

Data Replication Service

API Reference

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Contents

1 Before You Start.....	1
1.1 Overview.....	1
1.2 API Calling.....	1
1.3 Endpoints.....	1
1.4 Constraints.....	3
1.5 Basic Concepts.....	4
2 API Overview.....	6
3 Calling APIs.....	8
3.1 Making an API Request.....	8
3.2 Authentication.....	11
3.3 Returned Values.....	13
4 Getting Started.....	15
4.1 Task Creation Process.....	16
4.2 Task Creation Example.....	20
5 APIs V3.0 (Recommended).....	22
5.1 Quotas.....	22
5.1.1 Querying Resource Quotas.....	22
5.2 Public API Management.....	24
5.2.1 Querying AZs in Which Flavors Are Not Sold Out.....	24
5.2.2 Querying Task Progress in Batches.....	28
5.3 Real-Time Disaster Recovery.....	31
5.3.1 Querying RPO and RTO in Batches.....	31
6 APIs V3.0 (Deprecated).....	35
6.1 Public API Management.....	35
6.1.1 Creating Tasks in Batches.....	35
6.1.2 Testing Connections in Batches.....	49
6.1.3 Testing Connections in Batches (Cluster Mode).....	55
6.1.4 Modifying Tasks in Batches.....	60
6.1.5 Selecting Database Objects in Batches.....	72
6.1.6 Performing a Batch Pre-Check.....	77
6.1.7 Querying Pre-check Results in Batches.....	80

6.1.8 Setting Flow Control for Tasks.....	88
6.1.9 Obtaining Database Parameters in Batches.....	92
6.1.10 Modifying Database Parameters.....	98
6.1.11 Starting Tasks in Batches.....	100
6.1.12 Resuming or Retrying Tasks in Batches.....	103
6.1.13 Pausing Tasks in Batches.....	106
6.1.14 Stopping or Deleting Tasks in Batches.....	109
6.1.15 Changing the Passwords of the Source and Destination Databases in Batches.....	113
6.1.16 Setting Definers in Batches.....	117
6.1.17 Creating a Comparison Task.....	120
6.1.18 Querying Comparison Results.....	125
6.1.19 Querying Tasks of a Tenant.....	138
6.1.20 Querying Task Details in Batches.....	166
6.1.21 Querying Task Statuses in Batches.....	186
6.1.22 Configuring Exception Notifications.....	192
6.1.23 Querying Available Node Specifications.....	197
6.2 Real-Time Migration Management.....	200
6.2.1 Updating Migrated User Information in Batches.....	200
6.2.2 Obtaining Migration Users of the Source Database.....	206
6.3 Real-Time Synchronization Management.....	209
6.3.1 Processing Data in Batches.....	209
6.3.2 Configuring Synchronization Policies in Batches.....	215
6.3.3 Advanced Settings.....	228
6.4 Real-Time Disaster Recovery Management.....	231
6.4.1 Performing Primary/Standby Switchovers in Batches.....	231
6.4.2 Querying DR Monitoring Data.....	238
6.4.3 Querying the DR Initialization Progress in Batches.....	241
6.4.4 Querying DR Initialization Object Details in Batches.....	245
7 APIs V5.0 (in OBT).....	249
7.1 Resource Management.....	249
7.1.1 Querying Information about Available Links.....	249
7.2 Task Management.....	255
7.2.1 Creating a Task.....	255
7.2.2 Querying Tasks.....	278
7.2.3 Updating Details About a Task with a Specified ID.....	300
7.2.4 Deleting a Task with a Specified ID.....	345
7.2.5 Deleting Tasks in Batches.....	347
7.2.6 Cloning a Task.....	351
7.3 Management of Tasks Created Asynchronously in Batches.....	354
7.3.1 Asynchronously Creating Tasks in Batches.....	354
7.3.2 Submitting Tasks Created Asynchronously in Batches.....	399
7.3.3 Querying the List of Tasks Created Asynchronously in Batches.....	402

7.3.4 Querying Details About Tasks Created Asynchronously in Batches with a Specified ID.....	407
7.3.5 Updating Details About Tasks Created Asynchronously in Batches with a Specified ID.....	447
7.3.6 Downloading the Task Import Template.....	493
7.3.7 Importing Tasks in Batches.....	495
7.4 Database Object Configuration.....	498
7.4.1 Submitting the Query of Database Object Information.....	498
7.4.2 Submitting the Query of Database Object Information.....	502
7.4.3 Obtaining the Result of Querying Database Object Information.....	506
7.4.4 Querying Database Object Information.....	515
7.4.5 Querying Database Object Information.....	526
7.4.6 Downloading the Object Import Template.....	536
7.4.7 Uploading the Object Import Template.....	538
7.4.8 Querying the Progress of Uploading the Object Import Template.....	542
7.4.9 Obtaining the Result of Uploading the Object Import Template.....	545
7.4.10 Obtaining the Progress of Saving Objects.....	548
7.4.11 Querying the Synchronization Mapping List.....	551
7.4.12 Querying Whether Object Selection and Column Mapping Are Supported.....	554
7.5 Task Details.....	557
7.5.1 Querying Task Details.....	557
7.5.2 Obtaining Task Pricing Details.....	599
7.5.3 Querying the Abnormal Data List.....	603
7.5.4 Exporting Task Operation Statistics.....	607
7.5.5 Querying Monitoring Data.....	608
7.5.6 Querying Incremental Component Details.....	611
7.6 Task Operations.....	614
7.6.1 Performing Operations on a Task with a Specified ID.....	614
7.6.2 Collecting Database Position Information.....	644
7.6.3 Stopping a Task.....	647
7.6.4 Batch Performing Operations on Tasks with Specified IDs.....	650
7.6.5 Batch Stopping Tasks.....	677
7.6.6 Obtaining the Operations Allowed in a Specified Task.....	681
7.6.7 Obtaining the Result for Querying Database Position.....	688
7.6.8 Verifying a Task Name.....	691
7.6.9 Updating the Start Point of an Incremental Task.....	694
7.6.10 Uploading a Driver File.....	698
7.6.11 Deleting a Driver File.....	700
7.6.12 Synchronizing a Driver File.....	702
7.6.13 Querying the Driver File List.....	704
7.7 Comparison Management.....	707
7.7.1 Querying the Comparison Policy.....	707
7.7.2 Querying the Health Comparison List.....	710
7.7.3 Querying the Data-Level Streaming Comparison List.....	714

7.8 Enterprise Projects.....	718
7.8.1 Querying Enterprise Projects.....	718
7.9 Data Processing.....	722
7.9.1 Updating Data Processing Rules for a Specified Task.....	722
7.9.2 Obtaining the Data Processing Rule Update Result for a Specified Task.....	743
7.9.3 Querying Data Processing Rules.....	745
7.9.4 Verifying Data Filtering Rules.....	761
7.9.5 Obtaining the Data Filtering Verification Result.....	780
7.9.6 Collecting Column Information About a Specified Database Table.....	783
7.9.7 Obtaining Column Information About a Specified Database Table.....	786
7.10 Parameter Management.....	790
7.10.1 Updating Task Parameters.....	790
7.10.2 Querying Task Parameter Configuration List.....	793
7.10.3 Querying Task Parameter Change History.....	796
7.11 Tag Management.....	799
7.11.1 Batch Adding or Deleting Tags.....	799
7.11.2 Querying Tags of a Specified Project.....	803
7.11.3 Querying Tags of a Task.....	806
7.11.4 Adding Resource Tags in Batches.....	809
7.11.5 Deleting Resource Tags in Batches.....	813
7.11.6 Querying the Resource Instance List.....	816
7.11.7 Querying the Number of Resource Instances.....	821
7.11.8 Querying Tags of a Task.....	825
7.11.9 Querying Tags of a Specified Project.....	828
8 Application Examples.....	831
8.1 Scenario 1: Querying Task Statuses in Batches.....	831
8.2 Scenario 2: Querying Task Details in Batches.....	832
8.3 Scenario 3: Starting Tasks in Batches.....	835
9 Permissions Policies and Supported Actions.....	837
9.1 Permissions Policies and Supported Actions.....	837
9.2 DRS Actions.....	838
A Appendix.....	842
A.1 Abnormal Request Results.....	842
A.2 HTTP Status Codes for General Requests.....	842
A.3 Error Code.....	843
A.4 Task Statuses.....	864
A.5 Obtaining a Project ID.....	865
A.6 Obtaining an Account ID.....	866
A.7 Obtaining a Task ID.....	866
A.8 Engine Types.....	867
A.9 Status Code.....	868

