

71 moderdy\_t\_1."product\_price"

72 AS moderdy\_t\_1."product\_price",

73 FROM

74 "moderdy\_demo"."public",

75 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

76 moderdy\_t\_1."product\_type"

77 AS moderdy\_t\_1."product\_type",

78 moderdy\_t\_1."product\_price"

79 AS moderdy\_t\_1."product\_price",

80 FROM

81 "moderdy\_demo"."public",

82 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

83 moderdy\_t\_1."product\_type"

84 AS moderdy\_t\_1."product\_type",

85 moderdy\_t\_1."product\_price"

86 AS moderdy\_t\_1."product\_price",

87 FROM

88 "moderdy\_demo"."public",

89 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

90 moderdy\_t\_1."product\_type"

91 AS moderdy\_t\_1."product\_type",

92 moderdy\_t\_1."product\_price"

93 AS moderdy\_t\_1."product\_price",

94 FROM

95 "moderdy\_demo"."public",

96 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

97 moderdy\_t\_1."product\_type"

98 AS moderdy\_t\_1."product\_type",

99 moderdy\_t\_1."product\_price"

100 AS moderdy\_t\_1."product\_price",

101 FROM

102 "moderdy\_demo"."public",

103 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

104 moderdy\_t\_1."product\_type"

105 AS moderdy\_t\_1."product\_type",

106 moderdy\_t\_1."product\_price"

107 AS moderdy\_t\_1."product\_price",

108 FROM

109 "moderdy\_demo"."public",

110 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

111 moderdy\_t\_1."product\_type"

112 AS moderdy\_t\_1."product\_type",

113 moderdy\_t\_1."product\_price"

114 AS moderdy\_t\_1."product\_price",

115 FROM

116 "moderdy\_demo"."public",

117 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

118 moderdy\_t\_1."product\_type"

119 AS moderdy\_t\_1."product\_type",

120 moderdy\_t\_1."product\_price"

121 AS moderdy\_t\_1."product\_price",

122 FROM

123 "moderdy\_demo"."public",

124 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

125 moderdy\_t\_1."product\_type"

126 AS moderdy\_t\_1."product\_type",

127 moderdy\_t\_1."product\_price"

128 AS moderdy\_t\_1."product\_price",

129 FROM

130 "moderdy\_demo"."public",

131 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

132 moderdy\_t\_1."product\_type"

133 AS moderdy\_t\_1."product\_type",

134 moderdy\_t\_1."product\_price"

135 AS moderdy\_t\_1."product\_price",

136 FROM

137 "moderdy\_demo"."public",

138 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

139 moderdy\_t\_1."product\_type"

140 AS moderdy\_t\_1."product\_type",

141 moderdy\_t\_1."product\_price"

142 AS moderdy\_t\_1."product\_price",

143 FROM

144 "moderdy\_demo"."public",

145 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

146 moderdy\_t\_1."product\_type"

147 AS moderdy\_t\_1."product\_type",

148 moderdy\_t\_1."product\_price"

149 AS moderdy\_t\_1."product\_price",

150 FROM

151 "moderdy\_demo"."public",

152 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

153 moderdy\_t\_1."product\_type"

154 AS moderdy\_t\_1."product\_type",

155 moderdy\_t\_1."product\_price"

156 AS moderdy\_t\_1."product\_price",

157 FROM

158 "moderdy\_demo"."public",

159 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

160 moderdy\_t\_1."product\_type"

161 AS moderdy\_t\_1."product\_type",

162 moderdy\_t\_1."product\_price"

163 AS moderdy\_t\_1."product\_price",

164 FROM

165 "moderdy\_demo"."public",

166 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

167 moderdy\_t\_1."product\_type"

168 AS moderdy\_t\_1."product\_type",

169 moderdy\_t\_1."product\_price"

170 AS moderdy\_t\_1."product\_price",

171 FROM

172 "moderdy\_demo"."public",

173 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

174 moderdy\_t\_1."product\_type"

175 AS moderdy\_t\_1."product\_type",

176 moderdy\_t\_1."product\_price"

177 AS moderdy\_t\_1."product\_price",

178 FROM

179 "moderdy\_demo"."public",

180 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

181 moderdy\_t\_1."product\_type"

182 AS moderdy\_t\_1."product\_type",

183 moderdy\_t\_1."product\_price"

184 AS moderdy\_t\_1."product\_price",

185 FROM

186 "moderdy\_demo"."public",

187 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

188 moderdy\_t\_1."product\_type"

189 AS moderdy\_t\_1."product\_type",

190 moderdy\_t\_1."product\_price"

191 AS moderdy\_t\_1."product\_price",

192 FROM

193 "moderdy\_demo"."public",

194 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

195 moderdy\_t\_1."product\_type"

196 AS moderdy\_t\_1."product\_type",

197 moderdy\_t\_1."product\_price"

198 AS moderdy\_t\_1."product\_price",

199 FROM

200 "moderdy\_demo"."public",

201 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

202 moderdy\_t\_1."product\_type"

203 AS moderdy\_t\_1."product\_type",

204 moderdy\_t\_1."product\_price"

205 AS moderdy\_t\_1."product\_price",

206 FROM

207 "moderdy\_demo"."public",

208 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

209 moderdy\_t\_1."product\_type"

210 AS moderdy\_t\_1."product\_type",

211 moderdy\_t\_1."product\_price"

212 AS moderdy\_t\_1."product\_price",

213 FROM

214 "moderdy\_demo"."public",

215 "moderdy\_t\_1"."moderdy\_t\_1" AS moderdy\_t\_1,

### 9.3.8 Configuring Associated Queries

After configuring associated queries, you can import them when **configuring templated insights**. This enables you to select fields across datasets to build templated insights. Additionally, it supports reusing insights already configured in

associated queries, thereby improving the efficiency of setting up templated insights.

## Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

## Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. Click the name of the intelligent analysis assistant.
6. In the navigation pane on the left, choose **Q&A Settings > Related Query**. On the displayed page, click **Add Query**. In the **New Query** slide-out panel, set **Query Name**, **Query Settings**, and **Insight Editor** according to [Table 9-17](#).

Figure 9-27 Creating an associated query

New Query

Query Name

Enter a name.

Identify

Query Settings

Datasets

Select a dataset.

Dimensionality

Select a dimension.

Measure

Select a measure.

NonAggregate Filter

+ Add Condition

Insight Editor

+ - × ÷ () IF FOR | Preview

Generate Query Data

Insight Previewer

OK

Cancel

Table 9-16 Parameters for creating a templated insight

| Parameter      | Description                                                                                                                                                                                    |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Query Name     | Query name. The name can contain up to 32 characters and cannot start with a number. Only letters, underscores (_), dollar signs (\$), number signs (#), and at signs (@) are allowed.         |
| Query Settings | Select the dataset, dimensions, and metrics required for configuring associated queries.<br><b>NonAggregate Filter:</b> You can customize filter criteria that take effect before aggregation. |



| Parameter      | Description                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insight Editor | <p>Enter text and click <b>Generate Query Data</b> to select metrics, dimensions, and statistics to form an insight.</p> <ul style="list-style-type: none"><li>• <b>Preview:</b> Click <b>Preview</b> to preview the text generated by the template.</li><li>• <b>Generate Query Data:</b> Click <b>Generate Query Data</b> to select metrics, dimensions, and statistics to form an insight.</li></ul> |

7. Click **OK** to save the query. On the **Related Query** page, you can edit and delete associated queries.
8. In the navigation pane on the left, choose **Q&A Settings > Templated Insights**. Click **Add Template**.
9. In the **New Tempalte** slide-out panel, click **Add Query** and select **Import Query** to import the associated query saved in [Step 10](#). The fields in the associated query can be used to build templated insights.

### 9.3.9 Configuring Templated Insights

The intelligent analysis assistant supports the configuration of templated insights for key and typical questions. This makes it convenient for you to obtain intelligent insights that better meet your needs when asking questions on the intelligent analysis assistant's Q&A page. This section describes how to set, edit, and delete templated insights.

#### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

#### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
5. Click the name of the intelligent analysis assistant.
6. In the navigation pane on the left, choose **Q&A Settings > Templated Insights**. On the displayed page, click **Add Template** in the upper right corner. In the slide-out panel ([Figure 9-28](#)), set **Template Name**, **Query Matching Settings**, and **Insight Editor** according to [Table 9-17](#).

Figure 9-28 Creating templated insights

New Template

★ Template Name

Enter a name.

Identify

Query Matching Settings

★ Datasets

Select a dataset.

★ Dimensionality

Select a dimension.

★ Measure

Select a measure.

Insight Editor

+

-

x

+

()

IF

FOR

Preview

Add Query

OK

Cancel

Table 9-17 Parameters for creating a templated insight

| Parameter               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Template Name           | <p>Template name. The name can contain up to 32 characters and cannot start with a number. Only letters, underscores (_), dollar signs (\$), number signs (#), and at signs (@) are allowed.</p> <p>After the setting is successful, enter the template name on the intelligent analysis assistant's Q&amp;A page to display templated insights. Click <b>Identify</b>. The dataset, dimensions, and metrics related to the template name are automatically filled in the <b>Query Matching Settings</b> area.</p> |
| Query Matching Settings | <p>Select the dataset, dimensions, and metrics required for configuring templated insights. The dataset is mandatory. You can configure only dimensions or metrics.</p> <p><b>NonAggregate Filter:</b> You can customize filter criteria that take effect before aggregation.</p>                                                                                                                                                                                                                                  |

| Parameter      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insight Editor | <p>Enter text and add an associated query to form templated insights. Click <b>Preview</b> to preview the text generated by the template.</p> <ul style="list-style-type: none"><li>• <b>Import Query:</b> You can import <a href="#">associated queries</a> on the <b>Q&amp;A Settings &gt; Related Query</b> page.</li><li>• <b>New Query:</b> Create an associated query in the templated insights. The associated query supports adding fields of other datasets associated with the intelligent analysis assistant, which is convenient for selecting metrics, dimensions, and statistical information of other datasets in insight editing.</li></ul> <p><b>NOTE</b><br/>The newly created associated query on the <b>Template Insights</b> page will not be synchronized to <b>Q&amp;A Settings &gt; Related Query</b>, and can only be used in the templated insight.</p> <ul style="list-style-type: none"><li>• <b>Generate Query:</b> Click <b>Generate Query &gt; Original Query</b> to select the metrics, dimensions, and statistics of the dataset associated with the templated insight to form an insight.</li></ul> |

7. Click **OK** to save the templated insight and access the intelligent analysis assistant's Q&A page for verification. On the **Templated Insights** page, you can edit and delete templated insights.

## Example Scenario

Enter **Query product prices by product type** in the intelligent analysis assistant's Q&A page. The intelligent analysis assistant will display configured templated insights, including the maximum, minimum, and average prices of the products.

1. Configure template name, dataset, dimensions, and metrics.
2. In the insight editor, enter **Product statistics:** and press **Enter**.
3. Click **Add Query > Generate Query > Raw Query > Statistics > productPrice > Insight > Template**.

### NOTE

In addition to using templates provided by the raw query, you can also freely combine templated insights by selecting dimension names and values, as well as metric names, values, averages, maximums, and more.

4. Click **Preview** in the **Insight Editor** area to preview the text generated by the template.
5. Click **OK**.
6. Go to the intelligent analysis assistant's Q&A page and ask: **Query product prices by product type**. Click **Analyze** and select **Generate Intelligent Insight**. The intelligent data insight page will display the configured templated insights.

## 9.3.10 Configuring Synonyms

The intelligent analysis assistant understands questions and data based on configured synonyms, which can improve the accuracy of Q&A. Additionally, you can quickly configure synonyms using the preset ones in the public thesaurus. This section explains how to configure synonyms to optimize Q&A experience.

### Notes and Constraints

- Synonyms can be set for dimension, metric, and indicator fields.
- Synonyms for values cannot be set for metric, indicator, and date fields.
- Published synonyms cannot be deleted on the Q&A page but can be deleted on the synonym page.
- Associated synonyms cannot be deleted on the Q&A page but can be deleted on the synonym page.

### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

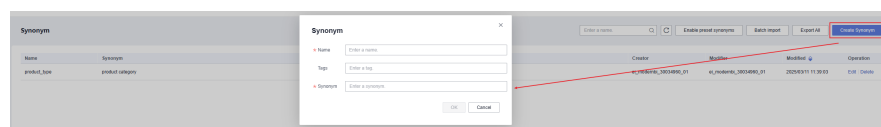
### Configuring Synonyms

You can configure synonyms on both the synonym page and dataset page.

- **Configuring synonyms on the synonym page**

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Knowledge Management** > **Synonym**.
5. On the displayed page, click **Create Synonym** in the upper right corner. See [Figure 9-29](#).

**Figure 9-29** Creating a synonym



6. In the **Synonym** dialog box that appears, enter the name, tags, and synonyms. You can set multiple tags and synonyms for a field. Each time you enter a synonym or tag, press **Enter** to save the settings.

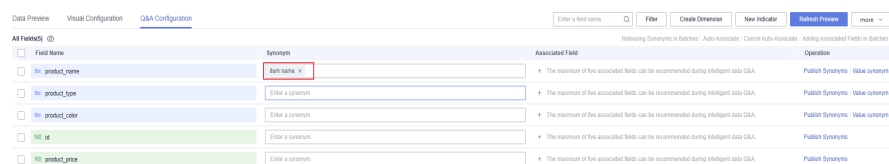
**Table 9-18** Parameters for creating a synonym

| Parameter | Description                                                                                                                                                                                          |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name      | Enter the field for which you want to configure synonyms, for example, <b>product name</b> . The name can contain up to 512 characters. The following special characters are not supported: <>#=# +@ |
| Tags      | Set tags for synonyms to facilitate unified management. For example, the default tag of for preset synonyms is <b>preset</b> .                                                                       |
| Synonym   | Enter the synonyms of the field, for example, <b>offering name</b> .                                                                                                                                 |

- Click **OK**.
- To import synonyms in batches, click **Batch import** in the upper right corner of the page. On the **Import Synonyms** page that is displayed, click **Select File** and click **Confirm**.

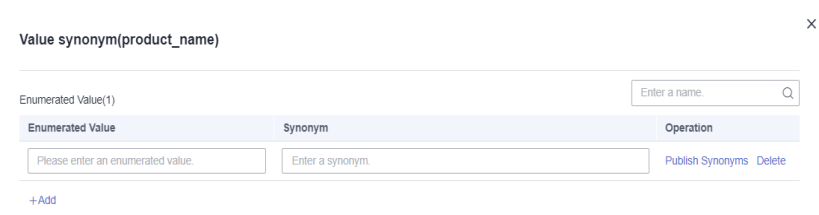
**NOTE**

- You can import synonyms in batches using an Excel file, but you are advised not to import more than 10,000 at a time.
  - You can only upload XLSX, XLS, and CSV files, and they must be under 5 MB in size.
- Configuring synonyms on the dataset editing page**
    - On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
    - In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, click the name of the target dataset. On the dataset editing page, click the **Q&A Configuration** tab. The Q&A configuration page is displayed.

**Figure 9-30** Configuring synonyms on the dataset editing page

- Enter synonyms of the fields in the **Synonym** text box and press **Enter** to save the settings.
- Click **Publish Synonyms** in the **Operation** column to publish the synonyms. Once published, the synonyms are saved to the public thesaurus for association. You can select multiple synonyms and click **Releasing Synonyms in Batches** to batch publish them.
- Configure synonyms for enumerated values.
  - Click **Value synonym** in the **Operation** column. See [Figure 9-31](#).

Figure 9-31 Value Synonym slide-out panel



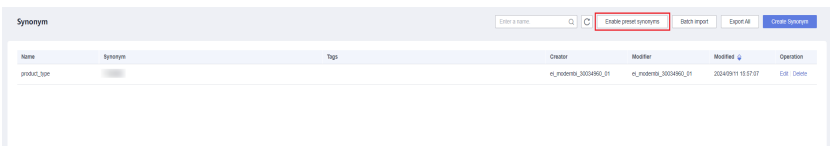
- b. Enter enumerated values in the enumerated value box, enter synonyms in the synonym box, and press **Enter** to save.
  - c. Click **Publish Synonyms** in the **Operation** column to publish the synonym. A published synonym cannot be deleted on the Q&A page but can be deleted on the synonym page.
6. Auto-associate synonym:
- a. Select the fields you want to associate and click **Auto-Associate Synonym**. The synonyms of the fields and enumeration values in the public thesaurus will be matched. If there is no matching synonym in the public thesaurus for a field, it will not be matched.
  - b. To cancel the associated synonyms, click **Cancel Auto-Associate**.

Enabling Preset Synonyms

The system comes with a set of built-in synonyms that you can directly use or edit in the public thesaurus. This allows you to quickly configure synonyms and improve work efficiency.

- 1. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- 2. In the navigation pane on the left, choose **Q&A Management > Synonym**.
- 3. On the displayed page, click **Enable preset synonyms** in the upper right corner (Figure 9-32). Preset synonyms are displayed on the page.

Figure 9-32 Enabling preset synonyms



- 4. If you do not want to use preset synonyms, click **Disable preset synonyms** in the upper right corner of the page. Only custom synonyms are displayed on the page.

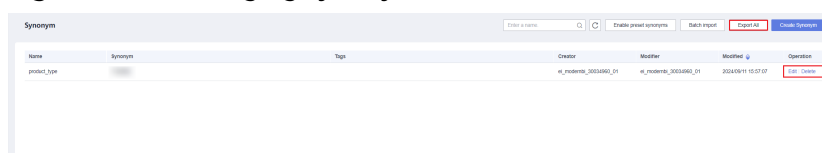
**NOTE**

- You can update preset synonyms. After the update, the **preset** tag is automatically removed, and the preset synonyms are converted to custom synonyms.
- You cannot assign the **preset** tag to custom synonyms that already exist, and if you try to add it manually, it will be removed automatically.
- Enabling preset synonyms does not overwrite custom synonyms. For example, if you customize a synonym for **City**, the preset synonym **City** will not be enabled.
- Disabling preset synonyms only hides synonyms with the **preset** tag, and custom synonyms you created will not be hidden.

## Managing Synonyms

- Exporting synonyms
  - a. In the navigation pane on the left, choose **Q&A Management > Synonym**. See [Figure 9-33](#).
  - b. Click **Export All** in the upper right corner of the displayed page.
- Editing a synonym
  - a. In the navigation pane on the left, choose **Q&A Management > Synonym**. See [Figure 9-33](#).
  - b. On the displayed page, locate the synonym you want to edit and click **Edit** in the **Operation** column.
  - c. In the dialog box that appears, edit the parameters and click **OK**.
- Deleting a synonym
  - a. In the navigation pane on the left, choose **Q&A Management > Synonym**. See [Figure 9-33](#).
  - b. On the displayed page, locate the synonym you want to delete and click **Delete** in the **Operation** column. In the dialog box that appears, click **OK**.

Figure 9-33 Managing synonyms



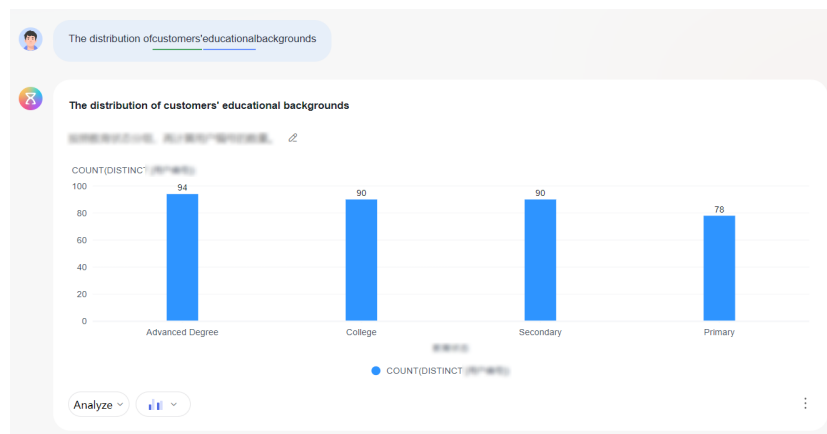
## Example Scenario

Configure the synonym for "Educational status" as "Educational background" and ask on the intelligent analysis assistant's Q&A page: **The distribution of customers' educational backgrounds**. The intelligent analysis assistant will automatically recognize and understand that "Educational background" actually refers to "Educational status" and provide the corresponding analysis results.

1. Creating a synonym:
  - Method 1: In the navigation pane on the left, choose **Q&A Management > Synonym**. On the displayed page, click **Create Synonym** in the upper right corner. In the dialog box that appears, configure the synonym for **Educational status** as **Educational background** and click **OK**.

- Method 2: In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, click the name of the desired dataset. Click the **Q&A Configuration** tab. Locate the field for which you want to create a synonym and click **Value Synonym** in the **Operation** column. In the slide-out panel, set the synonym for the **Education status** enumeration value as **Educational background**. After configuring it, click **Publish Synonyms** in the **Operation** column (only synonyms that have been published can be saved to the public thesaurus).
- 2. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate the desired intelligent analysis assistant and click **Synchronization** in its **Operation** column.
- 3. Click **Q&A. Ask** on the displayed intelligent analysis assistant's Q&A page: **The distribution of customers' educational backgrounds** (Figure 9-34).

Figure 9-34 Distribution of customers' educational backgrounds



### 9.3.11 Configuring Time Limits

A time limit defines a specific time range or time point. By configuring a time limit, abstract time concepts like "recently" and "this week" can be converted into precise time intervals. Additionally, you can customize time ranges according to your needs, making it easier to obtain more accurate data when using the intelligent analysis assistant.

#### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Time Limit**. On the displayed page, click **New Time Limit**. In the dialog box that appears, set parameters according to Table 9-19.



Figure 9-35 Creating a time limit

Time limit

★ Name

Enter

Date Range

Single Date

Earlier tha...

To date

Recently

Beginning ...

Condition

SQL

Time granularity

Day

2025-03-18

2025-03-18

Relative Time

Relative Time

T

-

0

Day

T

-

0

Day

Confirm

Cancel

Table 9-19 Parameters for creating a time limit

| Parameter               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                    | Name of a time limit. Only letters, numbers, commas (,), periods (.), parentheses, greater-than signs (>), less-than signs (<), underscores (_), hyphens (-), and slashes (/) are allowed.                                                                                                                                                                                                                                                                                                                                              |
| Date Range              | Custom date range. It is described as follows: <ul style="list-style-type: none"><li>• <b>Time granularity:</b> The options are <b>Year</b>, <b>Quarter</b>, <b>Month</b>, <b>Week</b>, and <b>Day</b>. For example, "the past two years" can have the time granularity set to <b>Year</b>.</li><li>• <b>Relative Time:</b> - indicates a time period before the current time, and + indicates a time period after the current time.</li><li>• <b>Absolute Time:</b> Select a specific time, independent of the current time.</li></ul> |
| Single Date             | Custom single date, for example, the same day of the previous week.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Earlier than later than | Set the time limit to be earlier or later than XX, for example, earlier than last week or later than last year.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| To date                 | Set the time range from XX to the current day, excluding the current day, for example, "from the beginning of last month to the current day" or "from the beginning of the current month to the current day".                                                                                                                                                                                                                                                                                                                           |

| Parameter                      | Description                                                                                                                                                                                                |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recently                       | Set the time range from XX to the current day and from the current day to XX, including the current day, for example, "from the past month to the current day" or "from the current day to the next week". |
| Beginning or end of the period | Set the start and end times within the specified time range, for example, the first month of the current quarter.                                                                                          |
| Condition                      | Set the time range by specifying conditions, for example, "greater than 2025-01-01".                                                                                                                       |
| SQL                            | Use SQL statements to limit the time range, for example, "the last day of the previous month" can be expressed as "SELECT DATE_TRUNC('month', CURRENT_DATE) - INTERVAL '1 day'".                           |

5. After a time limit is created, it can be used in the following two scenarios:
  - a. In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, click the name of the desired dataset. On the dataset editing page, move the cursor to the field whose field type is time, click , and select **Edit**. In the dialog box that appears, you can set **Default Filter** to the created time limit.
  - b. In the navigation pane on the left, choose **Data Management > Indicator**. On the displayed page, click **Create Indicator** in the upper right corner. In the **Create Indicator** slide-out panel, you can select the created time limit in **Time limit** in the **Panel Editing** area.

#### NOTE

- After the intelligent analysis assistant associates fields in a dataset with a time limit, if the question does not include time-related information, it will automatically return data within the specified time range. For more details, refer to [Example Scenario](#).
- If a time limit is associated with a field on the dashboard, the data within the specified time range is automatically displayed. Click  in the upper right corner of the chart and select **View SQL** to see the SQL statement corresponding to the time limit.

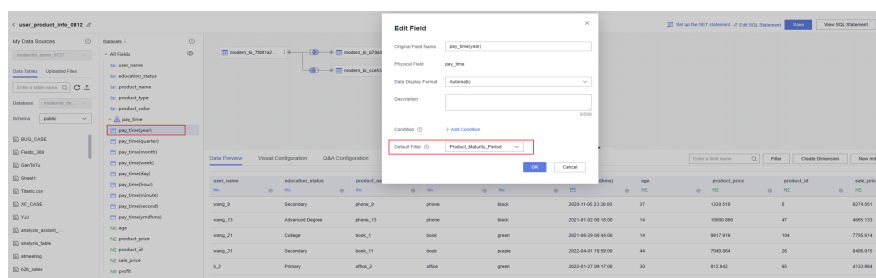
## Example Scenario

Creating a time limit ensures that data within this time range is returned during Q&A with the intelligent analysis assistant.

1. In the navigation pane on the left, choose **Q&A Management > Time Limit**. On the displayed page, click **New Time Limit** in the upper right corner. In the dialog box that appears, create a time limit named **Product Maturity** and set the time range to 2021-01-01 to 2023-01-01 (see [Figure 9-36](#)).

**Figure 9-36** Creating a time limit

2. In the navigation pane on the left, choose **Data Management > Datasets**. On the displayed page, locate the desired dataset and click its name.
3. Move the cursor to the field whose type is time, click , and select **Edit**. In the dialog box that appears, set **Default Filter** to the time limit created in [Step 1](#) and click **OK**. See [Figure 9-37](#).
4. Click **Save** in the upper right corner of the dataset page.

**Figure 9-37** Binding a time limit to the default filter

5. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, click **Create Domain**. In the dialog box that appears, set parameters. Select the dataset edited in [Step 3](#) for **Associated Dataset**. See [Figure 9-38](#).

Figure 9-38 Creating an assistant

**Create Assistant** ×

**Custom Assistant**   Example Assistant

\* Domain Name:

\* Associated Dataset:

Description:

0/1,000

**OK**   **Cancel**

6. Click **Synchronization** in the **Operation** column of the intelligent analysis assistant. After the synchronization is complete, click **Q&A**. The intelligent analysis assistant's Q&A page is displayed.
- In this example, the question is "product profit", and the intelligent analysis assistant automatically returns the product profit data within the range from **2021-01-01** to **2023-01-01**. See [Figure 9-39](#).

Figure 9-39 Product profit

product profit

Please confirm if my understanding is correct: "product profit"

Discover2Insight

pay\_time(year) 2021 - pay\_time(year) 2023

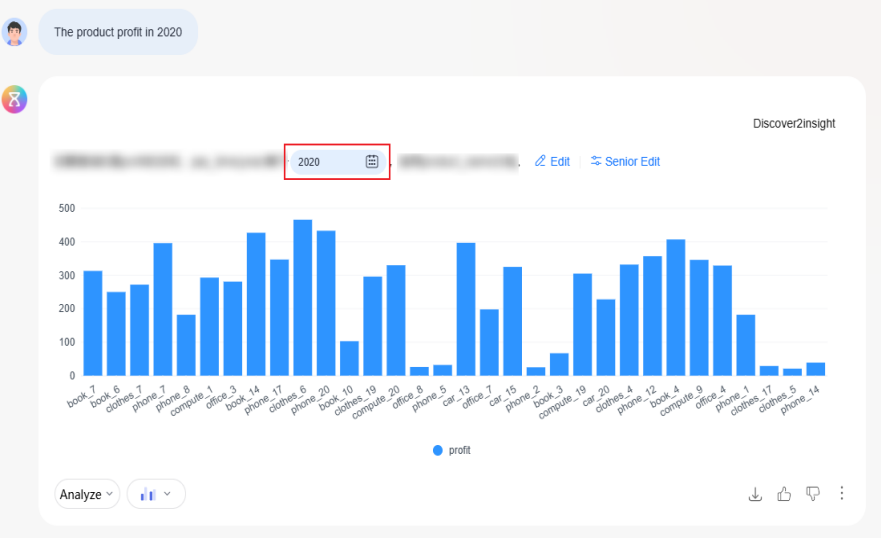
| product_name T1 | pay_time(year) T1 | profit T1 |
|-----------------|-------------------|-----------|
| clothes_10      | 2021              | 496       |
| car_17          | 2021              | 495       |
| car_5           | 2021              | 472       |
| book_17         | 2022              | 471       |
| clothes_18      | 2021              | 466       |
| clothes_8       | 2021              | 464       |
| car_14          | 2021              | 464       |
| compute_17      | 2021              | 456       |
| book_5          | 2022              | 454       |
| clothes_16      | 2021              | 438       |

10 Total Records: 77 < 1 >

Analyze

If the question includes time information, the time limit set in the default filter in [Step 3](#) will become invalid, and the time specified in the question will be used. See [Figure 9-40](#).

Figure 9-40 Product profit in 2020



## 9.4 Conversation with an Intelligent Analysis Assistant

### 9.4.1 Intelligent Data Insight

Intelligent data insight not only provides instant information retrieval services but also offers long-term information management solutions through the collection and history recording functions. Refer to [Table 9-20](#) for details. This section describes how to use the features related to intelligent data insight.

Table 9-20 Intelligent data insight features

| Feature                                          | Description                                                                                                                                                                                                                      |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Questioning and Answering</a>        | The intelligent analysis assistant offers various Q&A methods to enhance your Q&A efficiency.                                                                                                                                    |
| <a href="#">Editing Charts</a>                   | You can edit and optimize the charts returned by the intelligent analysis assistant. You can select fields, adjust the aggregation method, customize sorting, and drill down fields to better meet your specific analytic needs. |
| <a href="#">Favoriting Questions</a>             | During Q&A, you can collect key questions and frequently asked questions for easy future reference.                                                                                                                              |
| <a href="#">Viewing Historical Conversations</a> | The intelligent analysis assistant can save recent Q&A histories, making it easy for you to review and retrieve past dialogue results.                                                                                           |

| Feature                                 | Description                                                                                                                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Showing Q&amp;A Analysis Process</b> | The intelligent analysis assistant supports displaying the Q&A analysis process, allowing you to trace back the Q&A logic for better understanding and evaluation of the answers provided. |
| <b>Multi-Turn Dialogue</b>              | When the multi-turn dialogue feature is enabled, the model will rewrite the current question based on your historical questions and the current input question.                            |
| <b>Question Management</b>              | Displays the questions raised in the intelligent analysis assistant within the current project space and supports exporting questions.                                                     |

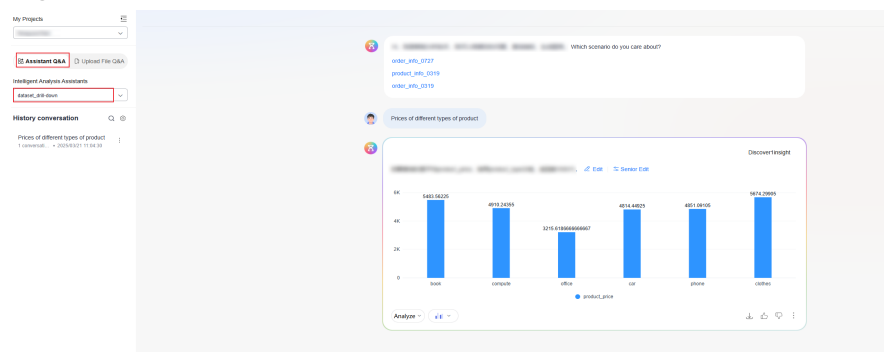
## Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

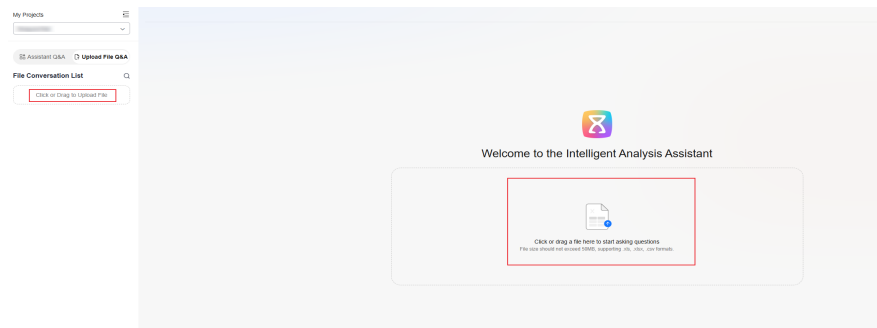
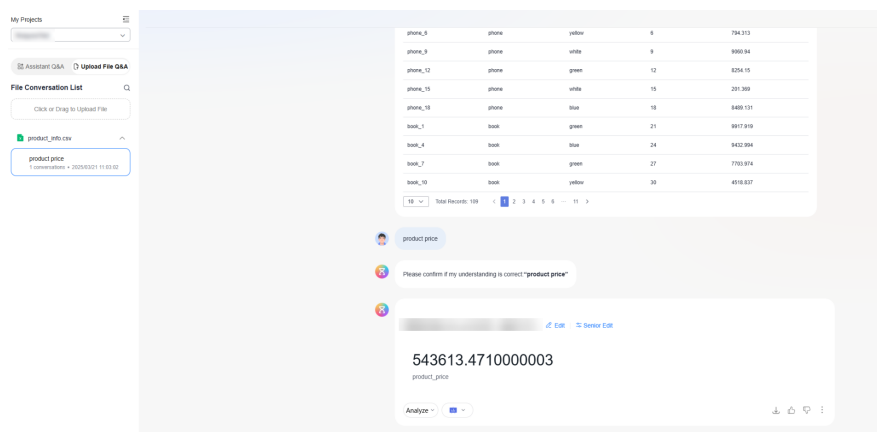
## Questioning and Answering

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate the desired intelligent analysis assistant and click **Q&A** in its **Operation** column.
5. Ask a question on the Q&A page, and the intelligent analysis assistant will return the data query results.
  - **Assistant Q&A:** Select an intelligent analysis assistant to conduct Q&A. For how to create an intelligent analysis assistant, see [Creating an Intelligent Analysis Assistant](#).

Figure 9-41 Assistant Q&A



- **Upload File Q&A:** Upload a file and directly conduct Q&A without any configuration.

**Figure 9-42** Uploading a file**Figure 9-43** Upload File Q&A

### NOTE

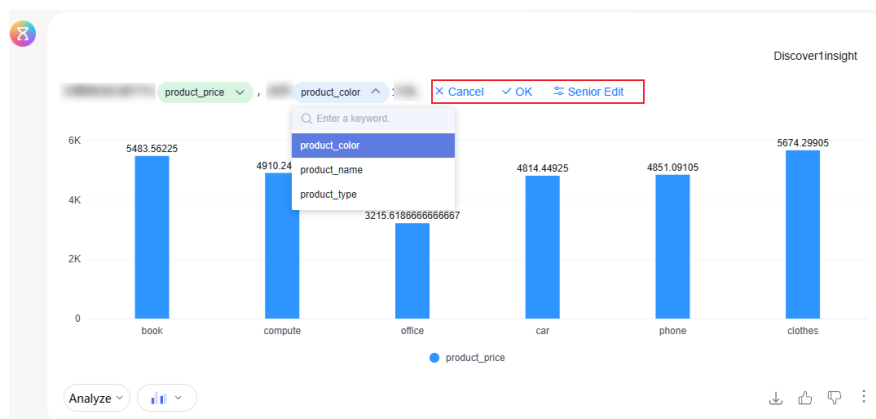
Each user can upload a maximum of 10 files.

## Editing Charts

You can edit and optimize the charts returned by the intelligent analysis assistant. You can select fields, adjust the aggregation method, customize sorting, and drill down fields to better meet your specific analytic needs and ensure that the generated charts align more closely with your business scenarios.

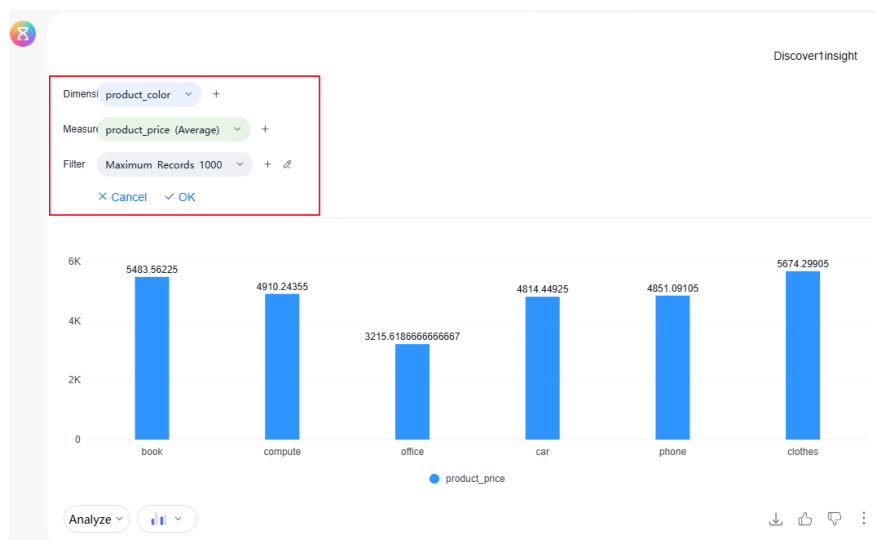
- **Editing fields**
  - In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate the desired intelligent analysis assistant and click **Q&A** in its **Operation** column. On the displayed page, ask the intelligent analysis assistant the following question: Prices of different types of products.
  - Click **Edit** to select other fields in the dataset as the data displayed in the chart. For example, change the **product\_price** field to **product\_color** (see [Figure 9-44](#)).

Figure 9-44 Edit



- c. Click **Senior Edit** to add fields, customize sorting, adjust aggregation methods, and filter fields.

Figure 9-45 Advanced editing



- **Drilling-down fields**

Drill-down involves delving into detailed data from summary data to obtain more specific information.

- In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate the desired intelligent analysis assistant and click **Q&A** in its **Operation** column. On the displayed page, ask the intelligent analysis assistant the following question: Prices of different types of products.
- Click the data in the chart. The **Drill-down Field** list is displayed. Click the field you want to drill down (see Figure 9-46). In this example, drill down to **product\_name** under the **book** field. The chart after drilldown displays details about the product names whose product type is **book** (see Figure 9-47).



Figure 9-46 Chart before drilldown

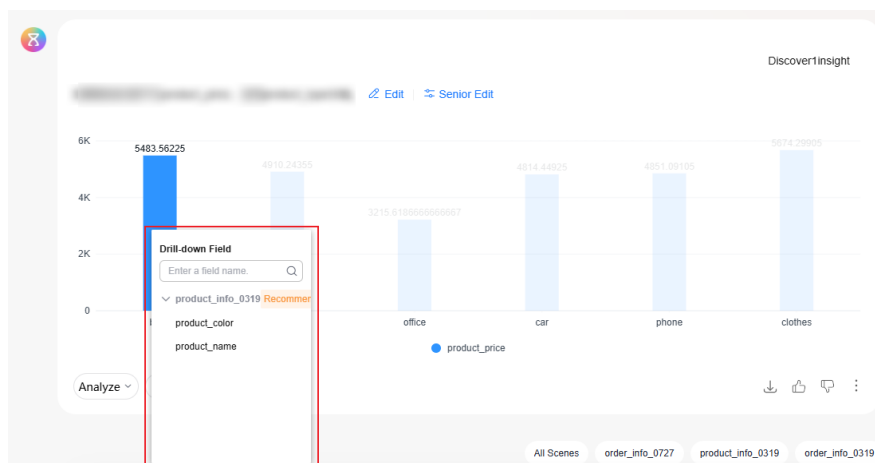


Figure 9-47 Chart after drilldown



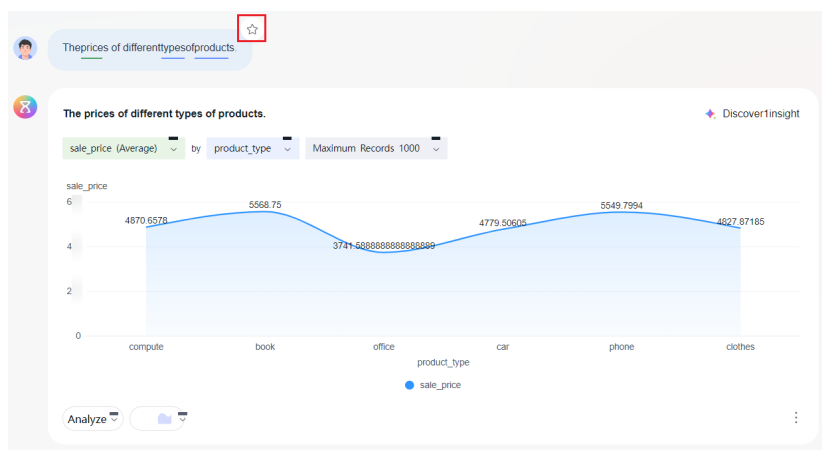
#### NOTE

- If other datasets include all field information in the current Q&A chart, cross-dataset drilldown is supported.
- If the Q&A chart contains indicators, cross-dataset drill-down is not supported.

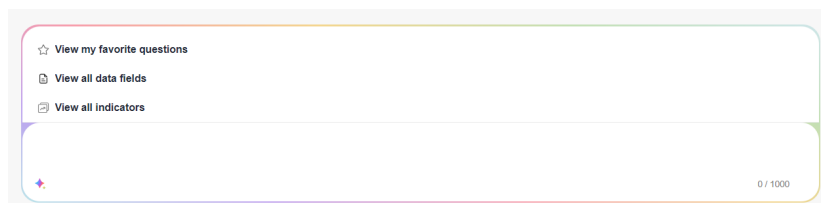
## Favoriting Questions

During Q&A in the intelligent analysis assistant interface, you can favorite key questions and frequently asked questions for easy future reference.

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
2. Locate the intelligent analysis assistant you trained and click **Q&A** in the **Operation** column.
3. On the Q&A page, move the mouse to the question, and a collection icon will appear at the top right corner of the question, as shown in [Figure 9-48](#). Click ☆ to favorite or unfavorite the question.

**Figure 9-48** Favoriting a question

4. You can view favorited questions on both the intelligent analysis assistant's Q&A page and the Q&A management page.
  - On the Q&A page, click **View My Favorite Questions** to see the favorited questions. Click  and click the favorited question to automatically input it into the Q&A box for quick questioning, as shown in [Figure 9-49](#).

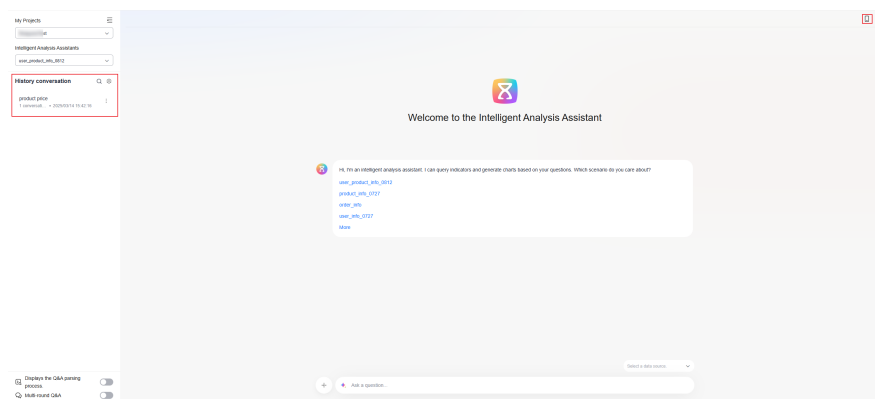
**Figure 9-49** Viewing favorited questions

## Viewing Historical Conversations

The intelligent analysis assistant can save recent Q&A histories, making it easy for you to review and retrieve past dialogue results.