B Change History..... 873

1 Before You Start

1.1 Overview

Welcome to Data Replication Service (DRS). DRS is a stable, secure, and efficient cloud service for online database migration and real-time database synchronization. You can create a migration task to migrate data from a source database to a destination database.

This document describes how to use application programming interfaces (APIs) to perform operations in DRS, such as creating, querying, obtaining, and deleting resources. For details about all supported operations, see [API Overview](#).

Before calling DRS APIs, ensure that you have understood the concepts related to DRS. For more information, see [Service Overview](#).

1.2 API Calling

DRS supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [Calling APIs](#).

1.3 Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. For the endpoints of all services, see [Regions and Endpoints](#).

[Table 1-1](#) and [Table 1-2](#) list the regions supported by DRS APIs. Select a desired one based on the service requirements.

Table 1-1 Regions supported by DRS v5 APIs

Region Name	Region	Endpoint	Protocol
CN South-Shenzhen	cn-south-2	drs.cn-south-2.myhuaweicloud.com	HTTPS

Table 1-2 Regions supported by DRS v3 APIs

Region Name	Region	Endpoint	Protocol
CN North-Beijing1	cn-north-1	drs.cn-north-1.myhuaweicloud.com	HTTPS
CN North-Beijing4	cn-north-4	drs.cn-north-4.myhuaweicloud.com	HTTPS
CN North-Ulanqab1	cn-north-9	drs.cn-north-9.myhuaweicloud.com	HTTPS
CN East-Shanghai 1	cn-east-3	drs.cn-east-3.myhuaweicloud.com	HTTPS
CN East-Shanghai 2	cn-east-2	drs.cn-east-2.myhuaweicloud.com	HTTPS
CN South-Guangzhou	cn-south-1	drs.cn-south-1.myhuaweicloud.com	HTTPS
CN Southwest-Guiyang1	cn-southwest-2	drs.cn-southwest-2.myhuaweicloud.com	HTTPS
LA-Santiago	la-south-2	drs.la-south-2.myhuaweicloud.com	HTTPS
LA-Sao Paulo1	sa-brazil-1	drs.sa-brazil-1.myhuaweicloud.com	HTTPS

Region Name	Region	Endpoint	Protocol
AF-Johannesburg	af-south-1	drs.af-south-1.myhuaweicloud.com	HTTPS
CN-Hong Kong	ap-southeast-1	drs.ap-southeast-1.myhuaweicloud.com	HTTPS
AP-Singapore	ap-southeast-3	drs.ap-southeast-3.myhuaweicloud.com	HTTPS
AP-Bangkok	ap-southeast-2	drs.ap-southeast-2.myhuaweicloud.com	HTTPS
LA-Mexico City2	la-north-2	drs.la-north-2.myhuaweicloud.com	HTTPS
LA-Mexico City1	na-mexico-1	drs.na-mexico-1.myhuaweicloud.com	HTTPS
AP-Jakarta	ap-southeast-4	drs.ap-southeast-4.myhuaweicloud.com	HTTPS
TR-Istanbul	tr-west-1	drs.tr-west-1.myhuaweicloud.com	HTTPS

1.4 Constraints

- The number of DRS tasks that you can create is determined by your quota. For details, see [Service Quota](#).
- DRS v3 APIs support only MySQL-to-MySQL migration and synchronization, MongoDB-to-DDS migration, MySQL-to-Kafka synchronization, GaussDB(for MySQL)-to-Kafka synchronization, GaussDB-to-GaussDB synchronization, GaussDB-to-Kafka synchronization, PostgreSQL-to-PostgreSQL synchronization, and MySQL-to-MySQL disaster recovery. For scenarios in open beta testing, problems may occur during the use of APIs. Exercise caution when calling APIs.
- DRS v5 APIs support only migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, synchronization from MySQL to MySQL, and synchronization from Oracle to GaussDB Distributed. Exercise caution when calling v5 APIs.

1.5 Basic Concepts

Account

An account is created upon successful registration with Huawei Cloud. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used directly to perform routine management. For security purposes, create users and grant them permissions for routine management.

IAM User

An IAM user is created using an account to use cloud services. Each IAM user has its own identity credentials (password and access keys).

The account name, username, and password will be required for API authentication.

Region

A region is a geographic area in which cloud resources are deployed. Availability zones (AZs) in the same region can communicate with each other over an intranet, while AZs in different regions are isolated from each other. Deploying cloud resources in different regions can better suit certain user requirements or comply with local laws or regulations.

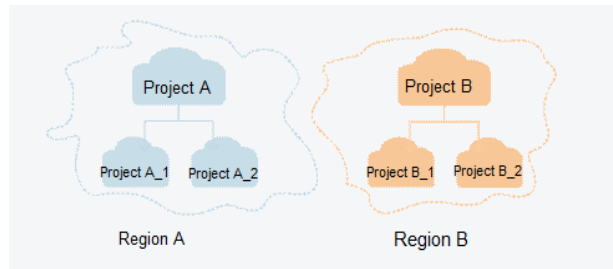
AZ

An AZ comprises one or multiple physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow users to build cross-AZ high-availability systems.

Project

A project corresponds to a Huawei Cloud region. Default projects are defined to group and physically isolate resources (including computing, storage, and network resources) across regions. You can grant users permissions in a default project to access all resources in the region associated with the project. If you need more refined access control, create subprojects under a default project and purchase resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

Figure 1-1 Project isolating model



2 API Overview

DRS provides REST APIs. With DRS APIs, you can use all the functions of DRS, including creating migration tasks, obtaining task details, obtaining the migration task list, and deleting migration tasks.

Table 2-1 v3 APIs

Type	Subtype	Description
DRS APIs (v3)	Quotas	The APIs are used to query quotas.
DRS APIs (v3)	Public API management	The APIs are used to create a task, test the connection, perform a pre-check, query task details and progress, create a comparison task, delete a task, retry a task, and stop a task.
DRS APIs (v3)	Real-Time migration management	The APIs are used to obtain migration users of the source database and update user information.
DRS APIs (v3)	Real-time synchronization management	The APIs are used to process data and set the synchronization policy.
DRS APIs (v3)	Real-time disaster recovery management	The APIs are used to perform a primary/standby switchover and query RPO, RTO, DR monitoring data, and DR initialization progress.

Table 2-2 DRS APIs (v5)

Type	Subtype	Description
DRS APIs (v5)	Resource management	The APIs are used to query available link information.