- **Notes and constraints:**
  - Each intelligent analysis assistant has an independent history of conversations. When you switch to a different intelligent analysis assistant in the upper left corner of the Q&A page, the conversation history updates accordingly.
  - Historical conversations record only successfully answered questions and their results, not failed conversations.
  - Historical conversations record only the initial Q&A questions and results, but does not log the charts, data generated from analysis dimensions, or recommended charts after switching types.
  - Only conversations from the past 30 days can be viewed. Conversations older than 30 days will not appear in the history list unless there is a new interactive message.

- **Procedure:**
  - a. In the navigation pane on the left, choose **Q&A Management** > **Intelligent Analysis Assistants**. On the displayed page, locate the desired assistant and click **Q&A** in its **Operation** column.
  - b. By default, the historical conversation list is displayed on the left of the page. Click  in the upper right corner to close or open the conversation list.

**Figure 9-50** Conversation history

## Showing Q&A Analysis Process

The intelligent analysis assistant supports displaying the Q&A analysis process, including keyword rewriting, retrieval results, prompts, semantic SQL, DQE, and SQL, making it easier for you to trace back the Q&A logic for better understanding and evaluation of the provided answers.

1. In the navigation pane on the left, choose **Q&A Management** > **Intelligent Analysis Assistants**. On the displayed page, locate the desired assistant and click **Q&A** in its **Operation** column.
2. On the left side of the page, choose whether to display the Q&A analysis process. The parameters for the analysis process are described in [Table 9-21](#).

### NOTE

Click **Analyze** and select **Generate Intelligent Insight** at the lower left corner of the chart. After generating intelligent insights, the analysis process will show related information on intelligent insights.

**Table 9-21** Analysis process parameters

| Parameter       | Description                                                                                                                                                                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Keyword Rewrite | You can configure question and answer keywords in the assistant. After multi-turn rewriting, the system will check if the question contains any user-defined keywords. If so, the keywords in the question will be replaced with the configured replacement content. |

| Parameter     | Description                                                                                                                                                                                                                                                                                                                                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Grounded      | The assistant will search and retrieve relevant data tables, fields, and enumerations based on your query. This search step simplifies the input for the model compared to directly inputting all dataset schemas and enumeration information. It improves the effectiveness of the NL2SQL model and reduces inference latency.                   |
| Prompt        | Based on prompt word templates and user instructions, as well as search results, the assistant dynamically generates corresponding prompt words for each user query.                                                                                                                                                                              |
| Semantics SQL | The foundation model performs inference for the NL2SQL task based on prompt words, generating semantic SQL. Note that semantic SQL is generated based on the dataset schema and is not directly executable physical SQL.                                                                                                                          |
| Semantic DQE  | Semantic SQL is transformed into data query expressions (DQEs). Compared to SQL, DQE is a more structured data structure and is a universal data query structure in DataArts Insight. During the transformation, semantic SQL is post-processed to validate and correct any illusions or errors, improving the accuracy of the entire data query. |
| Physical SQL  | DQE is further transformed into physical SQL that can be executed by the target data source. This transformation includes mapping the dataset schema to the physical table schema, adapting to the target data source dialect, injecting default filtering conditions and access control conditions.                                              |

## Multi-Turn Q&A

When the multi-turn dialogue feature is enabled, the model will rewrite the current question based on your historical questions and the current input question.

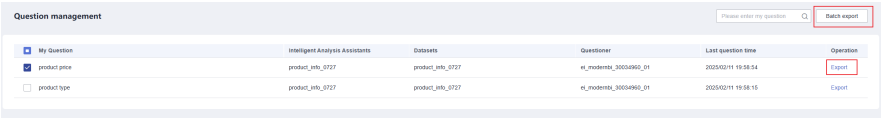
1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate the desired assistant and click **Q&A** in its **Operation** column.
2. You can choose whether to enable multi-turn Q&A on the left of the page.

## Question Management

Displays the questions raised in the intelligent analysis assistant within the current project space and supports exporting questions.

- **Notes and constraints:** This feature requires administrator permissions.
- **Procedure:**
  - a. In the navigation pane on the left, choose **Q&A Management > Question Management**.
  - b. Click **Export** to export questions. You can select multiple questions and export them in batches.

Figure 9-51 Question management



## 9.4.2 Intelligent Insights

Intelligent insights provide a series of functions including anomaly detection, intelligent insights generation, and automatic insights (Table 9-22), helping you improve the accuracy of intelligent data insight and data analysis efficiency. This section describes how to use the features related to intelligent insights.

Table 9-22 Intelligent insights features

| Feature              | Description                                                                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Anomaly Detection    | Anomaly detection efficiently detects abnormalities in measures or metrics in data tables, suitable for scenarios requiring identification of data anomalies.                                    |
| Intelligent Insights | Intelligent insights can autonomously analyze your business data and provide targeted business suggestions, suitable for scenarios requiring business decision support.                          |
| Automatic Insights   | Automatic insights automatically identify data anomalies and trends based on chart data, further exploring deeper questions and attribution, suitable for comprehensive data analysis scenarios. |
| Root Cause Analysis  | Root cause analysis focuses on exploring the reasons for fluctuations in measures or metrics over time, suitable for quickly identifying problems and finding the root cause of issues.          |

### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

### Anomaly Detection

Anomaly detection efficiently detects abnormalities in metrics or indicators in data tables, helping you take timely actions and improve business performance.

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate your desired assistant and

- click **Q&A** in the **Operation** column. On the page that appears, generate a chart based on the Q&A.
2. Click **Analyze** in the lower left corner of the generated chart and select **Detect Anomaly**. On the displayed page (**Figure 9-52**), set the parameters based on **Table 9-23**.

Figure 9-52 Configuring anomaly detection

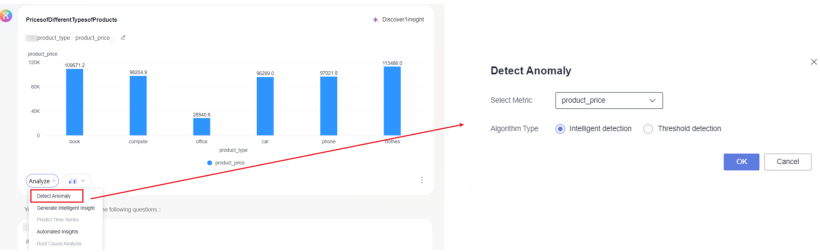


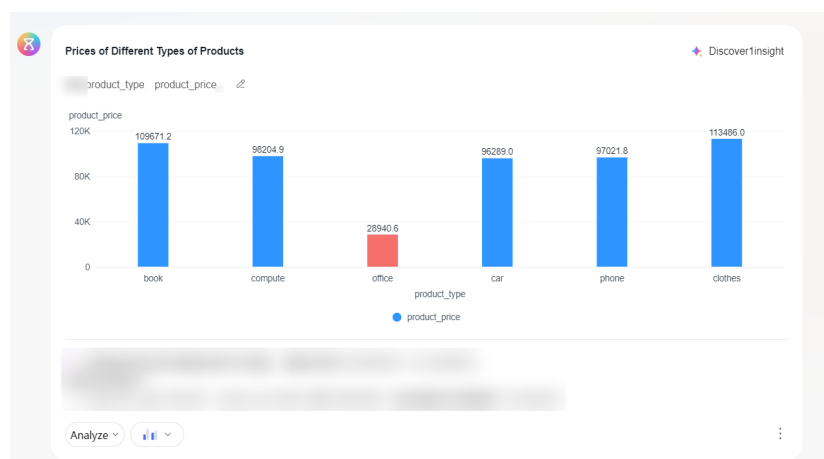
Table 9-23 Parameters for anomaly detection

| Parameter     | Description                |
|---------------|----------------------------|
| Select Metric | Metrics in the data table. |

| Parameter                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Algorithm Type           | <ul style="list-style-type: none"><li>• <b>Intelligent detection</b><ol style="list-style-type: none"><li>1. You only need to configure metrics or indicators and click <b>OK</b> to detect exceptions.</li><li>2. Anomaly detection results include identifying exceptions on charts and describing each exception in natural language.</li></ol></li><li>• <b>Threshold detection</b><ol style="list-style-type: none"><li>1. You need to configure the metrics or indicators, threshold detection type, and threshold range, and click <b>OK</b> to detect exceptions.</li><li>2. If there is only one dimension in the chart and the dimension value is ordinal time series, the available threshold detection types include <b>Absolute threshold</b>, <b>Change threshold</b>, and <b>Change rate threshold</b>. In other cases, only <b>Absolute threshold</b> is available.</li><li>3. The threshold range is determined by the left and right values. The left and right values cannot be empty at the same time. If neither of them is empty, the left value must be less than the right value. Otherwise, you cannot click <b>OK</b> to perform anomaly detection.</li><li>4. Anomaly detection results include identifying exceptions on charts and describing each exception in natural language. When <b>Threshold Detection Type</b> is set to <b>Absolute threshold</b>, the dotted line is used to mark the threshold in the chart.</li></ol></li></ul> |
| Threshold Detection Type | There are three types of threshold detection: <b>Absolute threshold</b> , <b>Change threshold</b> , and <b>Change rate threshold</b> . The display of detection types depends on the chart data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Threshold Settings       | If the left side is empty, it represents negative infinity. If the right side is empty, it represents positive infinity. Both cannot be empty at the same time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

3. After setting the parameters, click **OK** to generate anomaly detection ([Figure 9-53](#)).

Figure 9-53 Anomaly detection

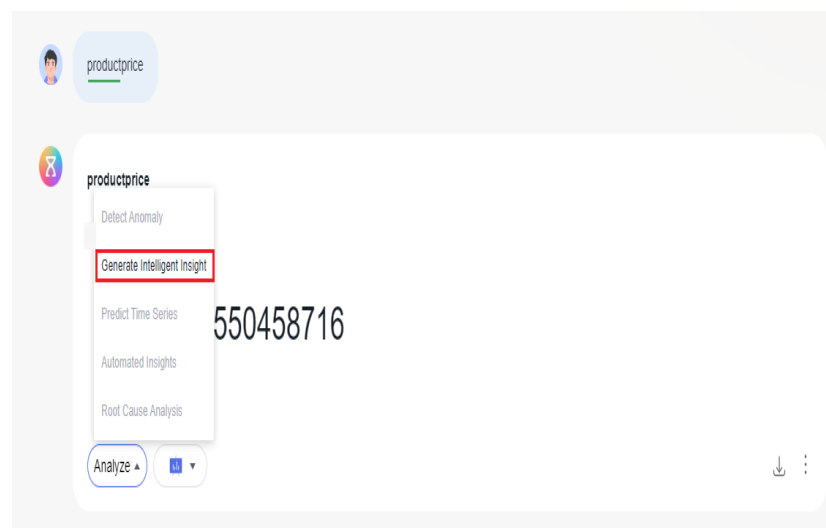


## Intelligent Insights

Intelligent insights generation can analyze your business data and provide targeted business recommendations, helping you make better business decisions.

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate your desired assistant and click **Q&A** in the **Operation** column. On the page that appears, generate a chart based on the Q&A.
2. Click **Analyze** in the lower left corner of the chart and select **Generate Intelligent Insight**.

Figure 9-54 Example intelligent insights



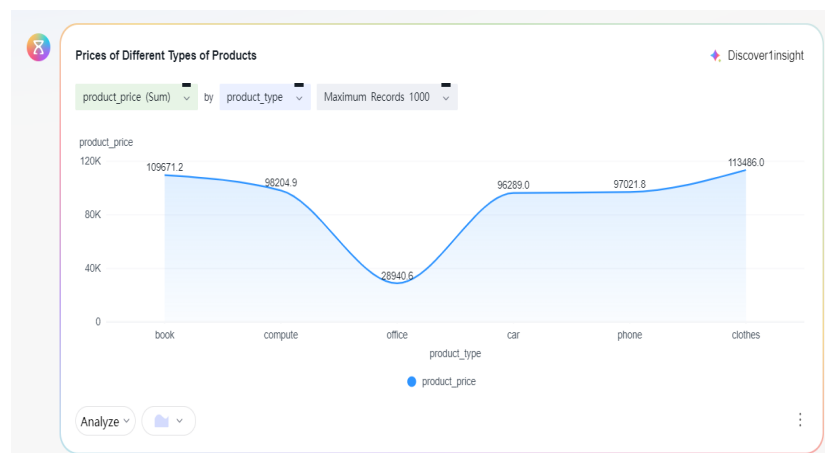
## Automatic Insights

Automatic insights identify data features based on chart data, exploring deeper questions and attribution for comprehensive data analysis.



- **Restrictions**
  - A chart must have at least one dimension and one metric.
  - Derivative indicators are not supported.
  - The chart is invalid when the number of dimensions is greater than 3.
- **Procedure**
  - a. Choose **Data Management > Datasets**. On the displayed page, click **Visual Configuration**.
  - b. By setting the priority of the **product\_name** field to **high**, automated insights will prioritize analyzing data based on this high-priority field.
  - c. Click **Save** in the upper right corner.
  - d. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate the desired assistant and click **Q&A** in its **Operation** column.
  - e. Ask the question on the intelligent data insight page: What is the price of different types of products? (**Figure 9-55**)

**Figure 9-55** Prices of different types of products

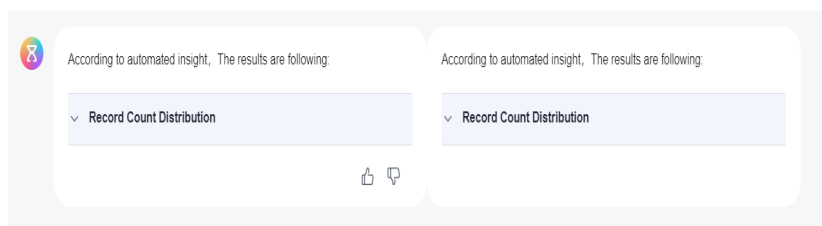


- f. Move the cursor to **Discover1insight** in the upper right corner of the chart (**Figure 9-56**).

**Figure 9-56** Accessing the auto insights page



- g. Click the question generated by automatic insights, and the intelligent data insight page will show automatic insights (**Figure 9-57**).

**Figure 9-57** Automatic insights results display

## Root Cause Analysis

Root cause analysis focuses on deeply exploring the reasons for fluctuations in dimensions, measures, or metrics over time, helping you quickly identify problems and take effective actions to optimize business processes.

- **Restrictions**
  - The chart's horizontal axis must be a time dimension with ordered time values, and there must be at least two time values. Otherwise, **Root Cause Analysis** will be grayed out.
  - The aggregation types of metrics/indicators in the chart must be those listed in [Table 9-24](#); otherwise, **Root Cause Analysis** is grayed out.
  - A maximum of 5 analysis dimensions and 10 analysis metrics can be selected.
- **Procedure**
  - a. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate your desired assistant and click **Q&A** in the **Operation** column. On the page that appears, generate a chart based on the Q&A.
  - b. Click **Analyze** in the lower left corner of the chart and select **Root Cause Analysis**. On the page that appears, set the parameters and click **OK**. For how to set the parameters, refer to [Table 9-24](#).

**Table 9-24** Parameters for a root cause analysis

| Parameter      | Description                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Select Metric  | The aggregation types of metrics and indicators in a data table must be: <ul style="list-style-type: none"><li>● Indicator aggregation types<ul style="list-style-type: none"><li>– Type 1: SUM(M), COUNT(M), SUM(M1)+SUM(M2), SUM(M1)-SUM(M2), SUM(M) x constant, SUM(M)/constant</li><li>– Type 2: SUM(M1)/SUM(M2), AVG(M), AVG(M1)/AVG(M2)</li></ul></li><li>● Metric aggregation types: SUM(M), COUNT(M)</li></ul> |
| Algorithm Type | The only option is <b>Fluctuation cause analysis</b> .                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter          | Description                                                                                                                                                                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analysis Dimension | Choose one or more dimensions from all dimensions of the dataset, except for the time dimension on the chart and the dimensions involved in the filter conditions, as the analysis dimensions. Currently, you can only select a maximum of five analysis dimensions. |
| Analysis Metric    | Choose one or more metrics from all metrics of the dataset, except for the time dimension on the chart and the metrics involved in the filter conditions, as the analysis metrics. Currently, you can only select a maximum of 10 analysis metrics.                  |
| Comparison Scope   | Two time dimension values on the chart, which are used to specify the analysis range of metric fluctuations.                                                                                                                                                         |

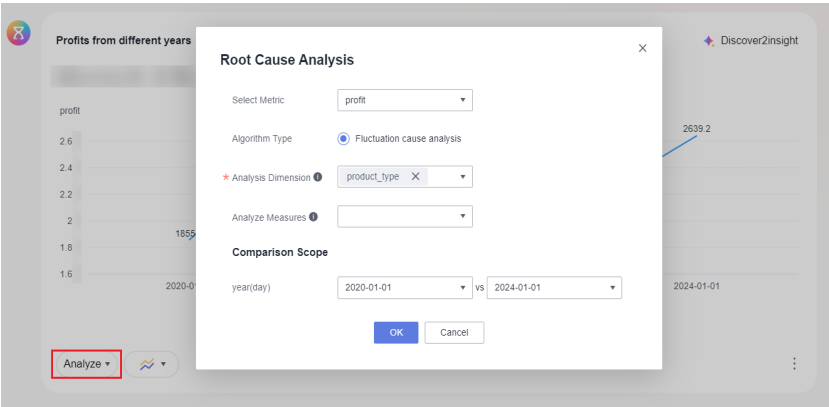
- c. Example: Compare the total profit of a product from 2020 to 2024.
- i. On the intelligent analysis assistant's Q&A page: profit of products in different years.

**Figure 9-58** Profits of products in different years



- ii. Click **Analyze** and select **Root Cause Analysis**. In the dialog box that appears ([Figure 9-59](#)), set the parameters and click **OK**. The analysis result is displayed on the Q&A page.

Figure 9-59 Setting root cause analysis parameters



### 9.4.3 Intelligent Building

Intelligent building simplifies the process of data analysis and dashboard creation, helping you achieve data visualization and information display more efficiently (Table 9-25). This section describes how to use the features related to intelligent building.

Table 9-25 Intelligent building features

| Feature                         | Description                                                                                                                                                                                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Viewing Chart SQL               | The intelligent analysis assistant supports copying the SQL statements of automatically generated charts during Q&A, making it easy for you to reuse these SQL statements for data analysis. |
| Saving a Chart to the Dashboard | The intelligent analysis assistant supports adding automatically generated charts directly to the dashboard during Q&A, helping you quickly build dashboards.                                |

#### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

#### Viewing Chart SQL

The intelligent analysis assistant supports copying the SQL statements of automatically generated charts during Q&A, making it easy for you to reuse these SQL statements for data analysis.

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate your desired assistant and click **Q&A** in the **Operation** column. On the page that appears, generate a chart based on the Q&A.
2. Click  in the lower right corner of the chart, select **View SQL Statement**, and in the dialog box that appears, you can copy the SQL statements of the current chart, as shown in [Figure 9-60](#).

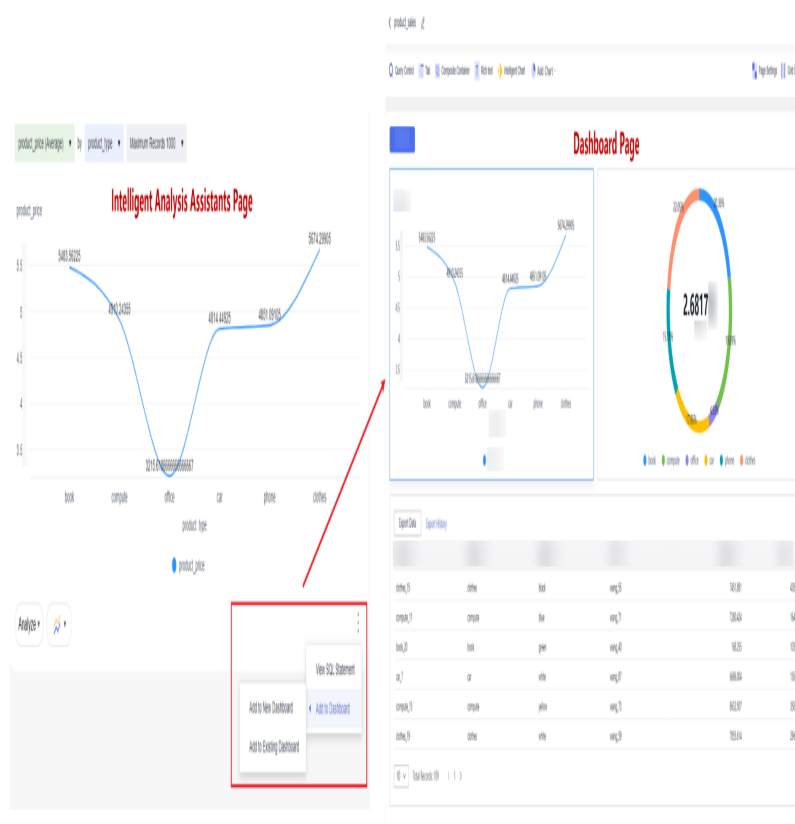
**Figure 9-60** Viewing chart SQL statements



## Saving a Chart to the Dashboard

The intelligent analysis assistant supports adding automatically generated charts directly to the dashboard during Q&A, helping you quickly build dashboards.

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate your desired assistant and click **Q&A** in the **Operation** column. On the page that appears, generate a chart based on the Q&A.
2. Click  in the lower right corner of the graph and choose **Add to Dashboard > Add to Existing Dashboard** to quickly save the generated graph to the dashboard, as shown in [Figure 9-61](#).

**Figure 9-61** Saving a chart to the dashboard

## 9.5 Evaluating an Intelligent Analysis Assistant

The system supports detailed analysis and evaluation of the intelligent analysis assistant's Q&A. The evaluation system covers a series of key indicators and is equipped with annotation functions to ensure accuracy and comprehensiveness. Additionally, DataArts Insight introduces a bad case management mechanism for inaccurate Q&A identified during evaluation. It can efficiently track and record Q&A marked as incorrect, facilitating subsequent problem resolution and improvement work.

Evaluating the intelligent analysis assistant can quickly and accurately assess the effectiveness of various modules, and track low-accuracy Q&A questions, supporting rapid optimization and iteration. This section describes how to effectively evaluate Q&A questions.

### Notes and Constraints

- To use this function, you must have the administrator permissions.

## Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- An intelligent analysis assistant has been created by referring to [Creating an Intelligent Analysis Assistant](#).

## Procedure

**Figure 9-62** Process of evaluating an intelligent analysis assistant



**Table 9-26** Process description

| Step                                                 | Description                                                                                                                                                                         |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1: Upload an Evaluation Set</b>              | The uploaded evaluation set contains questions for the intelligent analysis assistant. Subsequent evaluations will be based on these questions.                                     |
| <b>Step 2: Evaluate and Annotate</b>                 | Evaluation annotation can quickly and accurately assess the end-to-end effects and module effectiveness of the current intelligent analysis assistant.                              |
| <b>Step 3: (Optional) Compare Evaluation Results</b> | Choose two intelligent analysis assistants for evaluation annotation under the same evaluation set, to compare Q&A accuracy rates and optimize assistant configuration accordingly. |
| <b>Step 4: Manage Bad Cases</b>                      | Bad cases can effectively track questions marked as incorrect during evaluation annotation, facilitating subsequent problem handling and improvement.                               |

### Step 1: Upload an Evaluation Set

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Assessment Management**.
5. Click **Upload Assessment Set**. On the displayed page ([Figure 9-63](#)), enter the evaluation set name.

**Figure 9-63** Page for uploading evaluation sets

×

### Uploading Assessment Set

★ Assessment Set Name

Please enter a profile set name

★ Uploading the Assessment File

Select File

Download Template

Only Excel files can be uploaded.

★ Assessment Assistant

—Select—

A maximum of two assistants can be selected. If two assistants are selected, the comparison mode is used.

OK

Cancel

- Click **Download Template**, complete the evaluation set template, and click **Select File** to upload the evaluation file.
- Select an evaluation assistant and click **OK**.

**Table 9-27** Parameters for uploading an evaluation set

| Parameter                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assessment Set Name           | Name the evaluation set. The name can contain up to 32 characters and must be specified. Only letters, numbers, hyphens (-), and underscores (_) are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Uploading the Assessment File | Subsequent evaluations will be based on the evaluation file. The parameter descriptions for the evaluation template are as follows:<br><b>conversationId</b> : Conversation ID, for example, the IDs of the first and second conversations with the intelligent analysis assistant are 1 and 2, respectively.<br><b>seqId</b> : IDs of different questions in one conversation, e.g., questions in the first conversation are numbered 1, 2, 3...<br><b>question</b> : Different questions in one conversation, e.g., what is the percentage growth in sales of products in different regions? |
| Assessment Assistant          | Select the intelligent analysis assistant to be evaluated, with a maximum of two intelligent analysis assistants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |



## Step 2: Evaluate and Annotate

1. In the navigation pane on the left, choose **Q&A Management > Assessment Management**.
2. Click an evaluation set name. The intelligent analysis assistant associated with the evaluation set is displayed on the left of the page, that is, the assessment assistant selected in step 1. The top of the page shows the accuracy of the evaluation results, calculated as:  $\text{accuracy} = 1 - \text{Errors/Total steps}$ .
3. In the dialogue list area, annotate each question in the evaluation set. For parameter descriptions, refer to [Table 9-28](#).
4. The left side of the dialogue list area shows different conversations corresponding to the **conversationId** in the evaluation set template. After completing the annotation of questions in a conversation, click **Confirm** to complete the evaluation annotation of that conversation ([Figure 9-64](#)).

### NOTE

Questions marked as incorrect during evaluation annotation will be automatically updated to bad case management for subsequent tracking and improvement.

**Figure 9-64** Evaluation annotation

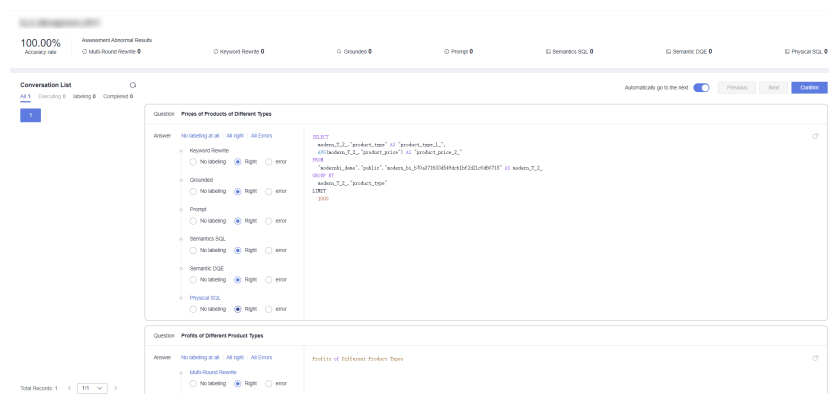


**Table 9-28** Evaluation annotation parameter descriptions

| Parameter       | Description                                                                                                                                                                                                                                                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Keyword Rewrite | You can configure question and answer keywords in the assistant. After multi-turn rewriting, the system will check if the question contains any user-defined keywords. If so, the keywords in the question will be replaced with the configured replacement content.                                                            |
| Grounded        | The assistant will search and retrieve relevant data tables, fields, and enumerations based on your query. This search step simplifies the input for the model compared to directly inputting all dataset schemas and enumeration information. It improves the effectiveness of the NL2SQL model and reduces inference latency. |

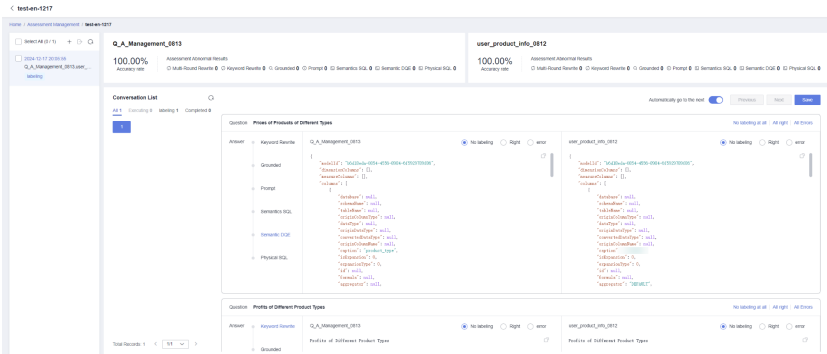
| Parameter     | Description                                                                                                                                                                                                                                                                                                                                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prompt        | Based on prompt word templates and user instructions, as well as search results, the assistant dynamically generates corresponding prompt words for each user query.                                                                                                                                                                              |
| Semantics SQL | The foundation model performs inference for the NL2SQL task based on prompt words, generating semantic SQL. Note that semantic SQL is generated based on the dataset schema and is not directly executable physical SQL.                                                                                                                          |
| Semantic DQE  | Semantic SQL is transformed into data query expressions (DQEs). Compared to SQL, DQE is a more structured data structure and is a universal data query structure in DataArts Insight. During the transformation, semantic SQL is post-processed to validate and correct any illusions or errors, improving the accuracy of the entire data query. |
| Physical SQL  | DQE is further transformed into physical SQL that can be executed by the target data source. This transformation includes mapping the dataset schema to the physical table schema, adapting to the target data source dialect, injecting default filtering conditions and access control conditions.                                              |

### Step 3: (Optional) Compare Evaluation Results

Choose two intelligent analysis assistants for evaluation annotation under the same evaluation set, to compare Q&A accuracy rates and optimize assistant configuration accordingly.

1. In the navigation pane on the left, choose **Q&A Management > Assessment Management**.
2. Click **Upload Assessment Set**, select the two intelligent analysis assistants to be compared for evaluation, set parameters, and click **Confirm**.
3. Click an evaluation set name. In the dialogue list area, annotate each question in the evaluation set. For parameter descriptions, refer to [Table 9-28](#).

Figure 9-65 Evaluation annotation



 NOTE

Questions marked as incorrect during evaluation annotation will be automatically updated to bad case management for subsequent tracking and improvement.

Step 4: Manage Bad Cases

Bad cases can effectively track questions marked as incorrect during evaluation annotation, facilitating subsequent problem handling and improvement.

1. In the navigation pane on the left, choose **Q&A Management > BadCase Management**. This page provides bad case query functions, supports filtering by question, stage, intelligent analysis assistant, owner, and other dimensions, and supports sorting by update time.

Figure 9-66 Bad case management

| BadCase management        |                 |                                |       |              |             |                     | Please enter question                                                                                                      |
|---------------------------|-----------------|--------------------------------|-------|--------------|-------------|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| Question                  | Stage           | Intelligent Analysis Assist... | Owner | Annotated by | Update Date | Status              | Operation                                                                                                                  |
| User's Level of Education | Physical SQL    | user_product_int_0812          | --    | et_model     | 360_01      | 2024/12/28 09:54:45 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Semantic DQE    | user_product_int_0812          | --    | et_model     | 360_01      | 2024/12/28 09:54:45 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Semantic SQL    | user_product_int_0812          | --    | et_model     | 360_01      | 2024/12/28 09:54:45 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Prompt          | user_product_int_0812          | --    | et_model     | 360_01      | 2024/12/28 09:54:45 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Grounded        | user_product_int_0812          | --    | et_model     | 360_01      | 2024/12/28 09:54:45 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Physical SQL    | Q_A_Management_0813            | --    | et_model     | 360_01      | 2024/12/28 09:54:45 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Semantic DQE    | Q_A_Management_0813            | --    | et_model     | 360_01      | 2024/12/28 09:54:44 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Semantic SQL    | Q_A_Management_0813            | --    | et_model     | 360_01      | 2024/12/28 09:54:44 |  Created <a href="#">View Details</a>   |
| User's Level of Education | Prompt          | Q_A_Management_0813            | --    | et_model     | 360_01      | 2024/12/28 09:54:44 |  Created <a href="#">View Details</a>  |
| User's Level of Education | Grounded        | Q_A_Management_0813            | --    | et_model     | 360_01      | 2024/12/28 09:54:44 |  Created <a href="#">View Details</a> |
| User's Level of Education | Keyword Rewrite | user_product_int_0812          | --    | et_model     | 360_01      | 2024/12/28 09:54:45 |  Created <a href="#">View Details</a> |
| User's Level of Education | Keyword Rewrite | Q_A_Management_0813            | --    | et_model     | 360_01      | 2024/12/28 09:54:44 |  Created <a href="#">View Details</a> |
| 20 Total Records: 12      |                 |                                |       |              |             |                     |                                         |

 NOTE

Bad case management displays questions marked as incorrect during evaluation annotation based on different stages of the parsing process (keyword rewriting, retrieval results, prompts, semantic SQL, DQE, SQL).

2. Click **View Details** to enter the bad case details page, where you can modify the bad case status and the current owner. After modification, click **OK** to save.

Figure 9-67 Bad case details

User's Level of Education

Stage

Physical SQL

Intelligent Analysis Assistants

user\_product\_info\_0812

Owner

Please enter the owner.

Annotated by

el\_n...0\_01

Update Date

2024/12/28 09:54:45

Status

Created

Modifying

CCB

Suspended

Completed

Non-problem

Question

Prices of Products of Different Types

Answer

Keyword Rewrite

Grounded

Prompt

Semantics SQL

Semantic DQE

Physical SQL

Prices of Products of Different Types

Question

Profits of Different Product Types

Answer

Keyword Rewrite

Profits of Different Product Types

OK

Cancel

Table 9-29 Bad case parameter descriptions

| Parameter                       | Description                                                                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stage                           | Stages of the intelligent analysis assistant parsing process, including keyword rewriting, retrieval results, prompts, semantic SQL, DQE, and SQL.    |
| Intelligent Analysis Assistants | The intelligent analysis assistant associated with the bad case, that is, the intelligent analysis assistant associated during evaluation annotation. |
| Owner                           | Owner for handling bad cases.                                                                                                                         |
| Annotated by                    | User who annotated the bad case during evaluation.                                                                                                    |
| Update Date                     | Time when the bad case was last updated.                                                                                                              |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status    | <p><b>Created:</b> Default status, indicating that the bad case has been recorded and initially identified.</p> <p><b>Modifying:</b> The bad case is currently under review or being modified.</p> <p><b>CCB:</b> The bad case has been submitted to the Change Control Board (CCB) for review, currently pending.</p> <p><b>Suspended:</b> The bad case is temporarily shelved for some reason, awaiting further processing.</p> <p><b>Completed:</b> The bad case has been processed, the issue has been resolved, or necessary measures have been taken.</p> <p><b>Non-problem:</b> After further analysis, the originally marked bad case is not actually an issue.</p> |

 NOTE

- The bad case status can only be updated sequentially to the next stage and cannot be modified to a previous stage. For example, the status cannot be changed from **Completed** to **Suspended**.

## 9.6 Sharing an Intelligent Analysis Assistant

DataArts Insight allows you to share an intelligent analysis assistant with other users or user groups. The shared users or user groups will have editing and usage permissions for the assistant. This section explains how to share an intelligent analysis assistant so that team members can collaborate quickly.

 NOTE

You can grant editing and usage permissions for an intelligent analysis assistant to all users or user groups. However, users or user groups must have corresponding fine-grained permissions to edit and use it. For more details, refer to "Permissions Management" in the *DataArts Insight Service Overview*.

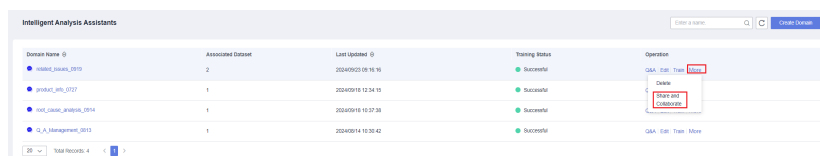
### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- Sharing and collaboration have been enabled for the intelligent analysis assistant that is associated with the dataset by referring to [Sharing a Dataset](#).

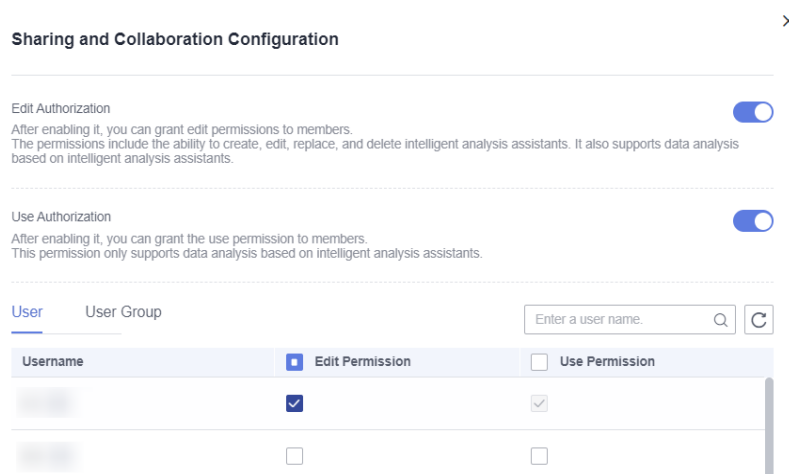
### Procedure

1. Log in to the DataArts Insight console.

- Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
- On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
- In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
- Click **More** in the **Operation** column and select **Share and Collaborate**.

**Figure 9-68** Intelligent analysis assistant page

- Select the permissions that you want to grant.
  - Edit Authorization:** Enabling this allows you to grant edit permissions to members, including editing and deleting intelligent analysis assistants, as well as performing data analysis based on the assistant.  
Enable edit permission of the intelligent analysis assistant will also enable use permission by default.
  - Use Authorization:** Enabling this allows you to grant the use permission to members. Only data analysis based on the intelligent analysis assistant is supported.
- Select the objects that you want to authorize.
  - User:** Grant permissions to users.
  - User Group:** After a user group is authorized, all users within the group will have the relevant permissions on the intelligent analysis assistant.
- Select the users and user groups that need to be authorized.

**Figure 9-69** Sharing and collaboration configuration page

## 9.7 Managing Intelligent Analysis Assistants

You can manage intelligent analysis assistants in a personalized manner. This includes viewing basic information, editing or deleting them, and exporting their Q&A.

### Viewing Basic Information About an Intelligent Analysis Assistant

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
2. Locate the intelligent analysis assistant whose basic information you want to view and click **Edit** in the **Operation** column. On the displayed page, view its basic information ([Figure 9-70](#)). For the basic information parameters, see [Table 9-30](#).

**Figure 9-70** Viewing basic information

The screenshot shows the 'Basic Information' configuration page for an assistant named 'product\_sales\_0225'. On the left is a navigation menu with 'Assistant Settings' selected. The main area contains the following fields:

- Name:** A text input field containing 'product\_sales\_0225'.
- Assistant Introduction:** A text area containing 'Hi, I'm an intelligent analysis assistant. I can query indicators and generate charts based on your questions.' with a character count of 110/200.
- Description:** A text area that is currently empty, with a character count of 0/1,000.
- Answer After Confirmation:** A toggle switch that is currently turned on.

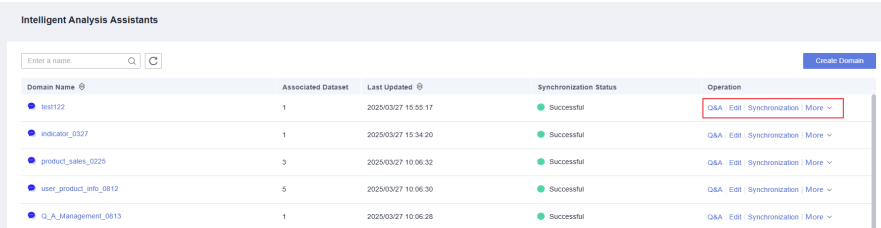
**Table 9-30** Basic information parameters

| Parameter                 | Description                                                                                                                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                      | Name of the intelligent analysis assistant. The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.                                         |
| Assistant Introduction    | Custom greeting for the intelligent analysis assistant on the Q&A page. The greeting can contain up to 200 characters.                                                                             |
| Description               | Description of the intelligent analysis assistant. Enter up to 1,000 characters. You can enter the purpose and use case of the intelligent analysis assistant to facilitate subsequent management. |
| Answer After Confirmation | Whether to first verify if the intelligent assistant accurately understands the user's question before generating an answer.                                                                       |

## Editing an Intelligent Analysis Assistant

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
2. Locate the intelligent analysis assistant you want to edit and click **Edit** in the **Operation** column.
3. Edit parameters and click **Synchronization** in the upper right corner of the page to re-synchronize the table structure semantic configuration.

Figure 9-71 Editing an intelligent analysis assistant

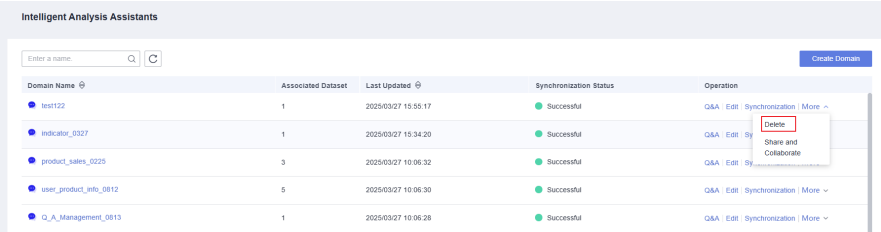


| Domain Name            | Associated Dataset | Last Updated        | Synchronization Status | Operation                     |
|------------------------|--------------------|---------------------|------------------------|-------------------------------|
| test122                | 1                  | 2025/03/27 15:55:17 | Successful             | Q&A Edit Synchronization More |
| indicator_0327         | 1                  | 2025/03/27 15:34:20 | Successful             | Q&A Edit Synchronization More |
| product_sales_0225     | 3                  | 2025/03/27 10:06:32 | Successful             | Q&A Edit Synchronization More |
| user_product_info_0812 | 5                  | 2025/03/27 10:06:30 | Successful             | Q&A Edit Synchronization More |
| Q_A_Management_0813    | 1                  | 2025/03/27 10:06:28 | Successful             | Q&A Edit Synchronization More |

## Deleting an Intelligent Analysis Assistant

1. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**.
2. Locate the intelligent analysis assistant you want to delete, click **More** in the **Operation** column, and select **Delete** (Figure 9-72).
3. In the dialog box that appears, click **OK**.

Figure 9-72 Deleting an intelligent analysis assistant



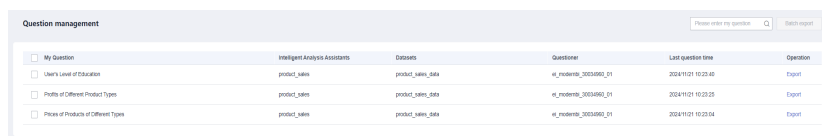
| Domain Name            | Associated Dataset | Last Updated        | Synchronization Status | Operation                     |
|------------------------|--------------------|---------------------|------------------------|-------------------------------|
| test122                | 1                  | 2025/03/27 15:55:17 | Successful             | Q&A Edit Synchronization More |
| indicator_0327         | 1                  | 2025/03/27 15:34:20 | Successful             | Q&A Edit Synchronization More |
| product_sales_0225     | 3                  | 2025/03/27 10:06:32 | Successful             | Q&A Edit Synchronization More |
| user_product_info_0812 | 5                  | 2025/03/27 10:06:30 | Successful             | Q&A Edit Synchronization More |
| Q_A_Management_0813    | 1                  | 2025/03/27 10:06:28 | Successful             | Q&A Edit Synchronization More |

## Exporting Questions from an Intelligent Analysis Assistant

You can export the questions and analysis process of an intelligent analysis assistant. The analysis process includes keyword rewriting, retrieval results, prompts, semantic SQL, DQE, and SQL.