Type	Subtype	Description
DRS APIs (v5)	Task management	The common APIs are used to create, query, update, and delete tasks.
DRS APIs (v5)	Comparison management	The APIs are used to query the comparison policy, health comparison list, and data-level streaming comparison list.
DRS APIs (v5)	Management of tasks created asynchronously in batches	The common APIs are used to asynchronously create tasks in batches, and submit, query, and update the tasks created asynchronously in batches.
DRS APIs (v5)	Database object configuration	The APIs are used to query database object information and import object files.
DRS APIs (v5)	Task details	The APIs are used to query task details.
DRS APIs (v5)	Task operations	The APIs are used to perform task operations.
DRS APIs (v5)	Enterprise project management	This API is used to query enterprise projects.
DRS APIs (v5)	Data processing	The APIs are used to update data processing rules, query data processing rules, and verify data filtering rules.
DRS APIs (v5)	Tag management	The APIs are used to add, delete, and query tags.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for **obtaining a user token** as an example to demonstrate how to call an API for obtaining a user token. The obtained token can then be used to authenticate requests for calling other APIs.

Request URI

A request URI consists of the following parts:

{URI-scheme}://{Endpoint}/{resource-path}?{query-string}

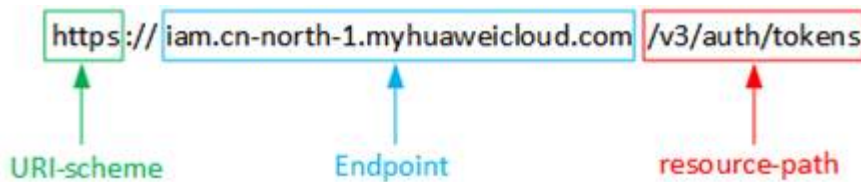
Table 3-1 Request URI

Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from Regions and Endpoints . For example, the endpoint of IAM in the CN North-Beijing1 region is iam.cn-north-1.myhuaweicloud.com .
resource-path	API access path for performing a specified operation. Obtain the path from the URI of an API. For example, the resource-path of the API used to obtain a user token is /v3/auth/tokens .
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "Parameter name=Parameter value". For example, ?limit=10 indicates that a maximum of 10 data records will be displayed.

For example, to obtain the IAM token in the **CN North-Beijing1** region, obtain the endpoint of IAM (**iam.cn-north-1.myhuaweicloud.com**) for this region and the **resource-path** (**/v3/auth/tokens**) in the URI of the API used to obtain a user token. Then, construct the URI as follows:

```
https://iam.cn-north-1.myhuaweicloud.com/v3/auth/tokens
```

Figure 3-1 Example URI



NOTE

To simplify the URI display in this document, each API is provided only with a resource-path and a request method. The **URI-scheme** of all APIs is **HTTPS**, and the endpoints of all APIs in the same region are identical.

Request Method

The HTTP protocol defines the following request methods that can be used to send a request to the server.

Table 3-2 Request Method

Method	Description
GET	Requests a server to return specified resources.
PUT	Requests a server to update specified resources.
POST	Requests a server to add a resource or perform special operations.
DELETE	Requests a server to delete specified resources, for example, an object.
HEAD	Same as GET except that the server must return only the response header.
PATCH	Requests a server to update partial content of a specified resource. If the resource does not exist, the PATCH method creates a resource.

For example, in the case of the API used to obtain a user token, the request method is POST. The request is as follows:

```
POST https://iam.cn-north-1.myhuaweicloud.com/v3/auth/tokens
```

Request Headers

You can also add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request for the authentication information, add **Content-Type**, which specifies the request body type.

Table 3-3 describes common request headers need to be added to requests.

Table 3-3 Common request headers

Name	Description	Mandatory	Example
Content-Type	Specifies the MIME type of the request body.	Yes	The default value is application/json . Other values will be described in the specific APIs.
Content-Length	Length of the request body. The unit is byte.	<ul style="list-style-type: none"> Optional for POST or PUT requests. Must be left blank for GET requests. 	3495
X-Auth-Token	Specifies a user token. This field is mandatory when token authentication is used. User token is a response to the API for obtaining a user token (only this API does not require authentication).	Yes	-
X-Language	Request language type.	No	en-us

NOTE

For details about other headers, see the HTTP protocol.

The API used to obtain a user token does not require authentication. Therefore, only the **Content-Type** field needs to be added to requests for calling the API. An example of such requests is as follows:

```
POST https://iam.cn-north-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

Request Body

The body of a request is often sent in a structured format as specified in the **Content-Type** header field. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies between APIs. Some APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

In the case of the API used to obtain a user token, the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace **username**, **domainname**, ********* (login password), and **projectname** (for example, cn-north-1) with the actual values. You can obtain a project name from [Regions and Endpoints](#).

NOTE

The **scope** parameter specifies where a token takes effect. You can set **scope** to an account or a project under an account. You can set scope to an account or a project under an account. For details, see [Obtaining a User Token Through Password Authentication](#).

```
POST https://iam.cn-north-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "*****",
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "projectname"
      }
    }
  }
}
```

If all data required for the API request is available, you can send the request to call the API through [curl](#), [Postman](#), or coding. In the response to the API used to obtain a user token, **x-subject-token** is the desired user token. You can use the token to authenticate other API calls.

3.2 Authentication

You can use the following authentication method:

Token authentication: Requests are authenticated using tokens.

Token Authentication

NOTE

The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API. You can obtain a user token by calling the API for [Obtaining a User Token](#).

A cloud service can be deployed globally or at the project level.

- A project-level service requires a project-level token. When you call the API, set **auth.scope** in the request body to **project**.
- A global service requires a global token. When you call the API, set **auth.scope** in the request body to **domain**.

A project-level token is required for calling APIs of the DRS service. As such, set **auth.scope** in the request body to **project** when you call the API for [obtaining a user token](#).

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "*****",
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "projectname"
      }
    }
  }
}
```

In section [3.1 Making an API Request](#), the process of calling the API used to obtain a user token is described. After a token is obtained, add the **X-Auth-Token** header field must be added to requests to specify the token when calling other APIs. For example, if the token is **ABCDEFJ....**, **X-Auth-Token: ABCDEFJ....** can be added to a request as follows:

```
POST https://iam.cn-north-1.myhuaweicloud.com/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

3.3 Returned Values

Status Code

After sending a request, you will receive a response, including a status code, response header, and response body.

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see [Status Code](#).

For example, if status code 201 is returned for calling the API used to obtain a user token, the request is successful.

Response Header

Similar to a request, a response also has a header, for example, **Content-Type**.

Figure 3-2 shows the response header fields for the API used to obtain a user token is called. The **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

Figure 3-2 Header fields of the response to the request for obtaining a user token

```
connection → keep-alive
content-type → application/json
date → Tue, 12 Feb 2019 06:52:13 GMT
server → Web Server
strict-transport-security → max-age=31536000; includeSubdomains;
transfer-encoding → chunked
via → proxy A
x-content-type-options → nosniff
x-download-options → noopen
x-frame-options → SAMEORIGIN
x-lam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5
x-subject-token → MfYXQYKzZlhvCNAQCcLlVYJCCGE=CAQExDTALBglghlg8ZQMEAgEwghar8gkqkhiG9w08BwGgghac8lIwMhoidG9Z2W4OnsiZDhwaXlc19ndCl6jwMTk4MDItMTNUMJ
fj3Kl6fYgKnpWNRbWzeZ5eb78SZ0kqjACgkq01w4lIGzrpd18LGXK5vldf4qHCYb8P4NaY0Nyej-AgzJVeFYlWT1GSO0zxZmlQHj82HqHdgiZ09fuEbl5dMhdavj+33wEi
+HRCe9l87o+k9-
+CMZSEB7bUgdSijjeRASXl1jppEGA270g1Fruool6jagfKfNPQuFSOU8+usittVwRtnfsc+qTp22Rkd5MCqFGQ8LcuXc3a+9CM8rOintWW7oeRUVhVpx8pxiXlwTEboX-
RzT6MUlbpvGw-oPNFYuJECKnoH3HRozv0vN--n5d6Nbg==
x-xss-protection → 1; mode=block
```

Response Body

The body of a response is often returned in structured format as specified in the **Content-type** header field. The response body transfers content except the response header.

The following is part of the response body for the API used to obtain a user token. The following shows part of the response body for the API to obtain a user token.

```
{
  "token": {
    "expires_at": "2019-02-13T06:52:13.855000Z",
    "methods": [
      "password"
    ],
    "catalog": [
      {
        "endpoints": [
```

```
{  
  "region_id": "cn-north-1",  
  .....
```

If an error occurs during API calling, the system returns an error code and message to you. The following shows the format of an error response body:

```
{  
  "error_msg": "The format of message is error",  
  "error_code": "AS.0001"  
}
```

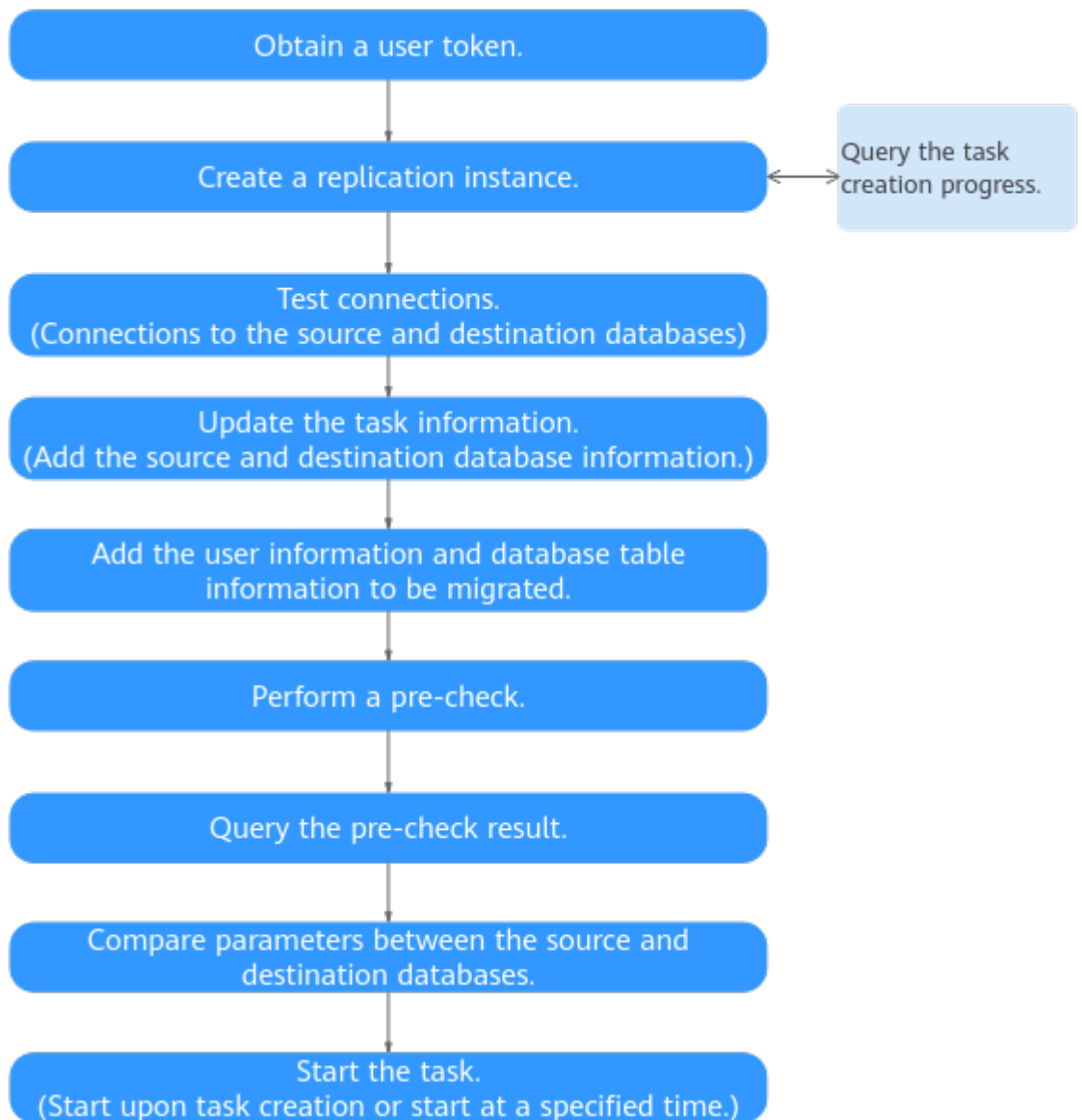
In the response body, **error_code** is an error code, and **error_msg** provides information about the error.

4 Getting Started

4.1 Task Creation Process

Process of Creating a Migration Task

Figure 4-1 Process of creating a real-time migration task

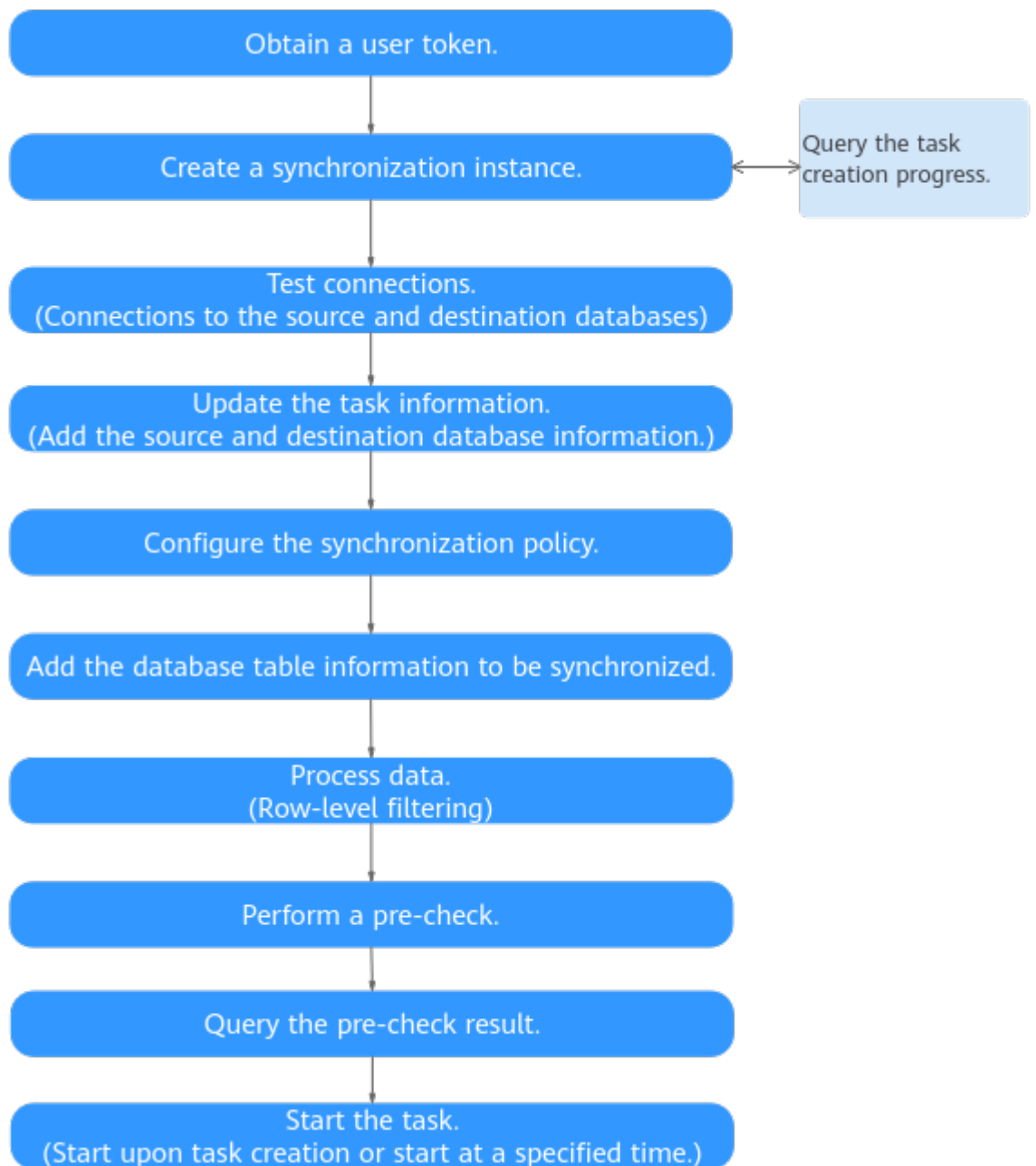


- **Obtaining a User Token:** Call an IAM API to obtain a user token.
- **Creating Tasks in Batches:** Create a migration task.
- **Querying Task Progress in Batches:** Query the status of a task.
- **Testing Connections in Batches:** Test connections to the source and destination databases.
- **Modifying Tasks in Batches:** Modify the task name or description and set exception notification information.

- **Updating Migrated User Information in Batches** and **Selecting Database Objects in Batches**: Update the user and role information and select the database or table to be migrated.
- **Performing a Batch Pre-Check**: Perform a pre-check.
- **Querying Pre-check Results in Batches**: View the pre-check result. After the pre-check is passed, go to the next step.
- **Obtaining Database Parameters in Batches**: Obtain the parameters of the source and destination databases.
- **Starting Tasks in Batches**: Start a real-time migration task.

Process of Creating a Real-Time Synchronization Task

Figure 4-2 Process of creating a real-time synchronization task



- **Obtaining a User Token:** Call an IAM API to obtain a user token.
- **Creating Tasks in Batches:** Create a synchronization task.
- **Querying Task Progress in Batches:** Query the status of a task.
- **Testing Connections in Batches:** Test connections to the source and destination databases.
- **Modifying Tasks in Batches:** Modify the task name or description and set exception notification information.
- **Configuring Synchronization Policies in Batches:** Configure the synchronization policies, including the conflict policy, DROP Database filtering, and object synchronization scope.
- **Selecting Database Objects in Batches:** Select the database or table to be synchronized.
- **Processing Data in Batches:** Add rules for the selected objects.
- **Performing a Batch Pre-Check:** Perform a pre-check.
- **Querying Pre-check Results in Batches:** View the pre-check result. After the pre-check is passed, go to the next step.
- **Starting Tasks in Batches:** Start a real-time synchronization task.

Process of Creating a Real-Time DR Task

Figure 4-3 Process of creating a real-time DR task



- **Obtaining a User Token:** Call an IAM API to obtain a user token.
- **Creating Tasks in Batches:** Create a DR task.
- **Querying Task Progress in Batches:** Query the status of a task.
- **Testing Connections in Batches:** Test connections to the source and destination databases.
- **Modifying Tasks in Batches:** Modify the task name or description and set exception notification information.
- **Setting Flow Control for Tasks:** Configure the rate limit for a DR task.
- **Performing a Batch Pre-Check:** Perform a pre-check.
- **Querying Pre-check Results in Batches:** View the pre-check result. After the pre-check is passed, go to the next step.

- [Obtaining Database Parameters in Batches](#): Obtain the parameters of the source and destination databases.
- [Starting Tasks in Batches](#): Start a real-time DR task.

4.2 Task Creation Example

This section describes how to create a real-time migration task by calling an API.

Involved APIs

- API for obtaining tokens from IAM
Obtain a token and add **X-Auth-Token** to the request header of API calls.
- API used to create a real-time migration task.

Procedure

- Step 1** Obtain the token by referring to [Authentication](#).
- Step 2** Obtain the DRS endpoints.
 - Before calling this API, obtain the required region and endpoint from the enterprise administrator.
 - Before calling this API, obtain the required [region and endpoint](#).
- Step 3** Obtain the project ID of a user in a region. For details, see [Obtaining a Project ID](#).
- Step 4** Send POST `https://{DRS endpoint}/v3/{projectId}/jobs`.
- Step 5** Add **X-Auth-Token** to the request header. The value is user token.
- Step 6** Add the **Content-Type** key to the request header. The value of **Content-Type** is **application/json**.
- Step 7** Specify the following parameters in the request body:

NOTE

For details about the API used for creating DB instances, see [Creating Tasks in Batches](#).