- **Constraints:**
  - To use this function, you must have the administrator permissions.
- **Procedure:**
  - a. In the navigation pane on the left, choose **Q&A Management > Question Management**.



**Figure 9-73** Question management page

| My Question                                                    | Intelligent Analysis Assistant | Datasets           | Question                     | Last question time  | Operation |
|----------------------------------------------------------------|--------------------------------|--------------------|------------------------------|---------------------|-----------|
| <input type="checkbox"/> User's Level of Education             | product_sales                  | product_sales_data | q1_product_sales_20230802_21 | 2024/11/21 10:23:40 | Export    |
| <input type="checkbox"/> Profile of Different Product Types    | product_sales                  | product_sales_data | q1_product_sales_20230802_21 | 2024/11/21 10:23:25 | Export    |
| <input type="checkbox"/> Phenon of Products of Different Types | product_sales                  | product_sales_data | q1_product_sales_20230802_21 | 2024/11/21 10:23:04 | Export    |

- b. On this page, locate the question you want to export and click **Export** in the **Operation** column. In the dialog box that appears, click **OK**. Then, the questions and analysis process of the intelligent analysis assistant are exported. [Table 9-31](#) describes the parameters in the analysis process.

**Table 9-31** Analysis process parameters

| Parameter       | Description                                                                                                                                                                                                                                                                                                                                       |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Keyword Rewrite | You can configure question and answer keywords in the assistant. After multi-turn rewriting, the system will check if the question contains any user-defined keywords. If so, the keywords in the question will be replaced with the configured replacement content.                                                                              |
| Grounded        | The assistant will search and retrieve relevant data tables, fields, and enumerations based on your query. This search step simplifies the input for the model compared to directly inputting all dataset schemas and enumeration information. It improves the effectiveness of the NL2SQL model and reduces inference latency.                   |
| Prompt          | Based on prompt word templates and user instructions, as well as search results, the assistant dynamically generates corresponding prompt words for each user query.                                                                                                                                                                              |
| Semantics SQL   | The foundation model performs inference for the NL2SQL task based on prompt words, generating semantic SQL. Note that semantic SQL is generated based on the dataset schema and is not directly executable physical SQL.                                                                                                                          |
| Semantic DQE    | Semantic SQL is transformed into data query expressions (DQEs). Compared to SQL, DQE is a more structured data structure and is a universal data query structure in DataArts Insight. During the transformation, semantic SQL is post-processed to validate and correct any illusions or errors, improving the accuracy of the entire data query. |
| Physical SQL    | DQE is further transformed into physical SQL that can be executed by the target data source. This transformation includes mapping the dataset schema to the physical table schema, adapting to the target data source dialect, injecting default filtering conditions and access control conditions.                                              |

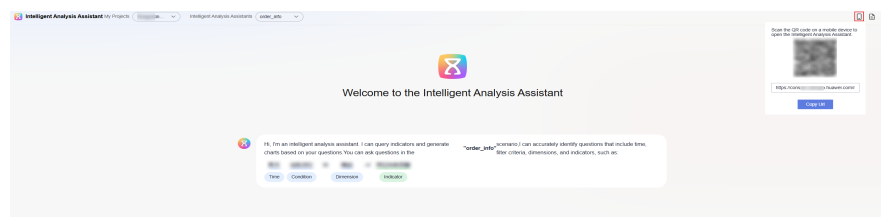
## 9.8 Viewing an Intelligent Analysis Assistant on Mobile

The intelligent analysis assistant supports sharing links or QR codes to mobile devices, making it convenient for you to use the intelligent analysis assistant on mobile.

### Obtaining the QR Code and Link

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Q&A Management > Intelligent Analysis Assistants**. On the displayed page, locate the desired assistant and click **Q&A** in its **Operation** column.
5. Click  in the upper right corner of the page to bring up the QR code and link.

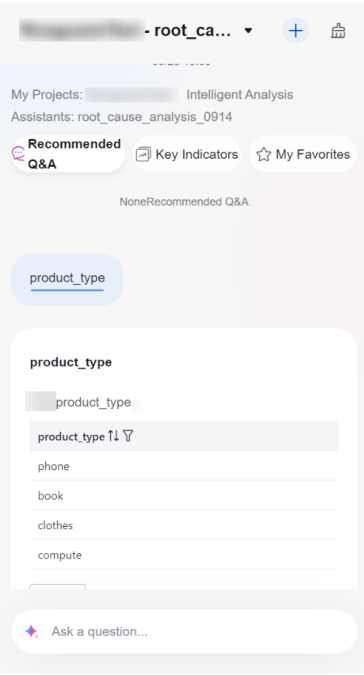
Figure 9-74 Obtaining the QR code and link



### Opening the Console on Mobile

1. Use your mobile device to scan the QR code or enter the link in a browser to access the Huawei Cloud console.
2. Enter your username and password on the mobile device to log into the console.
3. Click  in the upper left corner of the mobile page and select the project and intelligent analysis assistant.
4. Enter your question in the input box at the bottom of the mobile page to start the Q&A, as shown in [Figure 9-75](#).

Figure 9-75 Using the intelligent analysis assistant on mobile



# 10 Data Portal

---

## 10.1 Creating a Data Portal

A data portal is a collection of dashboards and data screens organized in a menu format. It allows for the creation of complex analytical menus with navigation capabilities. This section describes how to create a data portal.

### Prerequisites

- A project has been created by referring to [Creating a Project](#).
- A data source has been connected by referring to [Connecting to a Data Source](#).
- A dataset has been created by referring to [Creating a Dataset](#).
- A dashboard or large screen has been created by referring to [Creating a Dashboard](#) and [Creating a Large Screen](#).

### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Data Portals**. On the displayed page, click **Create Portal**.
5. Click **Portal Configuration** on the right of the page to set the data portal title and upload the logo. For details about the parameters, see [Table 10-1](#).

Figure 10-1 Portal configuration

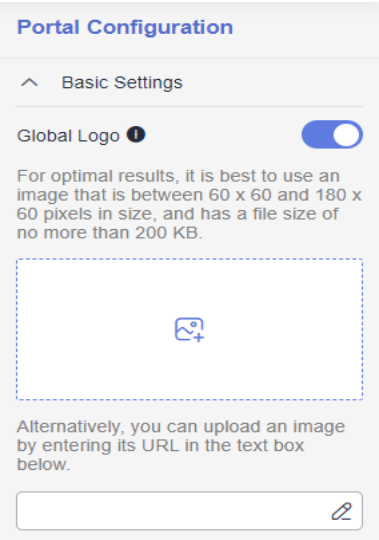


Table 10-1 Parameters for configuring a portal

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Logo       | <p>You can set your logo in two ways: by uploading an image or by entering the image URL. Click  in the input box to access the logo selection dialog box, where you can check, delete, or change your logo. You are advised to use an image of 60 x 60 to 180 x 60 pixels and keep the file size under 200 KB.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• Note that the Logo link must be accessible to the browser and comply with the content security policy.</li><li>• Use this feature with caution as it may result in the leakage of your icons.</li><li>• Uploaded images are only visible within the current project.</li></ul> |
| Main title | <p>You can determine whether to display the main title and configure the name and text format.</p> <ul style="list-style-type: none"><li>• The following fonts are supported: <b>Regular</b>, <b>Light</b>, <b>Dark</b>, and <b>Bold</b>.</li><li>• The font size ranges from 16 to 100.</li></ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.</li><li>• Color setting: You can customize the color of the main title.</li></ul>                                                                                                                                                                                     |

| Parameter                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subtitle                 | <p>You can determine whether to display the subtitle and configure the name and text format.</p> <ul style="list-style-type: none"><li>The following fonts are supported: <b>Regular</b>, <b>Light</b>, <b>Dark</b>, and <b>Bold</b>.</li><li>The font size ranges from 12 to 100.</li></ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.</li></ul> <ul style="list-style-type: none"><li>Color setting: You can customize the color of the subtitle.</li></ul> |
| Restore default settings | Restore the settings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Portal URL               | <p>User-defined domain name. You can use the user-defined domain name to open the data portal.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.</li></ul>                                                                                                                                                                                                                                                                                                       |

6. Configure the menu hierarchy, name, and select the referenced content.

Figure 10-2 Menu configuration

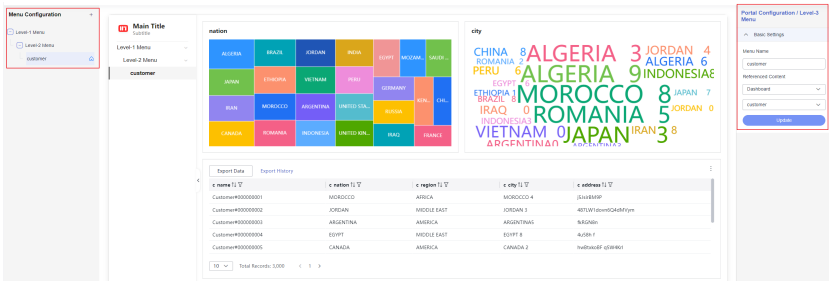


Table 10-2 Menu configuration parameters

| Parameter and Icon                                                                  | Description                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Add a menu.                                                                                                                                                                                                                                                                      |
| Renaming                                                                            | Click  and click <b>Rename</b> , or double-click the menu name to change name. The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed. |
| Delete                                                                              | Delete a menu.                                                                                                                                                                                                                                                                   |

| Parameter and Icon | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Menu settings      | <ul style="list-style-type: none"><li>• Level-1 menu basic configuration: Set the menu name.</li><li>• Level-2 menu basic configuration: Set the menu name.</li><li>• Level-3 menu basic configuration:<ul style="list-style-type: none"><li>– Menu name: Set the menu name.</li><li>– Referenced content: You can select a published dashboard and screen. You need to have the permission to view the dashboard and screen.</li></ul></li></ul> <p><b>NOTE</b><br/>A maximum of five levels are supported. Each level supports a maximum of 50 menu items.</p> |

7. Once the configuration is complete, click **Preview** in the upper right corner of the page. After confirming that the configuration is correct, click **Save**. The data portal is successfully created.

**Table 10-3** Parameters in the page header area

| Parameter and Icon                                                                  | Description                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Click the icon to return to the <b>Data Portals</b> page.                                                                                                                                                                                                                |
|  | Click the icon to rename the portal. (The name of the portal is the name displayed in the portals, which is different from the main title of the portal.) The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed. |
| Preview                                                                             | Click <b>Preview</b> to display the portal content on the current page. After you click <b>Preview</b> , the button changes to <b>Edit</b> .                                                                                                                             |
| Save                                                                                | Save the current portal configuration. If you do not click Save, all changes to the portal are not persisted.                                                                                                                                                            |

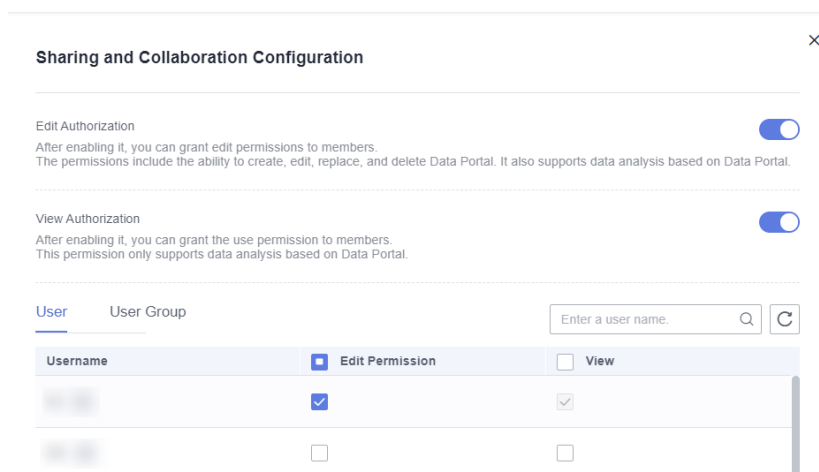
## 10.2 Sharing a Data Portal

DataArts Insight allows you to share a data portal with other users or user groups. The shared users or user groups will have editing and usage permissions for the data portal. This section explains how to share a data portal so that team members can collaborate quickly.

## Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Data Portals**.
5. On the displayed page, locate the data portal you want to share and click **Sharing and Collaboration** in the **Operation** column.
6. Select the permissions you want to grant.
  - **Edit Authorization:** Enabling this allows you to grant edit permissions to members, including editing and deleting data portals, as well as performing data analysis based on data portals.  
Enable the edit permission of the data portal. By default, the usage permission of the data portal is enabled.
  - **Use Authorization:** Enabling this allows you to grant the use permission to members. Only data analysis based on data portals is supported.
7. Select the objects that you want to authorize.
  - a. **User:** Grant a user the permission to edit the data portal.
  - b. **User Group:** After a user group is authorized, all users within the group will have the relevant permissions on the data portal.
8. Select the users and user groups to be authorized as required.

**Figure 10-3** Sharing and collaboration configuration page



## 10.3 Managing Data Portals

Managing data portals involves viewing, editing, and deleting them, which is essential for maintaining data accuracy, updating business insights promptly, and optimizing decision-making processes. This section describes how to view, edit, and delete a data portal.



## Prerequisite

A data portal has been created by referring to [Creating a Data Portal](#).

## Viewing a Data Portal

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Data Portals**.
5. Locate the data portal you want to view and click **View** in the **Operation** column.

## Editing a Data Portal

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Data Portals**.
5. Locate the data portal you want to edit and click **Edit** in the **Operation** column.

**Table 10-4** Parameters on the data portal page

| Parameter                           | Description                                                                                                                                                                                                                                                            |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                | Name of the new data portal.                                                                                                                                                                                                                                           |
| Creator                             | Person who creates the data portal.                                                                                                                                                                                                                                    |
| User who performed the modification | Person who modifies the data portal.                                                                                                                                                                                                                                   |
| Modified                            | Time when the data portal is edited.                                                                                                                                                                                                                                   |
| Operation                           | <ul style="list-style-type: none"><li>● <b>Edit</b>: Edit the data portal.</li><li>● <b>View</b>: View the data portal.</li><li>● <b>Sharing and Collaboration</b>: Assign permissions for the data portal.</li><li>● <b>Delete</b>: Delete the data portal.</li></ul> |

## Deleting a Data Portal

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Data Portals**.
5. Locate the data portal you want to delete and click **Delete** in its **Operation** column. Alternatively, select multiple data portals you want to delete and click **Delete** in the upper right corner of the list.
6. In the **Delete Portal** dialog box that appears, click **OK**.

# 11 Embedded Analytics

---

## 11.1 Creating Embedded Analytics

You can embed dashboards, intelligent analysis assistants, and large screens from your project into other systems to integrate with other applications, making business integration more convenient. This enhances cross-platform data sharing and business collaboration, making them more efficient and intuitive. This section describes how to create embedded analytics.

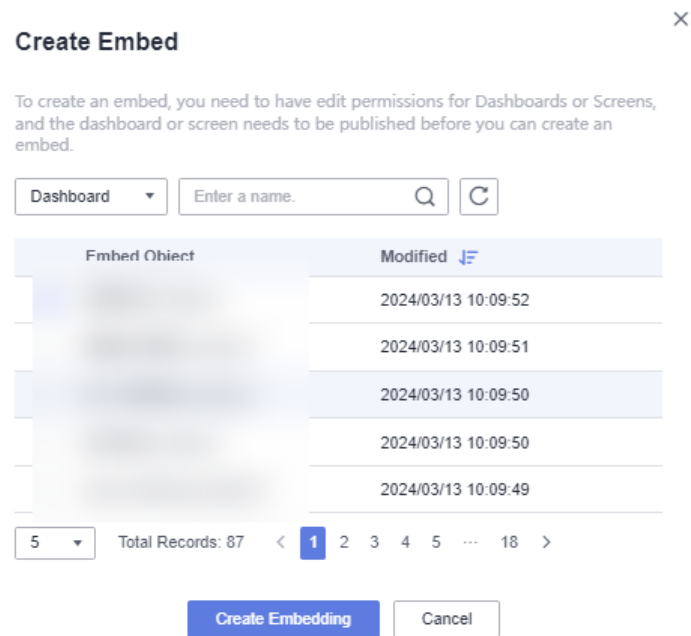
### Prerequisites

- There is a dashboard, intelligent analysis assistant, or large screen that has been published in the project.
- You have the analyst permission on the dashboard, intelligent analysis assistant, or large screen.

### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Embedded Analytics**. On the displayed page, click **Create Embed** in the upper right corner.

Figure 11-1 Embedded analytics



- 5. In the **Create Embed** dialog box that appears, select the object for which you want to create an embed and click **Enable Embedding**.
- 6. Set the parameters based on [Table 11-1](#).

Figure 11-2 Embed configuration

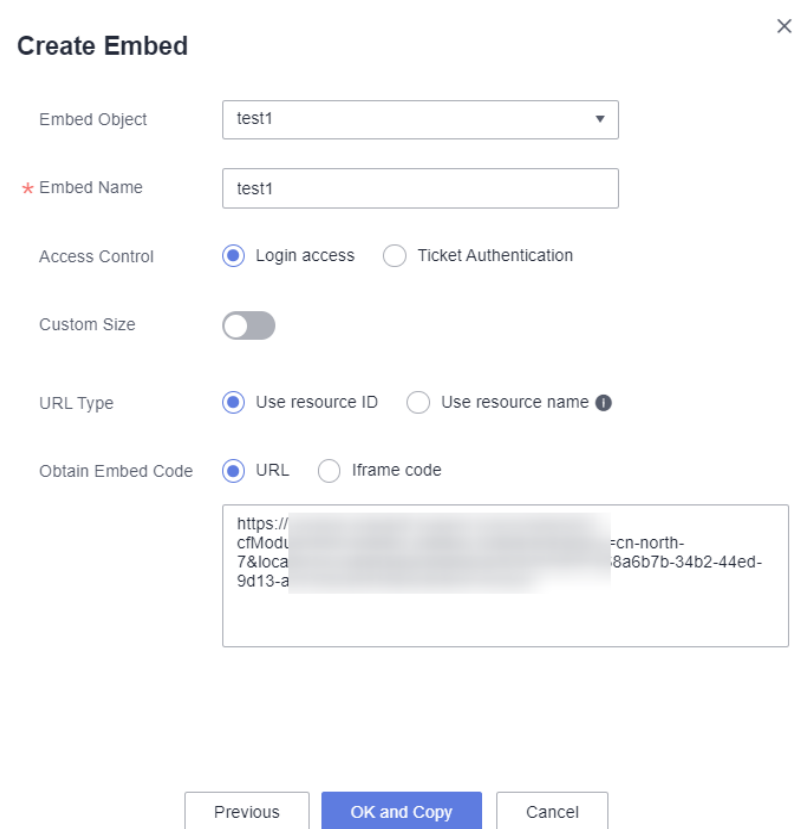


**Table 11-1** Parameters

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Embed Object      | The options currently are <b>Dashboard</b> , <b>Intelligent Analysis Assistants</b> , and <b>Screen</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Embed Name        | Uniqueness User-defined name<br><b>NOTE</b> <ul style="list-style-type: none"><li>If the embedded names are the same, click <b>OK and Copy</b>. The message "The embedding name is already in use." is displayed.</li><li>The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Access Control    | The value can be <b>Login access</b> or <b>Ticket authentication</b> .<br>Setting ticket authentication parameters: <ul style="list-style-type: none"><li>Click <b>Quick Generate</b> next to <b>Ticket</b>. In the displayed <b>Generate Ticket</b> dialog box, set the following ticket parameters:</li><li><b>Binding User</b> and <b>Binding User Group</b>: Select one user and one or multiple user groups, respectively. If you set them both, you can obtain the sharing and collaboration permissions of the user and the user groups.</li><li><b>Ticket Validity Period</b>: Set the validity period of the ticket, during which the generated URL/Iframe can be accessed.</li><li><b>Number of ticket access times</b>: You can control the number of times that the generated URL/Iframe can be accessed by setting the ticket access times.</li></ul> <b>NOTE</b> <ul style="list-style-type: none"><li>If you set <b>Embed Object</b> to <b>Intelligent Analysis Assistants</b>, you can only select <b>Ticket Authentication</b> for <b>Access Control</b>.</li><li>If set to <b>Ticket authentication</b>, any user can use a valid ticket to view dashboards, large screens, and intelligent analysis assistants, and access related data. Keep the ticket properly to avoid data leakage risks.</li></ul> |
| Custom Size       | This parameter is available only when you choose <b>Dashboard</b> when creating the embed. The default width is 1920, and the default height is 1080.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| URL Type          | <b>Use resource ID</b> and <b>Use resource name</b><br><b>NOTE</b><br>When using resource names as embed URLs, modifying the enterprise project name, project name, or embed name will make the previously used embed URL invalid. Be cautious when making modifications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Obtain Embed Code | The options are <b>URL</b> and <b>Iframe code</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

7. Click **OK and Copy**.
8. Access the embed using the copied URL/Iframe.

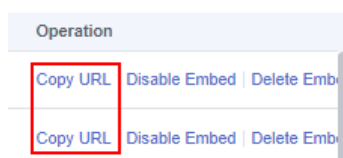
## 11.2 Managing Embedded Analytics

Managing embedded analytics includes operations such as copying URLs, copying iframes, closing embeds, and deleting embeds. These operations are crucial for maintaining data accuracy, timely updating business insights, and optimizing decision-making processes. This section describes how to manage embedded analytics.