```
{
  "bind_eip": true, // Check whether an EIP has been bound to the replication instance in the public network scenario.
  "db_use_type": "migration", // The usage type. The value can be migration (real-time migration), sync (real-time synchronization), or cloudDataGuard (real-time DR). This parameter is mandatory.
  "description": "", // Task description
  "engine_type": "mysql", // The engine type. The value can be mysql, mongodb, gaussdbv5, or cloudDataGuard-mysql.
  "is_target_readonly": true, // Specifies whether the destination instance is readable only.
  "job_direction": "up", // Task direction. The value can be up or down.
  "name": "DRS-2057", // Task name. This parameter is mandatory.
  "net_type": "eip", // Network type. This parameter is mandatory and the value can be vpn, vpc, or eip.
  "node_type": "high", // Specification type. This parameter is mandatory.
  "source_Endpoint": {}, // Information body of the source database. This parameter is mandatory.
  "db_type": "mysql", // The database type. The value can be mysql, mongodb, gaussdbv5, or gaussdbv5. This parameter is mandatory.
},
{
  "target_Endpoint": {}, // Information body of the destination database
  "db_type": "mysql", // Database type. This parameter is mandatory.
  "inst_id": "63e0699063494a8a93798f38abf3247ein01", // RDS instance ID. This parameter is mandatory when the database is an RDS DB instance.
  "region": "cn-xianhz-1" // The region where the RDS DB instance is located. This parameter is
```

mandatory when the database is an RDS DB instance.

```
    },  
    "task_type": "FULL_INCR_TRANS" //Task mode. The value can be FULL_TRANS or FULL_INCR_TRANS.  
  }
```

If the request fails, an error code and error message are returned. For details, see section [Error Code](#).

----End

5 APIs V3.0 (Recommended)

5.1 Quotas

5.1.1 Querying Resource Quotas

Function

This API is used to query quotas of a tenant.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

URI

GET /v3/{project_id}/quotas

Table 5-1 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 5-2 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type. Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Response Parameters

Status code: 200

Table 5-3 Response body parameters

Parameter	Type	Description
quotas	Object	Quota information. For details, see Table 5-4 .

Table 5-4 Data structure description of field **quotas**

Parameter	Type	Description
resource	Object	Quota information. For details, see Table 5-5 .

Table 5-5 Data structure description of field **resource**

Parameter	Type	Description
type	String	Quota type information.
min	Integer	Minimum value of the quota.
max	Integer	Maximum value of the quota.

Parameter	Type	Description
quota	Integer	Actual value of the user quota.
used	Integer	Used quota.

Example Request

Example of querying quotas

https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/quotas

Example Response

Status code: 200

OK

```
{
  "quotas": {
    "resource": {
      "type": "instances",
      "min": 0,
      "max": 9999,
      "quota": 9999,
      "used": 41
    }
  }
}
```

Status Code

Status Code	Description
200	OK

Error Code

For details, see [Error Code](#).

5.2 Public API Management

5.2.1 Querying AZs in Which Flavors Are Not Sold Out

Function

This API is used to query AZs where flavors are not sold out.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

URI

POST /v3/{project_id}/available-zone

Table 5-6 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 5-7 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type. Default value: en-us Enumerated values: <ul style="list-style-type: none">• en-us• zh-cn

Table 5-8 Request body parameters

Parameter	Mandatory	Type	Description
engine_type	Yes	String	Engine type of a DRS task. For details, see Engine Types .

Parameter	Mandatory	Type	Description
db_use_type	Yes	String	The migration scenario. The value can be migration (real-time migration), sync (real-time synchronization), or cloudDataGuard (real-time disaster recovery). Enumerated values: <ul style="list-style-type: none"> • migration • sync • cloudDataGuard
job_direction	Yes	String	Task direction. Values: <ul style="list-style-type: none"> • up: to-the-cloud scenarios and the current cloud is the standby cloud in the DR. • down: out-of-cloud scenarios and the current cloud is the active cloud in the DR. • non-dbs: self-built databases.
node_type	Yes	String	Flavor type.
multi_write	No	String	Whether the DR mode is dual-active. If this parameter is left blank, the default value is false .

Response Parameters

Status code: 200

Table 5-9 Response body parameters

Parameter	Type	Description
az_infos	Array of objects	AZ information. For details, see Table 5-10 .

Table 5-10 Data structure description of field **az_infos**

Parameter	Type	Description
code	String	AZ ID.
name	String	AZ name.
status	String	AZ status.

Example Request

Example of querying AZs for MySQL synchronization

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/available-zone
{
  "engine_type": "mysql",
  "db_use_type": "sync",
  "job_direction": "up",
  "node_type": "medium"
}
```

Example Response

Status code: 200

OK

```
{
  "az_infos": [ {
    "code": "az1xahz",
    "name": "az1xahz",
    "status": "DISABLED"
  }, {
    "code": "az2xahz",
    "name": "az2",
    "status": "ENABLED"
  }, {
    "code": "az3xahz",
    "name": "az3",
    "status": "ENABLED"
  }, {
    "code": "az4xahz",
    "name": "az4",
    "status": "ENABLED"
  }
]
```

Status Code

Status Code	Description
200	OK

Error Code

For details, see [Error Code](#).

5.2.2 Querying Task Progress in Batches

Function

This API is used to query the full progress and incremental delay information in batches based on the task ID.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

URI

POST /v3/{project_id}/jobs/batch-progress

Table 5-11 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 5-12 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none">• en-us• zh-cn

Table 5-13 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Request for querying task progress in batches.

Response Parameters

Status code: 200

Table 5-14 Response body parameters

Parameter	Type	Description
count	Integer	Total number.
results	Array of objects	Response body for querying the migration progress in batches. For details, see Table 5-15 .

Table 5-15 Data structure description of field **results**

Parameter	Type	Description
job_id	String	Task ID.
progress	String	Migration percentage.
incre_trans_delay	String	Incremental migration delay (unit: s).
incre_trans_delay_millis	String	Incremental migration delay (unit: ms).
task_mode	String	Task mode. Values: <ul style="list-style-type: none"> FULL_TRANS: full migration INCR_TRANS: incremental migration FULL_INCR_TRANS: full+incremental migration In the single-active DR scenario, only FULL_INCR_TRANS is available.
transfer_statuses	String	Task status.
process_time	String	Migration time in timestamp format.
remaining_time	String	Estimated remaining time.

Parameter	Type	Description
progress_map	Map<String,P rogressInfo>	Data, structure, and index migration progress information body. For details, see Table 5-16 .
error_code	String	Error code.
error_msg	String	Error message.

Table 5-16 Data structure description of field **progress_map**

Parameter	Type	Description
completed	String	Progress.
remaining_time	String	Estimated remaining time.

Example Request

Example of querying the DR progress:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-progress
{
  "jobs" : [ "8d0e8e36-a618-490d-8a46-8c61ac9jb502" ]
}
```

Example Response

Status code: 200

OK

- Example response 1 for querying the DR progress:

```
{
  "count" : 1,
  "results" : [ {
    "progress" : "100",
    "job_id" : "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
    "incre_trans_delay" : "0",
    "task_mode" : "FULL_INCR_TRANS",
    "transfer_status" : "INCR_TRANSFER_STARTED",
    "process_time" : "1608274919000",
    "remaining_time" : "0"
  } ]
}
```

- Example response 2 for querying the DR progress:

```
{
  "count" : 2,
  "results" : [ {
    "progress" : "100",
    "job_id" : "edae91cb-5892-49b6-a529-4921fb26jb21",
    "incre_trans_delay" : "0",
    "task_mode" : "FULL_INCR_TRANS",
    "transfer_status" : "INCR_TRANSFER_STARTED",
  } ]
}
```

```
"process_time" : "1594864576000",
"remaining_time" : "10"
}, {
"progress" : "0",
"job_id" : "f95c5d83-d0c9-42bd-b295-38c31cd1jb15",
"incre_trans_delay" : "-1",
"task_mode" : "FULL_INCR_TRANS",
"transfer_status" : "FULL_TRANSFER_COMPLETE",
"process_time" : "0",
"remaining_time" : "0",
"progress_map" : {
"struct" : {
"completed" : "94%",
"remaining_time" : null
},
"data" : {
"completed" : "100%",
"remaining_time" : null
},
"index" : {
"completed" : "100%",
"remaining_time" : null
}
}
}
}]
```

Status Code

Status Code	Description
202	Accepted
400	Bad Request

Error Code

For details, see [Error Code](#).

5.3 Real-Time Disaster Recovery

5.3.1 Querying RPO and RTO in Batches

Function

This API is used to query Recovery Point Objective (RPO) and Recovery Time Objective (RTO).

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

URI

POST /v3/{project_id}/jobs/batch-rpo-and-rto

Table 5-17 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 5-18 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 5-19 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Request for querying the IDs of RPO and RTO tasks in batches.

Response Parameters

Status code: 202

Table 5-20 Response body parameters

Parameter	Type	Description
count	Integer	Total number.
results	Array of objects	Response body set for querying RPO and RTO in batches. For details, see Table 5-21 .

Table 5-21 Data structure description of field **results**

Parameter	Type	Description
job_id	String	Task ID.
rpo_info	Object	RPO information. For details, see Table 5-22 .
rto_info	Object	RTO information. For details, see Table 5-22 .
error_code	String	Error code.
error_msg	String	Error message.

Table 5-22 Data structure description of fields **rpo_info** and **rto_info**

Parameter	Type	Description
check_point	String	Check point.
delay	String	Delay (unit: ms).
gtid_set	String	GTID.
time	String	Current time. The format is yyyy-MM-dd HH:mm:ss.

Example Request

Example of querying RPO and RTO in batches:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-rpo-and-rto
{
  "jobs" : [ "8d0e8e36-a618-490d-8a46-8c61ac9jb502" ]
}
```

Example Response

Status code: 202

Accepted

```
{
  "count" : 1,
  "results" : [ {
    "job_id" : "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
    "rpo_info" : {
      "delay" : "0",
      "time" : "2020-12-18 15:47:05",
      "gtid_set" : "NA",
      "check_point" : "mysql-bin.000514:197"
    },
    "rto_info" : {
      "delay" : "0",
      "time" : "2020-12-18 15:47:05",
      "gtid_set" : "NA",
      "check_point" : "mysql-bin.000514:197"
    }
  } ]
}
```

Status Code

Status Code	Description
202	Accepted
400	Bad Request

Error Code

For details, see [Error Code](#).