### Copying a URL

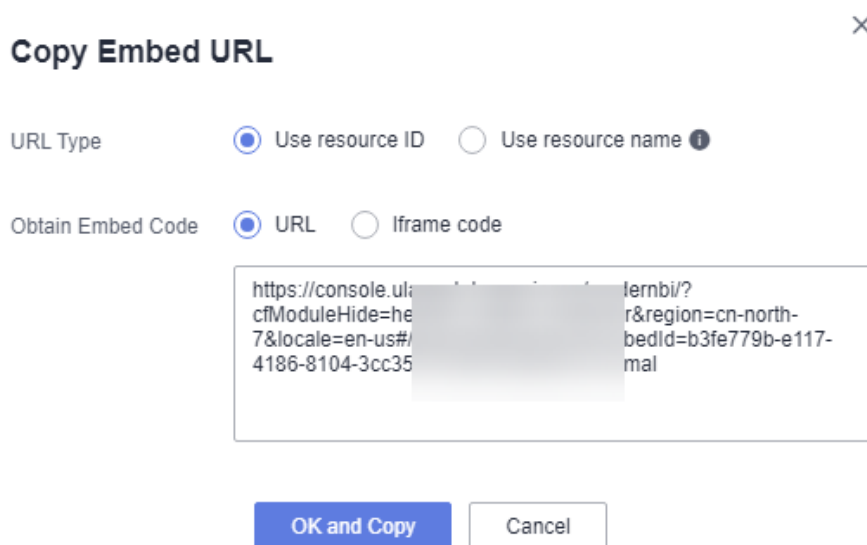
1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Embedded Analytics**.
5. On the displayed page, locate the target embedded analytics.

**Figure 11-3** Managing embedded analytics



6. Click **Copy URL** in the **Operation** column.

**Figure 11-4** Copy URL



7. In the **Copy Embed URL** dialog box that appears, set **URL Type** and click **OK and Copy**. A message is displayed indicating that the URL is copied. (You can also copy a URL in the **Create Embed** dialog box.)
8. Use a browser to access the address.

## Copying an Iframe

1. Access the **Embedded Analytics** page and locate the desired embedded analytics.
2. Click **Copy URL** in the **Operation** column.
3. In the **Copy Embed URL** dialog box that appears, set **Obtain Embed Code to Iframe code** and click **OK and Copy**.
4. The iframe is successfully copied if the message **Copied.** is displayed.

## Disabling or Deleting an Embed

1. On the **Embedded Analytics** page, locate the desired embedded analytics.
2. Click **Disable Embed** or **Delete Embed** in the **Operation** column. In the dialog box that appears, click **OK**.
3. If you want to re-enable the embed, click **Re-Enable** in the **Operation** column. The message **Re-enabled.** is displayed.

## Batch Disabling or Deleting Embed

1. On the **Embedded Analytics** page, locate the desired embedded analytics.
2. Select the embeds you want to batch disable or delete and click **Disable Embed** or **Delete** in the upper right corner of the list. In the dialog box that appears, click **OK**.

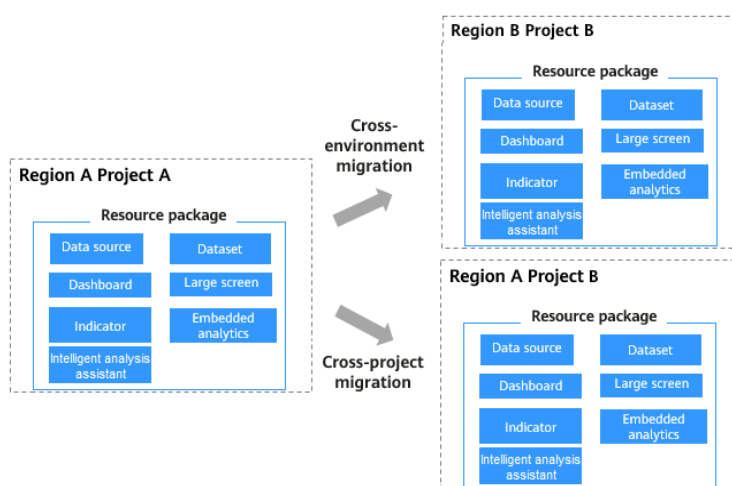
# 12 Migrating Resources

## 12.1 Resource Migration Overview

A resource bundle is a collection of resources that includes data sources, datasets, dashboards, large screens, intelligent analysis assistants, indicators, and embedded analytics. Resource migration is used to quickly migrate resource packages in different environments and projects. This section describes how to migrate resources.

- Cross-environment migration: Migrate resource data from region A to region B.
- Cross-project migration: Migrate resource packages from project A to project B within the same region. The sharing and collaboration permissions can be migrated across projects.

**Figure 12-1** Resource package migration



### Notes and Constraints

- Only administrators can perform operations related to resource migration.



- Only cross-project migration in the same region supports migration with the permission of the resource package. Currently, only the **Sharing and Collaboration** permission can be migrated synchronously.
- Associated data sources and datasets are automatically imported when dashboards, large screens, intelligent analysis assistants, and embedded analytics are imported.
- You need to reconfigure the password for accessing the data source when the resource package is imported to the new environment. Otherwise, you cannot access the data source.
- When data source resources are repeatedly imported, only data sources of the same type can be imported and replaced.
- If the new project does not have a resource package, the resource package is imported as a new one by default.
- You can click **Cross-project import** to switch project in the same environment.
- Users with the **DataartsInsight FullAccess** permission can migrate indicators.
- Collaborative permission migration is only supported across projects within the same account, as cross-environment migration is not supported.

## Resource Migration Process

Figure 12-2 Resource package migration



Table 12-1 Resource migration process

| No. | Step                        | Description                                                                                                                                                                                                                                       |
|-----|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Create a resource package   | Before migrating a resources, you need to create a resource package.                                                                                                                                                                              |
| 2   | Export the resource package | Export the resource package created in the current environment/region to the local host. When switching projects within the same environment, you can directly import the resource package across projects without the need to export it locally. |
| 3   | Import the resource package | Import the resource package into a new environment/region.                                                                                                                                                                                        |

## 12.2 Creating a Resource Package

Before migrating resource packages, you need to create one. When creating a resource package, you can select dashboards, large screens, intelligent analysis assistants, indicators, datasets, data sources, and embedded analytics. This section describes how to create a resource package.

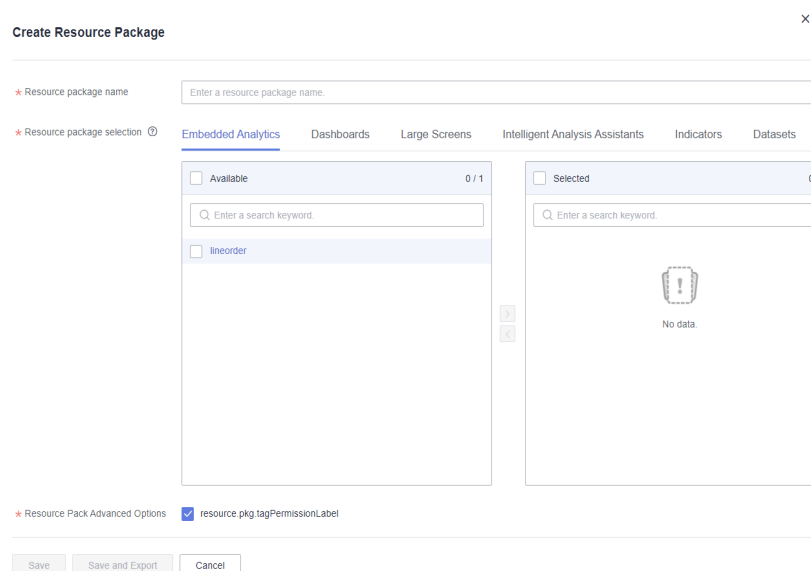
### Notes and Constraints

- The total size of images in a resource package cannot exceed 20 MB. Any excess will not be exportable or importable.
- Only administrators can perform resource migration operations.

### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Resource Migration**. On the displayed page, click **Create Resource Package** in the upper right corner.

**Figure 12-3** Creating a resource package



5. Set resource package parameters.

Table 12-2 Parameters

| Parameter                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resource package name          | Name of a resource package. The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Resource package selection     | <p>The following resource packages are supported:<br/><b>Dashboards, Large Screens, Intelligent Analysis Assistants, Indicators, Datasets, Data Sources, and Embedded Analytics.</b></p> <p>Select the resource package to export and click  to move it from <b>Available</b> to <b>Selected</b>.</p> <p><b>NOTE</b><br/>After selecting a resource, other resources associated with it will be exported to the resource package synchronously.</p> <ul style="list-style-type: none"><li>• For embedded analytics, the types of resources that can be exported synchronously include dashboards, large screens, datasets, indicators, and data sources.</li><li>• For dashboards, intelligent analysis assistants, and large screens, the types of resources that can be exported synchronously include datasets, indicators, and data sources.</li><li>• For datasets, the types of resources that can be exported synchronously include indicators and data sources.</li><li>• The "Correlation Indicator" configuration for indicators in the resource package only retains the indicators that are directly or indirectly associated with the current export.</li></ul> |
| Resource Pack Advanced Options | Once selected, the resource package will carry dataset row-level permissions authorized by user tags.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Export name                    | Name of the exported resource package. The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

6. Click **Save and Export**. Once the resource package is created, an **xx.zip** file is automatically downloaded to the local host.

## 12.3 Exporting a Resource Package

Once a local resource package expires, if you need to re-import it, you need to re-export the expired package from the package list. This section describes how to export a resource package.

### Notes and Constraints

- A resource package has been created. The total size of images in a resource package cannot exceed 20 MB. Any excess will not be exportable.

- Only administrators can perform resource migration operations.

## Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Resource Migration**.
5. On the displayed **Resource export** tab, select the resource package you need to export, and click **Export** in the **Operation** column. In the dialog box that appears, enter the name of the resource package to export and click **Confirm**. An **xx.zip** file is automatically downloaded to the local host.

Figure 12-4 Exporting a resource package

### Export

 Export name

## 12.4 Importing a Resource Package

This section describes how to import a resource package into a new environment or project.

- Cross-environment resource package import: Import resource packages in region A to region B. For details, see [Importing a Resource Package](#).
- Cross-project resource package migration under the same account: Click **Cross-project import** to import the resource package of project A in the same region to project B. For details, see [Importing a Resource Package Across Projects](#).

### Notes and Constraints

- A resource package has been created. The total size of images in a resource package cannot exceed 20 MB. Any excess will not be importable.
- Only administrators can perform resource migration operations.
- Cross-project migration within the same region only supports migration with the permissions of the resource package. Currently, only the **Sharing and Collaboration** permission can be migrated synchronously.

## Importing a Resource Package

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Resource Migration**. On the displayed page, click the **Resource Import** tab.

**Figure 12-5** Resource import



5. Click **Import Resource Package** in the upper right corner. In the dialog box that appears, set the parameters based on [Table 12-3](#).

### NOTE

To import custom component packages from environment A to environment B, you must register the same custom components in the developer platform of environment B. The component name and development package must match those in environment A. Failure to do so will result in the custom components not being displayed in the large screen of environment B.

**Table 12-3** Parameters for importing a resource package

| Parameter                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Upload Resource Package  | Select the resource package downloaded to the local PC.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Repeated resource import | Select an import mode. <ul style="list-style-type: none"><li>• Replace: Replace the resource package based on the selected rule.</li><li>• Do not replace: Import the resource package as a new one.</li></ul>                                                                                                                                                                                                                                                                                      |
| Replacement Rule         | <ul style="list-style-type: none"><li>• Same-source replacement: Resources from the same source are replaced. The replaced resource and the resource in the resource package are exported from the same resource.</li><li>• Same-name replacement: If a resource with the same name exists during resource import, replace the resource with the resource in the resource package.</li></ul> <p><b>NOTE</b><br/>Only data sources of the same type can be replaced for same-source replacement.</p> |

6. After the preceding steps are complete, click **Complete**. The resource package is imported.

## Importing a Resource Package Across Projects

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. Click the search icon in the upper right corner, enter a desired project name. Then, click the retrieved project.
5. In the navigation pane on the left, choose **Work Management > Resource Migration**.
6. Select the resource package to be migrated and click **Cross-project import** in the **Operation** column. In the dialog box that appears, set the parameters based on [Table 12-4](#).
7. Click **Confirm**. You can view the imported resource package on the **Resource Import** tab page.

Figure 12-6 Importing across project

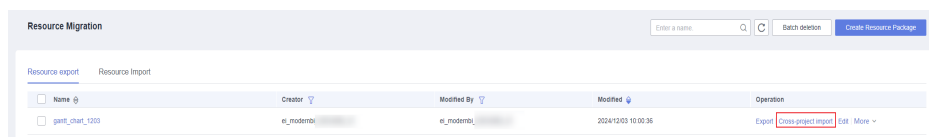


Table 12-4 Parameters for cross-project import

| Parameter                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Repeated resource import | <p>This parameter can be set to <b>Replace</b> (cannot be restored) or <b>Do not replace</b>.</p> <ul style="list-style-type: none"><li>• Replace: Replace the resource package based on the selected rule.</li><li>• Do not replace: Import the resource package as a new one.</li></ul>                                                                                                                                                                                                  |
| Replacement Rule         | <ul style="list-style-type: none"><li>• Same-source replacement: Resources from the same source are replaced. The replaced resource and the resource in the resource package are exported from the same resource.</li><li>• Same-name replacement: If a resource with the same name exists during resource import, replace the resource with the resource in the resource package.</li></ul> <p><b>NOTE</b><br/>During the import, only data sources of the same type can be replaced.</p> |
| Import Project page      | Select a project in the current environment.                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter                                     | Description                                                                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Include sharing and collaboration permissions | When selected, the sharing and collaboration permissions of each resource in the resource package are synchronously migrated. |

## 12.5 Managing Resource Packages

Managing resource packages includes operations such as editing and deleting resource packages, as well as viewing export and import records. These operations are crucial for maintaining data accuracy, timely updating business insights, and optimizing decision-making processes. This section describes how to manage resource packages.

### Notes and Constraints

Only administrators can perform operations related to resource migration.

### Editing a Resource Package

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. On the top menu of the console, click **Project**. On the displayed **My Projects** page, click the name of the desired project.
4. In the navigation pane on the left, choose **Work Management > Resource Migration**.
5. On the displayed page, select the resource package you want to edit and click **Edit** in the **Operation** column. In the slide-out panel, edit basic information about the resource package and click **Confirm**.

**Table 12-5** Parameters for editing a resource package

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resource package name      | Name of a resource package. The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.                                                                                                                                                                                                                                          |
| Resource package selection | The following resource packages are supported:<br><b>Dashboards, Large Screens, Intelligent Analysis Assistants, Indicators, Datasets, Data Sources, and Embedded Analytics.</b><br><br>Select the resource package to export and click  to move it from <b>Available</b> to <b>Selected</b> . |

| Parameter       | Description                                                                                                                                           |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Directly export | If you select this option, the resource package is automatically exported to the local PC.                                                            |
| Export name     | Name of the exported resource package. The name can contain up to 32 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed. |

## Deleting a Resource Package

1. In the navigation pane on the left, choose **Work Management > Resource Migration**.
2. On the displayed page, select the resource package you want to delete, click **More** in the **Operation** column, and select **Delete**. In the dialog box that appears, click **OK**.

## Viewing Export Records

1. In the navigation pane on the left, choose **Work Management > Resource Migration**.
2. Locate the resource package whose export records you want to view, click **More** in the **Operation** column, and select **Export Records**.
3. In the displayed slide-out panel, view its export information.

## Viewing Resource Import Logs

1. In the navigation pane on the left, choose **Work Management > Resource Migration**. On the displayed page, click the **Resource Import** tab.
2. Locate the resource package whose import logs you want to view and click **View Log** in the **Operation** column.



# 13 System Configuration

## 13.1 Organization Management

### 13.1.1 User Management

User management enables administrators to effectively manage various types of users and create and set user groups based on the different needs of organization members. This section describes how to manage users.

#### User Management

- **Creating a user**
  - a. Log in to the DataArts Insight console.
  - b. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
  - c. In the top menu of the console, click **System Settings**.
  - d. In the navigation pane on the left, choose **Organization Management > User Management**.

**Table 13-1** Parameters

| Parameter      | Description                                                                                                                                                                                                                           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Username       | ID of the user                                                                                                                                                                                                                        |
| Permission     | The types include <b>General</b> and <b>Unactivated</b> . <ul style="list-style-type: none"><li>• <b>General</b>: Users have full permissions.</li><li>• <b>Unactivated</b>: Users cannot use the DataArts Insight service.</li></ul> |
| Effective Time | Time when a subscriber is activated.                                                                                                                                                                                                  |

| Parameter | Description                                                                                                                                                                                                                                                  |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type      | <ul style="list-style-type: none"><li>● <b>IAM</b>: Identity and Access Management (IAM) is a Huawei Cloud basic service that helps you manage access permissions for your cloud services and resources.</li><li>● <b>SELF-BUILT</b>: custom user.</li></ul> |
| Operation | <ul style="list-style-type: none"><li>● Edit: Edit user permissions.</li><li>● Delete: Delete a user.</li></ul>                                                                                                                                              |

- e. On the displayed **Users** tab, click **Create User** in the upper right corner.
  - Manually adding a user (for federated users): Click **Manual**, enter the **Username**, select permission type, and **User Group**, and click **Confirm**. The new user is displayed in the list.
  - Batch import: Click **Batch import**, select a spreadsheet file to upload, and click **Confirm**. The new user is displayed in the list.
- f. New user verification. Log in to the service as a new user and check whether the service can be operated.
  - **General**: Users have full permissions.
  - **Read-only**: Users only have the permission to view objects such as data sources, datasets, and reports.
  - **Unactivated**: Users cannot use the DataArts Insight service.
- **Activating a user**
  - a. In the navigation pane on the left, choose **Organization Management > User Management**.
  - b. On the displayed page, click **Activate User** in the upper right corner. In the slide-out panel, select a user group from the drop-down list and select users in the **Available** list.
  - c. Click  to move the selected users to the **Selected** list. Select the user permission type and click **Confirm**. The newly activated users are displayed on the **Users** tab.
- **Editing a user**
  - a. In the navigation pane on the left, choose **Organization Management > User Management**.
  - b. On the displayed **Users** tab, locate the user whose information you want to edit and click **Edit** in the **Operation** column. In the displayed slide-out panel, change the permission type and click **Confirm**.

 **NOTE**

You cannot edit the user permissions of the main account or delete it.

- **Deleting a user**

- a. In the navigation pane on the left, choose **Organization Management > User Management**.
- b. On the displayed **Users** tab, locate the user you want to delete and click **Delete** in the **Operation** column. In the dialog box that appears, click **OK**.
- **Modifying permissions in batches**
  - a. In the navigation pane on the left, choose **Organization Management > User Management**.
  - b. On the displayed **Users** tab, select the users whose permissions you want to batch modify and click **Batch edit permissions** above the user list.
  - c. In the dialog box that appears, select the required permission type and click **Confirm**.

## User Group Management

- **Adding a user group**
  - a. In the navigation pane on the left, choose **System Settings**.
  - b. In the navigation pane on the left, choose **Organization Management > User Management**. On the displayed page, click the **User Groups** tab.
  - c. In the **User Group List**, click  next to **All**. A new node is displayed. Name the new node, move the cursor to the blank area on the page, and click to save the user group.
- **Editing a user group (renaming)**: Click  next to the user group. In the displayed box, edit the user group, click the blank area on the page to save the edited content.
- **Deleting a user group**: Click  next to the user group. In the dialog box that appears, click **OK**. To delete a user group, you must first remove all the subgroups within that user group.
- **Adding a user to a user group**: Select a user under the **Users** list on the right of the page and click **Add User**. The user is displayed in the user group list.
- **Removing a user from a user group**: In a user group, locate the user you want to remove and click **Remove** in the **Operation** column. In the dialog box that appears, click **OK**.

### 13.1.2 Tag Management

You can manage DataArts Insight users and user groups by tags. This method allows data permissions to be managed according to these tags for both users and groups. This section describes how to manage tags.

#### Notes and Constraints

- To use this function, you must have the administrator permissions.

#### Step 1: Add a Tag

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.

3. In the top menu of the console, click **System Settings**.
4. Choose **Organization Management > Tag Management**. On the displayed **User Tags** tab, click **Add Tag**. In the dialog box that appears, set the parameters based on [Table 13-2](#).
5. Click **Confirm**.
  - For how to add tags in batches, see [Setting Tag Values in Batches](#).
  - To edit or delete a tag, click  next to the tag name.

**Table 13-2** Parameters for adding a tag

| Parameter              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tag Name               | Tag name. The name can contain up to 128 characters. Only letters, numbers, hyphens (-), and underscores (_) are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Default Tag Value Type | If the tag value of a user or user group is not changed, the preset value is used by default. <ul style="list-style-type: none"><li>• <b>Enumeration</b>: After selecting <b>Enumeration</b>, you need to enter the default tag value. A user/user group can view the entered tag value by default.</li><li>• <b>All</b>: All values. By default, a user or user group can view all values.</li><li>• <b>Null</b>: Null value. By default, a user or user group can view data whose value is <b>Null</b> (IS NULL).</li><li>• <b>Ignore</b>: By default, a user or user group ignores the current tag, meaning they do not have the tag by default.</li></ul> |
| Description            | Add a description to the tag. You can enter information such as the usage and use cases of the tag, making it easier for future management. Enter a maximum of 512 characters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Step 2: Set Tags for a User or User Group

1. Choose **Organization Management > Tag Management**.
2. Click **Edit** in the **Operation** column. In the displayed slide-out panel, set the tag type and value. For example, add the user tag **tag\_product\_type** and assign a tag value to **user1**, as shown in [Figure 13-1](#).