6 APIs V3.0 (Deprecated)

6.1 Public API Management

6.1.1 Creating Tasks in Batches

Function

This API is used to create real-time migration, real-time synchronization, and real-time DR tasks in batches based on different request parameters.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

You can call a maximum of 10 APIs in batches.

URI

POST /v3/{project_id}/jobs/batch-creation

Table 6-1 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-2 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type. The default value is en-us . Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-3 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Request body for creating tasks. For details, see Table 6-4 .

Table 6-4 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
name	Yes	String	The task name. The task name can be 4 to 50 characters in length. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_). <ul style="list-style-type: none"> • Minimum length: 4 characters • Maximum length: 50 characters

Parameter	Mandatory	Type	Description
db_use_type	Yes	String	<p>Migration scenario.</p> <p>Values:</p> <ul style="list-style-type: none"> • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.
engine_type	Yes	String	<p>Engine type of a DRS task.</p> <p>Values:</p> <ul style="list-style-type: none"> • mysql: used for migration and synchronization from MySQL to MySQL • mongodb: used for migration from MongoDB to DDS • cloudDataGuard-mysql: used for DR from MySQL to MySQL • gaussdbv5: used for GaussDB synchronization • mysql-to-kafka: used for synchronization from MySQL to Kafka • taurus-to-kafka: used for synchronization from GaussDB(for MySQL) to Kafka • gaussdbv5ha-to-kafka: used for synchronization from GaussDB primary/standby to Kafka • postgresql: used for synchronization from PostgreSQL to PostgreSQL <p>For details, see Engine Types.</p>

Parameter	Mandatory	Type	Description
job_direction	Yes	String	Task direction. Values: <ul style="list-style-type: none"> • up: to-the-cloud scenarios and the current cloud is the standby cloud in the DR. • down: out-of-cloud scenarios and the current cloud is the active cloud in the DR. • non-dbs: self-built databases.
bind_eip	No	Boolean	Whether to bind an EIP. This parameter is mandatory and set to true when the network type is EIP.
customize_subnet_id	Yes	String	The ID of the subnet where the DRS instance resides, which corresponds to the network ID of the subnet created in the VPC of the destination database. The value is in UUID format.
product_id	No	String	Product ID.
is_target_read_only	No	Boolean	Whether the destination DB instance can be read-only. This parameter is valid only when the destination DB instance is a MySQL DB instance and the job_direction value is up . In the DR scenario, this parameter is mandatory and set to true if the current cloud is a standby cloud. If this parameter is not specified, the default value is true .
net_type	Yes	String	Network type. Value: <ul style="list-style-type: none"> • vpn • vpc • eip The VPC network cannot be selected in the DR scenario.
node_type	Yes	String	The flavor type. Value: high

Parameter	Mandatory	Type	Description
node_num	No	Integer	<p>The number of nodes.</p> <p>For a MongoDB database, this parameter indicates the number of source shards. This parameter is mandatory when the source database is a cluster. The value ranges from 1 to 32. The default value is 2 for MySQL dual-active DR.</p> <p>For a MongoDB database, this parameter indicates the number of source shards. This parameter is mandatory when the source database is a cluster. The value ranges from 1 to 32.</p>
source_endpoint	Yes	Object	<p>The source database information.</p> <p>For details, see Table 6-5.</p>
target_endpoint	Yes	Object	<p>The destination database information.</p> <p>For details, see Table 6-5.</p>
task_type	Yes	String	<p>Task mode. The default value is FULL_INCR_TRANS.</p> <p>Values:</p> <ul style="list-style-type: none"> ● FULL_TRANS: full migration ● FULL_INCR_TRANS: full +incremental migration ● INCR_TRANS: incremental migration <p>In the single-active DR scenario, only FULL_INCR_TRANS is available.</p>
tags	No	Array of object	<p>Tag information. Up to 20 tags can be added.</p> <p>For details, see Table 6-6.</p>
description	No	String	<p>Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: ! <>'&"\</p>

Parameter	Mandatory	Type	Description
multi_write	No	Boolean	<ul style="list-style-type: none"> This parameter is mandatory when db_use_type is set to cloudDataGuard. If the DR type is dual-active, the value of multi_write is true. Otherwise, the value is false. If db_use_type is set to other values, multi_write is optional. Default value: false
sys_tags	No	Array of object	Enterprise project. If this parameter is not specified, the value is default . The key must be _sys_enterprise_project_id , and the value is the enterprise project ID. Only one enterprise project can be selected. For details, see Table 6-6 .
expired_days	No	String	After a task is in the abnormal status for a period of time, the task is automatically stopped. The unit is day. The value ranges from 14 to 100. If this parameter is not transferred, the default value is 14 .
master_az	No	String	AZ where the primary task is located. You can obtain the value by calling the API for querying AZs where flavors are not sold out. <ul style="list-style-type: none"> This parameter takes effect when both master_az and slave_az are specified. MySQL and gaussdbv5ha-to-kafka scenarios are supported.

Parameter	Mandatory	Type	Description
slave_az	No	String	<p>AZ where the standby task is located. You can obtain the value by calling the API for querying AZs where flavors are not sold out.</p> <ul style="list-style-type: none"> This parameter takes effect when both master_az and slave_az are specified. MySQL and gaussdbv5ha-to-kafka scenarios are supported.
charging_mode	No	String	<p>Billing Mode: Pay-per-use is used by default.</p> <p>Values:</p> <ul style="list-style-type: none"> period: indicates the monthly/yearly billing. on_demand: indicates the pay-per-use billing. <p>NOTE</p> <ul style="list-style-type: none"> If db_use_type is set to migration, the yearly/monthly billing is not supported. The engine_type can be set to mysql, cloudDataGuard-mysql, postgresql, or gaussdbv5ha-to-kafka.
period_order	No	Object	<p>Yearly/Monthly information. For details, see Table 6-7.</p> <p>NOTE This parameter is mandatory when charging_mode is set to period.</p>
public_ip_list	No	Array of objects	<p>Information about a specified EIP. For details, see Table 6-8.</p>

Table 6-5 Data structure description of fields **source_endpoint** and **target_endpoint**

Parameter	Mandatory	Type	Description
db_type	No	String	Database type. Values: <ul style="list-style-type: none"> • mysql: MySQL • mongodb: MongoDB • gaussdbv5: GaussDB Distributed • taurus: GaussDB(for MySQL) • gaussdbv5ha: GaussDB Primary/Standby • kafka: Kafka • postgresql: PostgreSQL
az_code	No	String	azCode of the AZ where the database is located.
region	No	String	Region where the DB instance is located. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance. In DR scenarios, if job_direction is set to down , this parameter is mandatory in source_endpoint . If job_direction is set to up , this parameter is mandatory in target_endpoint .
inst_id	No	String	DB instance ID. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance. In DR scenarios, if job_direction is set to down , this parameter is mandatory in source_endpoint . If job_direction is set to up , this parameter is mandatory in target_endpoint .
vpc_id	No	String	ID of the VPC where the database is located.
subnet_id	No	String	ID of the subnet where the database is located.
security_group_id	No	String	ID of the security group to which the database belongs.