Figure 13-1 User tag example

tag\_product\_type

\* Tag Name

\* Default tag value type

Description

0/512

Enter a name.

| User name | Tag type    | Tag value |
|-----------|-------------|-----------|
| user1     | Enumeration | book      |
| user2     | Enumeration | phone     |

- 3. Set tag values in batches: You can set tag values and add tags based on exported data.
  - a. Click **Import Tags**.
  - b. In the displayed **Import User Tags** dialog box, click **Export Tags** to export all users and their tags as a spreadsheet file. In the file, set tag values and add tags for all users.
  - c. Click **Select File**, select the edited spreadsheet file, and click **Confirm**.

Figure 13-2 Importing user tags

Import User Tags

① **Export Tags**

Export Tags

② **Editing tags locally**

③ **Import Tags**

Select File

Only Excel files can be uploaded, and the number of account data records cannot exceed 1000.

Confirm Cancel

 NOTE

- When editing an spreadsheet file, you can only set tag values and add tags. Deleting and editing tags, as well as adding and modifying users/user groups, are not supported. Additionally, you are not allowed to edit the values in the **account\_id** column; otherwise, the file upload will fail.
- You can import a maximum of 200 tags and 1,000 users or user groups at a time using a spreadsheet file.
- The tag name can contain up to 64 characters. Only letters, numbers, hyphens (-), and underscores (\_) are allowed.

## Helpful Links

Once you have finished editing the user tags, you can use them to grant user tag permissions to the data in the dataset. For details, see [Authorization Based on User Tags](#).

### 13.1.3 Agency Management

You can share resources to other accounts or delegate an individual or team to manage your resources. You do not need to share your security credentials (the password and access keys) with the delegated party. Instead, the delegated party can log in with its own account credentials and then switches the role to your account and manage your resources.

#### Batch Authorization/Batch Cancel

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. In the top menu of the console, click **System Settings**.
4. Choose **Organization Management > Agency Management**. The page is displayed.
5. Select target agencies and click **Authorize** in the upper right corner of the page.

## 13.2 Function Settings

### 13.2.1 Configuring an OBS Bucket

A bucket is a service in cloud computing used for storing and managing data. Data buckets are used to store various types of data files, supporting multiple purposes such as backup, analysis, and content distribution. Static resource buckets are used to host static website content that does not require server-side processing. Setting up OBS buckets helps in efficiently storing and managing data.

#### Prerequisites

- The OBS bucket to be exported has been created and the endpoint and the OBS bucket name have been obtained.

- After setting up the OBS bucket information, the administrator needs to grant OBS operation permissions synchronously.

## Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. In the top menu of the console, click **System Settings**.
4. In the navigation pane on the left, choose **Function Settings > OBS Bucket Settings**. On the page that appears, set the data bucket parameters.

**Figure 13-3** Data bucket

**Data storage bucket**

\* Endpoint

\* Bucket Name

Path Prefix

\* Max. Retention Period (Days)  Setting this parameter to 0 removes any restrictions on the retention period.

\* File Encryption  ☒ None ☐ SSE-OBS

AK

SK  

**Table 13-3** Data bucket parameter descriptions

| Parameter   | Description                                                                                                                                                                                             |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Endpoint    | Endpoint. OBS provides an endpoint for each region. An endpoint can be understood as the regional domain name of OBS in different regions, used to handle access requests for their respective regions. |
| Bucket Name | A bucket is a container for storing objects in OBS.                                                                                                                                                     |
| Path Prefix | Path where an object is stored in a bucket.                                                                                                                                                             |

| Parameter                    | Description                                                                                                                                                                                          |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Max. Retention Period (Days) | Retention period, in days.<br><b>NOTE</b><br>Set this parameter to 0 removes any restrictions on the retention period.                                                                               |
| File Encryption              | <ul style="list-style-type: none"><li>None: Files to be exported or imported are not encrypted.</li><li>SSE-OBS: Use the SSE-OBS. For details, see <a href="#">Server-side encryption</a>.</li></ul> |
| AK                           | Access key ID. It is the unique ID associated with the SK. An AK is used together with an SK to cryptographically sign requests.                                                                     |
| SK                           | Used together with the access key ID to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.                                                |

- Set static resource bucket parameters.
- Click **Save** to complete the configuration.

**Figure 13-4** Static resource bucket**Static resource storage bucket**

★ Bucket Type ☐ System Open Bucket ☒ User-defined Bucket

★ Endpoint

★ Bucket Name

Path Prefix

★ Max. Retention Period (Days)     
Setting this parameter to 0 removes any restrictions on the retention period.

★ File Encryption  ☒ None ☐ SSE-OBS

AK

SK  



**Table 13-4** Static resource bucket parameter descriptions

| Parameter                    | Description                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bucket Type                  | <ul style="list-style-type: none"><li>• <b>System Open Bucket:</b> An OBS public bucket preset by the service, publicly readable and writable by everyone. If it involves private data, use a custom bucket.</li><li>• <b>User-defined Bucket:</b> A user-configured OBS bucket that can restrict access permissions with bucket policies to protect private data.</li></ul> |
| Endpoint                     | Endpoint. OBS provides an endpoint for each region. An endpoint can be understood as the regional domain name of OBS in different regions, used to handle access requests for their respective regions.                                                                                                                                                                      |
| Bucket Name                  | A bucket is a container for storing objects in OBS.                                                                                                                                                                                                                                                                                                                          |
| Path Prefix                  | Path where an object is stored in a bucket.                                                                                                                                                                                                                                                                                                                                  |
| Max. Retention Period (Days) | Retention period, in days.<br><b>NOTE</b><br>Set this parameter to 0 removes any restrictions on the retention period.                                                                                                                                                                                                                                                       |
| File Encryption              | <ul style="list-style-type: none"><li>• None: Files to be exported or imported are not encrypted.</li><li>• SSE-OBS: Use the SSE-OBS. For details, see <a href="#">Server-side encryption</a>.</li></ul>                                                                                                                                                                     |
| AK                           | Access key ID. It is the unique ID associated with the SK. An AK is used together with an SK to cryptographically sign requests.                                                                                                                                                                                                                                             |
| SK                           | Used together with the access key ID to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.                                                                                                                                                                                                                        |

## 13.2.2 Quota Management

Quota Management is used to collect statistics on basic usage and project distribution. This feature assists in effectively managing purchased quotas and offers a gateway for charged scale-out, enhancing the overall service experience.

### Scenario

After scale-out, you can view the basic usage and project distribution.

### Acceleration Engine

Acceleration engine space management is used to purchase and release acceleration engine space and store user acceleration data, query results, and cached data.

- 1. Log in to the DataArts Insight console.
- 2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
- 3. In the top menu of the console, click **System Settings**.
- 4. In the navigation pane on the left, choose **Function Settings > Quota Management**.
- 5. Click **Acceleration Engine** to view the space usage records.

Figure 13-5 Space usage of the acceleration engine

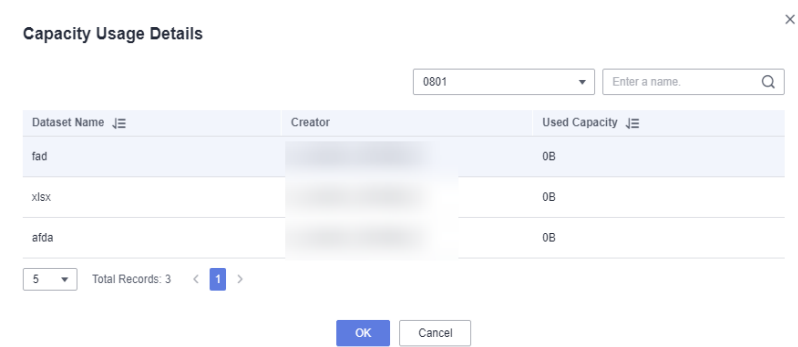


Table 13-5 Parameters

| Parameter            | Description                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------------------|
| Total Capacity       | Total capacity of the acceleration engine space, which consists of free capacity and purchased capacity. |
| Used                 | Total capacity used by each project.                                                                     |
| Free                 | Basic usage                                                                                              |
| Purchased            | Purchased capacity                                                                                       |
| Project              | Project name                                                                                             |
| Creator              | Person who creates the project.                                                                          |
| Used Capacity        | Capacity used by each project.                                                                           |
| Accelerated Datasets | Time of the dataset acceleration                                                                         |
| Operation            | Capacity usage details of each dataset in a project.                                                     |

- 6. To view the capacity usage details of datasets, you can click **View Details** in the **Operation** column of the selected project.

Figure 13-6 Capacity usage details page



## Large Screen

1. On the left of the console, choose **System Settings > Function Settings > Quota Management**. The page is displayed.
2. Click **Large Screen** to view the project space usage records.

Figure 13-7 Large screen

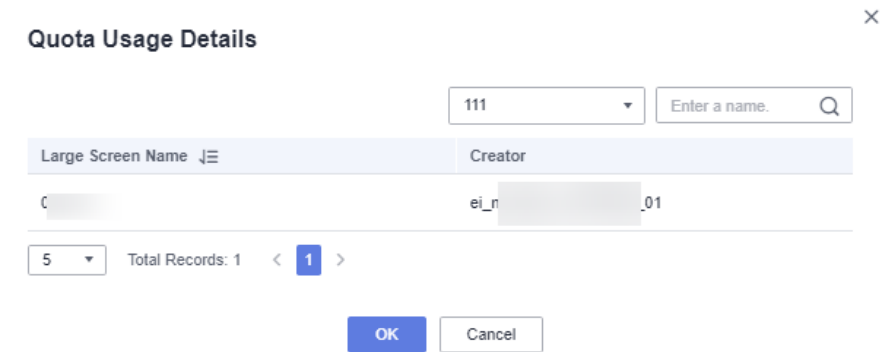


Table 13-6 Parameters

| Parameter   | Description                                                                                  |
|-------------|----------------------------------------------------------------------------------------------|
| Total Quota | Total quota of the large screen space, which consists of the free quota and purchased quota. |
| Used        | Total quota used by each project.                                                            |
| Free        | Basic usage                                                                                  |
| Purchased   | Purchased quota                                                                              |
| Project     | Project name                                                                                 |
| Creator     | Person who creates the project.                                                              |
| Used        | Quota used by each project.                                                                  |
| Operation   | Quota usage details of each dataset in a project.                                            |

3. To check the quota usage details of the large screen, you can click **View Details** in the **Operation** column of the selected project. The **Quota Usage Details** page is displayed.

Figure 13-8 Quota usage details page



Embedded Analytics

- 1. On the left of the page, choose **System Settings > Function Settings > Embedded Analytics**. The page is displayed.
- 2. View the space usage records.

Figure 13-9 Embedded analytics

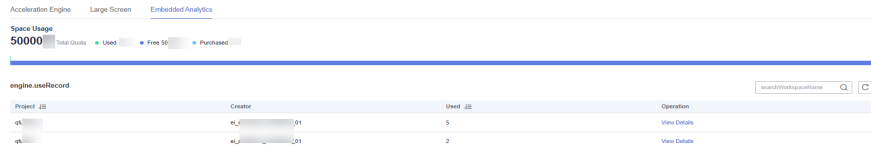


Table 13-7 Parameters

| Parameter   | Description                                                                         |
|-------------|-------------------------------------------------------------------------------------|
| Total Quota | Total quota for embedded analysis, which consists of free quota and purchase quota. |
| Used        | Total quota used by each project.                                                   |
| Free        | Basic usage                                                                         |
| Purchased   | Purchased quota                                                                     |
| Project     | Project name                                                                        |
| Creator     | Person who creates the project.                                                     |
| Used        | Quota used by each project.                                                         |
| Operation   | Quota usage details of each dataset in a project.                                   |

- 3. To view the quota usage details of the embedded analytics, you can click **View Details** in the **Operation** column of the selected project. The **Quota Usage Details** page is displayed.

**Figure 13-10** Quota usage details page

### Quota Usage Details

qfute

Enter a name. Q

| Embedded Analytics Name | Creator |
|-------------------------|---------|
|                         | ei_     |
| te                      | ei_     |

5 Total Records: 2 < 1 >

OK Cancel

## 13.3 Collaborative Office

### 13.3.1 Subscription Management

DataArts Insight supports sending dashboards to users in the form of links via DingTalk, Lark, DingTalk groups, email, and Lark groups. You can flexibly set the sending frequency and receiving method for subscription tasks to ensure fast and convenient information delivery. This section describes how to create a subscription task.

#### Creating a Subscription Task

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. In the top menu of the console, click **System Settings**.
4. In the navigation pane on the left, choose **Office Collaboration > Subscription Management**.
5. On the displayed page, click **Create Subscription Task** in the upper right corner.

Figure 13-11 Creating a subscription task

Create Subscription Task

\*

Name

\*

Sending Subject

Subject Suffix

☐ Show time

Every ...

▼

T

+

▼

0

Opening Description

\*

Chart Content

z

▼

Dashboard

▼

lit

▼

Closing Description

Sending Time

Daily

▼

hh:mm

🕒

\*

Receiving Method

DingTalk

▼

\*

Recipient

Select a recipient.

▼

Confirm

Cancel

6. Set the parameters based on [Table 13-8](#).
7. Click **Save**.

Table 13-8 Parameters

| Parameter       | Ma<br>nd<br>ato<br>ry | Description                                                                                                                                                                                        |
|-----------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name            | Yes                   | Name of the subscription task. The name can contain up to 64 characters and cannot start or end with a space. Only letters, numbers, spaces, underscores (_), and hyphens (-) are allowed.         |
| Sending Subject | Yes                   | Subject of the subscription task, that is, the title of the email or DingTalk message.                                                                                                             |
| Subject Suffix  | No                    | If selected, the send time will be automatically appended to the topic suffix. You can customize display times based on the send time using + or -.<br><b>NOTE</b><br>The value cannot exceed 366. |

| Parameter           | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Opening Description | No        | Opening part of the subscription task body.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Chart Content       | Yes       | Chart content pushed in the subscription task body.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Closing Description | No        | Closing part of the subscription task body.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Sending Time        | No        | Time when the subscription task sends notifications, for example, 17:00 every day.                                                                                                                                                                                                                                                                                                                                                                                                             |
| Receiving Method    | Yes       | Supported methods: DingTalk, Lark, DingTalk group, Lark group, and email.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Recipient           | Yes       | This parameter is required when <b>Receiving Method</b> is set to <b>DingTalk</b> or <b>Lark</b> .<br>User who receives the subscription task. They can be a user or user group.                                                                                                                                                                                                                                                                                                               |
| Webhook URL         | Yes       | This parameter is required when <b>Receiving Method</b> is set to <b>DingTalk group</b> or <b>Lark group</b> .<br>A Webhook URL is a specific URL that allows external applications or services to send messages to DingTalk or Lark groups via HTTP POST requests when specific events occur.<br>For how to obtain the Webhook URL for DingTalk or Lark groups, see <a href="#">Obtain the Webhook URL of a DingTalk Group</a> and <a href="#">Obtain the Webhook URL of the Lark Group</a> . |
| Topic               | Yes       | This parameter needs to be set if email is selected as the receiving method. The topic created in the Message Notification Service (SMN) serves as a channel for sending messages and subscribing to notifications, providing a communication link between publishers and subscribers.                                                                                                                                                                                                         |

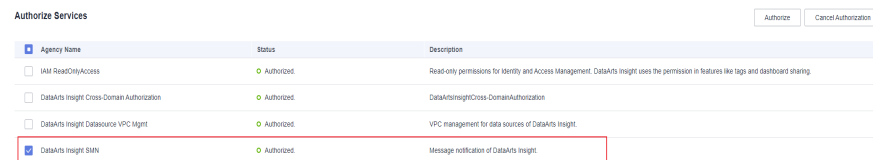
## Example Scenario

Send a daily report on the company's global sales situation to XX company employees via email.

### Step 1: Grant Agency Permissions

The administrator grants the **DataArts Insight SMN** permission for subsequent message notifications.

1. Log in to the DataArts Insight console.
2. In the top menu of the console, click **System Settings**. In the navigation pane on the left, choose **Organization Management > Agency Management**.
3. Select **DataArts Insight SMN** and click **Authorize**.

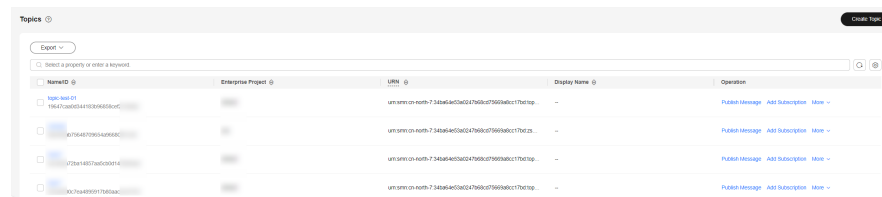
**Figure 13-12** Agency authorization

| Agency Name                                 | Status     | Description                                                                                                                                 |
|---------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| IAM ReadOnlyAccess                          | Authorized | Read-only permissions for Identity and Access Management. DataArts Insight uses the permission in features like tags and dashboard sharing. |
| DataArts Insight Cross-Domain Authorization | Authorized | DataArts Insight Cross-Domain Authorization.                                                                                                |
| DataArts Insight Database VPC Mgmt          | Authorized | VPC management for data sources of DataArts Insight.                                                                                        |
| DataArts Insight SMN                        | Authorized | Message notification of DataArts Insight.                                                                                                   |

## Step 2: Create a Topic on SMN

SMN is a reliable, scalable, and massive message handling service. DataArts Insight uses this service to actively push email messages to subscribers.

1. Log in to the management console, click  in the upper left corner, and select a region and project.
2. Click  in the upper left corner of the page and choose **Management & Governance > Simple Message Notification**.
3. In the navigation pane on the left, choose **Topic Management > Topics**.
4. On the **Topics** page, click **Create Topic** in the upper right corner. On the displayed page, set the parameters. In this example, create the topic **topic-test-01** and add the email information of XX company employees to the topic.

**Figure 13-13** Creating a topic

| Name          | Enterprise Project | UIN | Display Name | Operation                            |
|---------------|--------------------|-----|--------------|--------------------------------------|
| topic-test-01 | ...                | ... | ...          | Public Message Add Subscription More |
| ...           | ...                | ... | ...          | Public Message Add Subscription More |
| ...           | ...                | ... | ...          | Public Message Add Subscription More |
| ...           | ...                | ... | ...          | Public Message Add Subscription More |

## Step 3: Create a Subscription Task

Push subscription content to subscribers via email.

1. Log in to the DataArts Insight console.
2. In the top menu of the console, click **System Settings**. In the navigation pane on the left, choose **Office Collaboration > Subscription Management**.
3. In the navigation pane on the left, choose **Office Collaboration > Subscription Management**. On the displayed page, click **Create Subscription Task** in the upper right corner.
4. Set the parameters. Set **Receiving Method** to **Email** and **Topic** to **topic-test-01** ([Figure 13-11](#)).



5. Click **OK**. The subscription task is created. Recipients in the **topic-test-01** topic will receive the email (Figure 13-15).

Figure 13-14 Creating a subscription task

**Edit Subscription Task**

---

\* Name

\* Sending Subject

Subject Suffix ☒ Show time

Opening Description 

You can access our latest global sales daily report through the following link:

\* Chart Content

Closing Description 

If you have any questions or ideas regarding any data or strategies in the daily report, please feel free to contact me at any time!

Sending Time 

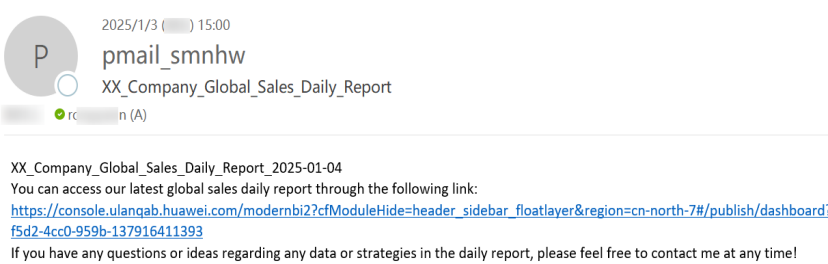
Daily

\* Receiving Method

\* Topic

---

Figure 13-15 Email content



## 13.3.2 Access Office Software

Before creating a subscription task, you need to connect the office software to the DataArts Insight. This section describes how to connect the office software to the DataArts Insight.

### 13.3.2.1 Lark

The administrator can create a user-defined application on the Lark platform to push messages to users.

## Notes and Constraints

- The member ID cannot be set to Chinese characters or special characters. Otherwise, a single point of failure (SPOF) occurs.
- Member IDs cannot be modified. To modify a member ID, delete the member and then add it again.

## Procedure

1. Log in to the Lark management background as an administrator, choose **Workbench > Application Management**, and click **Create Application**.
2. Choose **Enterprise App > Create Enterprise App**.
3. On the creation page, select an enterprise-built application, enter the necessary information, and click **Create**.
4. Click the newly created application **Document test**.
5. Grant the following permissions in permission management: basic address book access, read address book as app, access basic department information, access address book department structure information, access organization information, access user basic information, access user id, user id by phone number or email, access and update group information.
6. Under the application created on the Lark open platform, choose **Credentials and Basic Information > App Credentials** and obtain the application ID and key.
7. In the navigation pane of the DataArts Insight console, choose **System Settings**. On the displayed page, choose **Office Collaboration > Office Software Access**. On the displayed page, enter the obtained application name, ID, and key. For example, the application name is **Document test**.

**Figure 13-16** Accessing office software

Office Software Access

DingTalk interface authorization Flybook interface authorization

Configure the application

\* Application name

\* AppId

\* App Key

Save

Contact synchronization Update

8. Click **Save** and then **Update**.

## Obtain the Webhook URL of the Lark Group

You have added the DingTalk robot on the target group.

1. Access the target group, click **More** in the upper right corner of the group, and click **Group Robots** on the right.
2. On the robot page, click **Add Robot** and then click **Custom Robot** to add it.
3. Set the name and description of the custom robot and click add.
4. Obtain the webhook URL of the custom robot.

### 13.3.2.2 DingTalk

If you use the DingTalk as a mobile office platform, you can create a self-built application in the DingTalk and view reports through the DingTalk.

#### Procedure

1. Log in to the DingTalk using an enterprise account as the administrator and click self-built Apps on the Workspace tab page.
2. Choose application development > enterprise internal development from the main menu and click **Create application**.
3. Enter the necessary information such as selecting "H5 micro-application" as the application type, and filling in the application name and description. For example, the document name and description could be **Document Test**. Choose "Enterprise Internal Independent Development" as the development method and click **Confirm Creation**.
4. Grant the necessary permissions on the permission management page. The following permissions are required: basic access to personal information of user contacts, basic access to user information in a department, access to role details, access to the employee list of a specified user, access to the list of all parent departments of a specified user, access to the department list, access to the executive mode setting of a user, access to user details query, access to the user ID list of a department, and access to the administrator list.
5. Obtain the **AppKey** and **AppSecret**, click **Basic Information** in the document test app, and check the values of **AppKey** and **AppSecret** under application credentials.
6. Obtain the **RobotCode**. Choose app functions > robot and message push. On the displayed page, click robot configuration to enable the function. Click copy **RobotCode** to copy it.
7. On the DataArts Insight office software, enter the **AppKey**, **AppSecret**, and **RobotCode** of the enterprise into the DingTalk API authorization page, AppId, AppSecret, and RobotCode in sequence. For example, the application name is **Document Test**.
8. Click save and then click update. The DingTalk user is connected to the DataArts Insight.

**Figure 13-17** Accessing office software

**Office Software Access**

DingTalk interface authorization    Flybook interface authorization

Configure the application

★ Application name

★ AppId

★ App Key

★ RobotCode

Contact synchronization

## Obtain the Webhook URL of a DingTalk Group

You have added the DingTalk robot on the target DingTalk group.

1. Select the target DingTalk group and click  in the upper right corner.
2. On the group setting panel, click **Smart Group Assistant**. Then, click **Add Robot** in the smart group assistant panel.
3. In the robot dialog box, click **Customize** and then click **Add** in the robot details dialog box.
4. In the displayed dialog box, edit the robot information.
  - a. Click  in the lower right corner of the profile picture to edit the profile picture.
  - b. Enter the robot name in the robot name text box.
  - c. In the **Security Settings** area, complete necessary security settings (select at least one), select "I have read and agree to the Custom Robot Service and Disclaimer", and click complete.
5. In the add robot dialog box, copy the generated Webhook URL.

# 14 Model Management

## 14.1 Model Service

Model management allows you to create, edit, and delete models used by the intelligent analysis assistant and intelligent insights. This helps you select the model that best fits your business scenario when [configuring the intelligent analysis assistant](#).

### Notes and Constraints

You must have administrator permissions to manage models.

### Procedure

1. Log in to the DataArts Insight console.
2. Click  in the upper left corner of the management console to select a region. Then, select an enterprise project in the upper right corner.
3. Click **Models** on the top menu of the console.
4. Click **Create Model Service**. Models of various interface types can be connected. For details about the parameters, see [Table 14-1](#).

**Figure 14-1** Creating a model



**Table 14-1** Parameters for creating a model service

| Parameter      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Example Value                                           |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Name           | Model name. The name can contain up to 64 characters and cannot start or end with a space. Only letters, numbers, spaces, underscores (_), and hyphens (-) are allowed.                                                                                                                                                                                                                                                                                                                        | Pangu model test                                        |
| Model Type     | Model type. <ul style="list-style-type: none"><li>• <b>Pangu Large Model (Cloud Base)</b>: large models purchased from and deployed by Pangu Models.</li><li>• <b>Open-source Model (Ascend cloud)</b>: an open source large model deployed by Ascend Cloud.</li><li>• <b>Open-source Large Model (Bare Metal)</b>: an open source large model deployed on a custom bare metal server.</li><li>• <b>Pangu Large Model (Bare Metal)</b>: Pangu model deployed on a bare metal server.</li></ul> | Pangu Large Model (Cloud Base)                          |
| Project        | Project space with permission to use the model. If left blank, it indicates that all spaces have permission to use the model.                                                                                                                                                                                                                                                                                                                                                                  | test                                                    |
| Task Type      | Task type that can be applied to the current access model. Task types: NL2SQL, Intelligent insights                                                                                                                                                                                                                                                                                                                                                                                            | NL2SQL, Intelligent insights                            |
| Network Type   | Model network access method. <ul style="list-style-type: none"><li>• <b>Public network</b>: The model address must be a public network domain name or IP address and can be directly accessed.</li><li>• <b>VPC endpoint service</b>: VPCEP is used to connect DataArts Insight to the large model. This service is mainly used when the large model is deployed on a bare metal server.</li></ul>                                                                                             | Public network                                          |
| Access Address | Address for accessing the large model's Q&A page.                                                                                                                                                                                                                                                                                                                                                                                                                                              | https://test.com/v1/infers/gpt/query?endpoint=infer-app |

| Parameter |                        | Description                                                                                                                                                                                                          | Example Value                                                                                         |
|-----------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Auth Type | IAM authentication     | Tenant name: Huawei Cloud tenant name, that is, the master account name.<br>Username: username with the large model access permission.<br>Password: user login password.<br>Project name: Huawei Cloud project name. | Tenant name: domain_name<br>Username: sub_user_name<br>Password: password<br>Project name: cn-north-4 |
|           | AK/SK authentication   | AK: access key ID.<br>SK: secret access key.<br>Project name: Huawei Cloud project name.                                                                                                                             | AK: test<br>SK: test<br>Project name: cn-north-4                                                      |
|           | AppCode authentication | AppCode: App code of the application in the API Gateway access scenario.                                                                                                                                             | yourAppCode                                                                                           |
|           | Agency authentication  | Account name: name of the delegating account.<br>Agency name: Name of the agency created by the delegating party.<br>Project name: Huawei Cloud project name.                                                        | Account name: domain_name<br>Agency name: agency_name<br>Project name: cn-north-4                     |
|           | Custom authentication  | Header key: request header key.<br>Header value: request header value.                                                                                                                                               | Header key: X-Test-Header<br>Header value: testHeader                                                 |

5. After setting the parameters, click **Connectivity Test**. If the test is successful, click **Confirm**. The model is successfully created.

#### NOTE

You can set the default model from the **Default NL2SQL Model** or **Intelligent Insights Default Model** drop-down list. After the configuration is complete, the new intelligent analysis assistant NL2SQL and intelligent insights will automatically use the selected default model.

# 15 Permissions Management

---

## 15.1 Creating an IAM User and Granting It Permissions

This section describes how to use IAM to implement fine-grained permissions control for your DataArts Insight resources. With IAM, you can:

- Create IAM users for personnel based on your enterprise's organizational structure. Each IAM user has their own identity credentials for accessing DataArts Insight resources.
- Grant users only the permissions required to perform a given task based on their job responsibilities.
- Entrust a Huawei ID or a cloud service to perform efficient O&M on your DataArts Insight resources.

If your Huawei ID meets your permissions requirements, you can skip this section.

**Figure 1** shows the process flow of granting permissions.

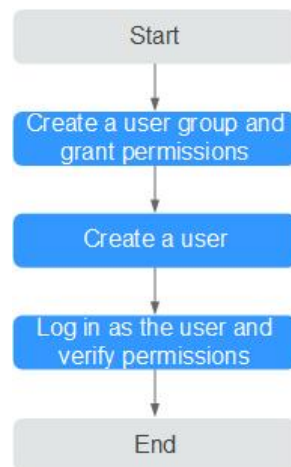
### Prerequisites

Before granting permissions to user groups, learn about the DataArts Insight permissions and choose accordingly based on actual needs.



## Process Flow

**Figure 15-1** Granting an IAM user DataArts Insight resource permissions



1. On the IAM console, [create a user group and grant it permissions](#) (**DataArts Insight ReadOnlyAccess** as an example).
2. [Create an IAM user and add it to the created user group.](#)
3. [Log in as the IAM user](#) and verify permissions.

In the authorized region, perform the following operations:

- Log in to the DataArts Insight management console. Select a project on the right. Choose **Data Management > Datasets**. Then click **Create Dataset**. If a message appears indicating that you have insufficient permissions to perform the operation, the **DataArts Insight ReadOnlyAccess** policy is in effect.
- Choose another service from **Service List**. If a message appears indicating that you have insufficient permissions to access the service, the **DataArts Insight ReadOnlyAccess** policy is in effect.

## More Operations

- For details about how to create an IAM user, see [Creating an IAM User](#).
- For details about how to modify a user policy, see [Modifying or Deleting a Custom Policy](#).

## 15.2 Creating a Custom Policy

You can create custom policies to supplement the system-defined policies of DataArts Insight. You can add actions to custom policies.

To create a custom policy, choose either visual editor or JSON.

- Visual editor: Select cloud services, actions, resources, and request conditions. This does not require knowledge of policy syntax.
- JSON: Create a JSON policy or edit an existing one.

For details, see [Creating a Custom Policy](#). The following lists examples of common DataArts Insight custom policies.

## Policy Fields

In the following example, an IAM user is granted the permission to create tables across all databases in all regions.

```
{
 "Version": "1.1",
 "Statement": [
 {
 "Effect": "Allow",
 "Action": [
 "dataartsinsight:datasource:get"
],
 "Resource": [
 "DataArtsInsight:*:*:workspace:*"
]
 }
]
}
```

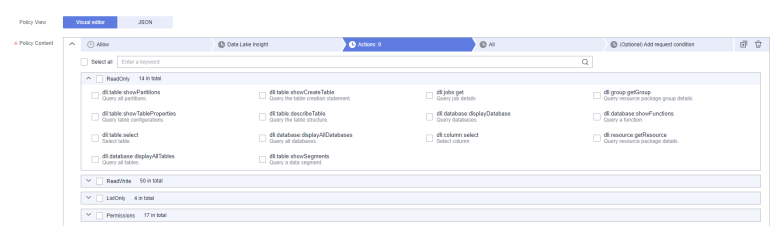
- Version

**1.1** indicates a fine-grained permission policy that defines permissions required to perform operations on specific cloud resources under certain conditions.
- Effect

The value can be **Allow** and **Deny**. If both **Allow** and **Deny** are found in statements, the **Deny** overrides the **Allow**.
- Action

Specific operation on a resource. A maximum of 100 actions are allowed.

### Figure 15-2 DataArts Insight actions



 **NOTE**

- The format is *Service name:Resource type:Action*, for example, **dataartsinsight:datasource:get**.
  - *Service name*: product name, such as **dataartsinsight**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and actions are not case-sensitive. You can use an asterisk (\*) to represent all actions.
  - *Action*: action registered with IAM.
- Condition

Determines when a policy is in effect. A condition consists of a condition key and a condition operator.

A key in the **Condition** element of a statement. There are global and service-specific condition keys.

- Global-level condition key: The prefix is **g**;, which applies to all actions. For details, see the condition key description in [Policy Syntax](#).
- Service-level condition key: applies only to actions of the specific service.

An operator must be used together with a condition key to form a complete condition statement. For details, see [Table 15-1](#).

DataArts Insight provides a set of predefined condition keys, as listed below.

**Table 15-1** DataArts Insight request conditions

| DataArts Insight Condition Key | Type   | Operator      | Description                                                                                                                                                                   |
|--------------------------------|--------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| g:CurrentTime                  | Global | Date and time | Time when an authentication request is received<br><b>NOTE</b><br>The time is expressed in the format defined by <b>ISO 8601</b> , for example, <b>2012-11-11T23:59:59Z</b> . |
| g:MFAPresent                   | Global | Boolean       | Whether multi-factor authentication is used during user login                                                                                                                 |
| g:UserId                       | Global | String        | ID of the current login user                                                                                                                                                  |
| g:UserName                     | Global | String        | Current login username                                                                                                                                                        |
| g:ProjectName                  | Global | String        | Project that you have logged in to                                                                                                                                            |
| g:DomainName                   | Global | String        | Domain that you have logged in to                                                                                                                                             |
| g:ResourceTag                  | Global | StringEquals  | Resource tag key value                                                                                                                                                        |

- Resource

Format: *Service name:Region:Account ID:Resource type:Resource path*. An asterisk (\*) means all based on its position in the resource path.

Example:

"DataArtsInsight:\*:\*:workspace:\*": All workspaces

## Creating a DataArts Insight Custom Policy

You can set actions and resources at varying levels based on scenarios.

1. Define an action.

The format is *Service name:Resource type:Action*. You can use wildcards \*. For example:

**Table 15-2** Actions

| Action                          | Description                          |
|---------------------------------|--------------------------------------|
| dataartsinsight:datasource:get  | Obtains details about a data source. |
| dataartsinsight:dataset:preview | Previews a dataset.                  |
| dataartsinsight:screen:view     | Previews a large screen.             |

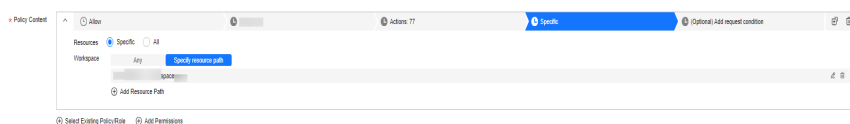
2. Define a resource.

The format is *Service name:Region:Domain ID:Resource type:Resource path*. The wildcard (\*) indicates all resources. You have the flexibility to set these five fields. The *Resource path* field can be set with varying levels of access control based on the specific scenario. If you need to set permissions for all resources under this service, you can leave this field unspecified. For details about how to define a resource, see [Table 15-3](#).

**Table 15-3** Resource

| Resource                        | Description    |
|---------------------------------|----------------|
| dataartsinsight:*:*:workspace:* | All workspaces |

- Specific resources:

**Figure 15-3** Specific resources

- All resources: all resources of the service

**Figure 15-4** All resources

3. Combine all of the preceding fields into a JSON string to create a complete policy. You can set multiple actions and resources, and you also have the option to create policies through the IAM console.

## 15.3 DataArts Insight Resources

Resources are objects that exist within a service. In DataArts Insight, only workspaces are currently supported. When creating custom policies, you can select specific resources by specifying their paths.

**Table 15-4** DataArts Insight resources and their paths

| Type      | Resource  | Path                           |
|-----------|-----------|--------------------------------|
| workspace | Workspace | dataartsinsight:*:*:workspace: |

# 16 Auditing

## 16.1 Key Operations Supported by CTS

### Scenario

Cloud Trace Service (CTS) is a professional log audit service provided by the Huawei Cloud security solution. It allows you to collect, store, and query cloud resource operation records. With CTS, you can record operations related to DataArts Insight for later query, audit, and backtracking.

### Key DataArts Insight Operations

**Table 16-1** lists the DataArts Insight operations that can be recorded by CTS.

**Table 16-1** DataArts Insight operations that can be recorded by CTS

| Operation                     | Resource Type | Event Name             |
|-------------------------------|---------------|------------------------|
| Creating a project            | workspace     | createWorkspace        |
| Updating a project            | workspace     | updateWorkspace        |
| Deleting a project            | workspace     | deleteWorkspace        |
| Modifying the default project | workspace     | updateDefaultWorkspace |
| Creating a data source        | datasource    | createDatasource       |
| Updating a data source        | datasource    | updateDatasource       |
| Deleting a data source        | datasource    | deleteDatasource       |
| Uploading a file data source  | datasource    | uploadFileDatasource   |
| Deleting a file data source   | datasource    | deleteFileDatasource   |

| Operation                                         | Resource Type     | Event Name                  |
|---------------------------------------------------|-------------------|-----------------------------|
| Saving a file data source                         | datasource        | saveUploadFileData-source   |
| Updating the file upload configuration            | datasource        | updateFileDatasource-Config |
| Saving a dataset                                  | dataset           | saveDataset                 |
| Deleting a dataset                                | dataset           | deleteDataset               |
| Saving dataset row/<br>column-level permissions   | datasetPermission | saveDatasetPermission       |
| Deleting dataset row/<br>column-level permissions | datasetPermission | deleteDatasetPermission     |
| Saving a dashboard                                | dashboard         | saveDashboard               |
| Deleting a dashboard                              | dashboard         | deleteDashboard             |
| Publishing a dashboard                            | dashboard         | publishDashboard            |
| Taking a dashboard<br>offline                     | dashboard         | unpublishDashboard          |
| Saving a large screen                             | screen            | saveScreen                  |
| Deleting a large screen                           | screen            | deleteScreen                |
| Publishing a large screen                         | screen            | publishScreen               |
| Taking a large screen<br>offline                  | screen            | unpublishScreen             |
| Uploading an image to a<br>large screen           | screen            | uploadScreenImage           |
| Copying a large screen                            | screen            | copyScreen                  |
| Creating embedded<br>analytics                    | embedding         | createEmbedding             |
| Updating embedded<br>analytics                    | embedding         | updateEmbedding             |
| Deleting embedded<br>analytics                    | embedding         | deleteEmbedding             |
| Opening embedded<br>analytics                     | embedding         | openEmbedding               |
| Closing embedded<br>analytics                     | embedding         | closeEmbedding              |
| Creating a user tag                               | tag               | createTag                   |
| Updating a user tag                               | tag               | updateTag                   |

| Operation                               | Resource Type | Event Name             |
|-----------------------------------------|---------------|------------------------|
| Deleting a user tag                     | tag           | deleteTag              |
| Updating the user tag content           | tag           | updateTagValue         |
| Creating a data export task             | dataExport    | createDataExportTask   |
| Modifying the data export configuration | dataExport    | modifyDataExportConfig |



# 17 FAQ

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## 17.1 What Are the Use Cases of DataArts Insight?

DataArts Insight aims to present business insights hidden behind complex and ever-changing data in a more vivid and user-friendly way. It helps business personnel discover and diagnose problems in various fields, such as retail, logistics, power, water conservation, environmental protection, and transportation, through the display of real-time data on interactive screens.

- DataArts Insight provides a variety of visualization components, including customized charts optimized for business display and unconventional charts such as topology relationships for free combination.
- DataArts Insight seamlessly integrates with Huawei GaussDB(DWS), supports local CSV, online API, and enterprise private cloud data, and meets your needs for real-time big data calculation and monitoring, fully leveraging the power of big data computation.
- You can easily build a visualized large screen without programming by dragging and dropping components for free configuration and layout, with a WYSIWYG interface.
- DataArts Insight has optimized the resolution for splicing large screens and can adapt to unconventional splicing resolutions. The created large screens can be published and shared as a window for your external data business display.

## 17.2 Regions and AZs

### What Are Regions and AZs?

A region or an availability zone (AZ) identifies the location of a data center. You can create resources in a specific region or an AZ.

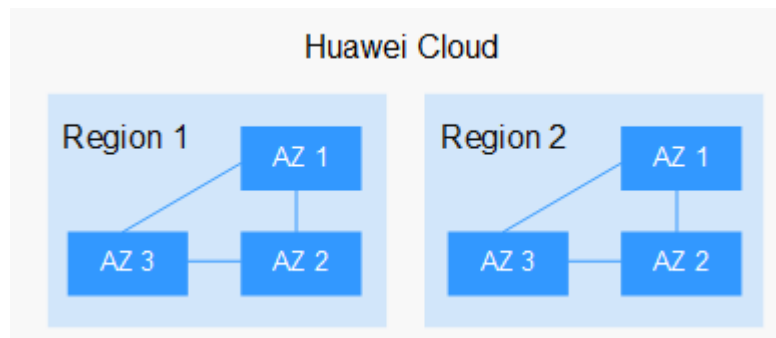
- A region is a geographical area that shares common public services such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS). Regions can be either general purpose or

dedicated. General regions provide cloud services to the public, while dedicated regions are exclusively used for specific business or tenant services. Regions are divided based on geographical location and network latency.

- An AZ is a collection of one or more physical data centers that have independent power, cooling, and networking infrastructure. Within an AZ, resources such as compute, network, and storage are logically grouped into clusters. Multiple AZs within a region are interconnected through high-speed fiber optic cables to meet the demand for building highly available systems across AZs.

**Figure 17-1** shows the relationship between regions and AZs.

**Figure 17-1** Regions and AZs



Huawei Cloud currently offers cloud services in multiple regions worldwide. You can select ad region and AZ as needed. For more information, see [Huawei Cloud Global Regions](#).

## What Factors Should I Consider When Selecting a Region?

When selecting a region, consider the following factors:

- **Geolocation**  
Select a region close to you or your target users. This reduces network latency and accelerates access. However, Chinese mainland regions provide the same infrastructure, BGP network quality, as well as resource operations and configurations. If you or your target users are in the Chinese mainland, you do not need to consider differences in network latency when selecting a region.  
Other regions and countries such as Hong Kong and Bangkok provide international bandwidth mainly for users outside the Chinese mainland. If you or your target users are located in the Chinese mainland, using these regions may result in longer access latency and is not recommended.
  - If you or your target users are in Asia Pacific regions that are outside the Chinese mainland, select the **CN-Hong Kong**, **AP-Bangkok**, or **AP-Singapore** region.
  - If you or your target users are in South Africa, select the **AF-Johannesburg** region.
  - If you or your target users are in Europe, select the **EU-Paris** region.

## What Factors Should I Consider When Selecting an AZ?

The decision to deploy resources in the same AZ depends mainly on your requirements for disaster recovery capabilities and network latency.

- If your application requires high disaster recovery capabilities, it is recommended deploying resources in different AZs within the same region.
- If your application requires low network latency between instances, it is recommended deploying resources in the same AZ.

## Regions and Endpoints

When utilizing resources through an API, you must specify its region and endpoint. For details about Huawei Cloud regions and endpoints, see [Regions and Endpoints](#).

## 17.3 Why Isn't the Data Source Connected to DataArts Insight Working?

The possible causes are as follows:

- Check if the VPC and subnet of the data source are connected.
- Check if the **VPCEndpoint Administrator** policy is granted.
- Check if the security group of the peer data source allows access from DataArts Insight's CIDR blocks.
- Check if the VPC network has set ACL rules to restrict network access.