Parameter	Mandatory	Type	Description
project_id	No	String	Project ID of an RDS instance.
db_name	No	String	The service name. This parameter is mandatory when the source database is an Oracle database. The database name can be a maximum of 128 characters in length and cannot contain the following special characters: !<>&'\"
db_password	No	String	Database password.
db_port	No	Integer	Database port. The value is an integer ranging from 1 to 65535.
db_user	No	String	Database user.
inst_name	No	String	RDS instance name.
ip	No	String	Database IP address.
mongo_ha_mode	No	String	Mongo HA mode.
safe_mode	No	Integer	Running mode of an MRS cluster. Values: <ul style="list-style-type: none"> 0: Normal cluster 1: Security cluster
ssl_cert_password	No	String	SSL certificate password. The certificate file name extension is .p12.
ssl_cert_checksum	No	String	The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database.
ssl_cert_key	No	String	SSL certificate content, which is encrypted using Base64.
ssl_cert_name	No	String	SSL certificate name.
ssl_link	No	Boolean	Whether SSL is enabled.
topic	No	String	Kafka topic name.

Parameter	Mandatory	Type	Description
cluster_mode	No	String	For MongoDB 4.0 or later, if the cluster instance cannot obtain the IP address of the sharded node, set source_endpoint to Sharding4.0+ . Default value: Sharding4.0+ Value: Sharding4.0+

Table 6-6 Data structure description of fields **tags** and **sys_tags**

Parameter	Mandatory	Type	Description
key	No	String	Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).
value	No	String	Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-).

Table 6-7 Data structure description of field **period_order**

Parameter	Mandatory	Type	Description
period_type	No	Integer	Subscription period type. Values: <ul style="list-style-type: none"> • 2: indicates that the service is subscribed by month. • 3: indicates that the service is subscribed by year. NOTE This parameter is available and mandatory only when charging_mode is set to period .

Parameter	Mandatory	Type	Description
period_num	No	Integer	<p>Number of subscription periods.</p> <p>Values:</p> <ul style="list-style-type: none"> If period_type is set to 2 (month), the value ranges from 1 to 9. If period_type is set to 3 (year), the value ranges from 1 to 3. <p>NOTE</p> <ul style="list-style-type: none"> This parameter is available and mandatory only when charging_mode is set to period. The value of period_num must be a positive integer.
is_auto_renew	No	Integer	<p>Whether auto renewal is enabled.</p> <p>Values:</p> <ul style="list-style-type: none"> 0: The subscription is not automatically renewed. true: The subscription is automatically renewed. <p>NOTE</p> <p>This parameter is available only when charging_mode is set to period. If this parameter is not specified, automatic renewal is disabled by default.</p>

Table 6-8 Data structure description of field **public_ip_list**

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a specified EIP.
public_ip	Yes	String	EIP.

Parameter	Mandatory	Type	Description
type	Yes	String	Type of a task with an EIP bound. <ul style="list-style-type: none"> In a primary/standby task, master indicates the primary task, and slave indicates the standby task. In other cases, the value is fixed to master. Enumerated values: <ul style="list-style-type: none"> master slave

Response Parameters

Status code: 202

Table 6-9 Response body parameters

Parameter	Type	Description
results	Array of objects	The response body for creating tasks in batches. For details, see Table 6-10 .
count	Integer	Total number of records.

Table 6-10 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
child_ids	Array of strings	Subtask ID set. This parameter is returned when there are subtasks.
name	String	Task name.
status	String	Task status.
create_time	String	Creation time (timestamp).
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Creating to-the-cloud MySQL migration tasks in batches, in which **task_type** is set to **FULL_INCR_TRANS**, and **net_type** is set to **eip**

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-creation>

```
{
  "jobs": [ {
    "name": "DRS-9228",
    "node_type": "high",
    "engine_type": "mysql",
    "net_type": "eip",
    "job_direction": "up",
    "db_use_type": "migration",
    "task_type": "FULL_INCR_TRANS",
    "customize_sutnet_id": "352ad828-3467-4f03-987a-c55a5a9dd417",
    "source_endpoint": {
      "db_type": "mysql"
    },
    "target_endpoint": {
      "region": "cn-xianhz-1",
      "db_type": "mysql",
      "inst_id": "e05a3679efe241d8b5dee80b17c1a863in01"
    },
    "is_target_readonly": false,
    "bind_eip": true
  } ]
}
```

- Creating real-time MySQL DR tasks in batches (current cloud as standby), in which **net_type** is set to **eip**

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-creation>

```
{
  "jobs": [ {
    "name": "DRS-api-test",
    "engine_type": "cloudDataGuard-mysql",
    "net_type": "eip",
    "node_type": "high",
    "job_direction": "up",
    "source_endpoint": {
      "db_type": "mysql"
    },
    "target_endpoint": {
      "region": "cn-xianhz-1",
      "db_type": "mysql",
      "inst_id": "e05a3679efe241d8b5dee80b17c1a863in01",
      "project_id": "054ba152d480d55b2f5dc0069e7ddef0"
    },
    "is_target_readonly": true,
    "bind_eip": true,
    "db_use_type": "cloudDataGuard",
    "task_type": "FULL_INCR_TRANS",
    "customize_sutnet_id": "352ad828-3467-4f03-987a-c55a5a9dd417",
    "multi_write": false
  } ]
}
```

- Creating to-the-cloud DDS replica set migration tasks in batches, in which **task_type** is set to **FULL_INCR_TRANS**, and **net_type** is set to **eip**

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-creation>

```
{
  "jobs": [ {
    "name": "DRS-3371-linxiaolu",
    "node_type": "high",
    "engine_type": "mongodb",
    "net_type": "eip",
    "job_direction": "up",
  } ]
}
```

```

"db_use_type": "migration",
"task_type": "FULL_INCR_TRANS",
"customize_sutnet_id": "faf513f3-7a88-4a5c-bec7-238699c29c17",
"source_endpoint": {
  "db_type": "mongodb"
},
"target_endpoint": {
  "region": "cn-xianhz-1",
  "db_type": "mongodb",
  "inst_id": "3cadd5a0ef724f55ac7fa5bcb5f4fc5fin02"
},
"bind_eip": true
}]
}

```

- Creating a MySQL primary/standby synchronization task, in which **task_type** is set to **FULL_INCR_TRANS**, and **net_type** is set to **eip**

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-creation>

```

{
  "jobs": [ {
    "name": "DRS-linxiaolu-test3",
    "engine_type": "mysql",
    "net_type": "eip",
    "node_type": "high",
    "job_direction": "up",
    "source_endpoint": {
      "db_type": "mysql"
    },
    "target_endpoint": {
      "region": "cn-xianhz-1",
      "db_type": "mysql",
      "inst_id": "64e8d7a31afa476ca85609a17af83765in01",
      "project_id": "054ba152d480d55b2f5dc0069e7ddef0"
    },
    "bind_eip": true,
    "db_use_type": "sync",
    "task_type": "FULL_INCR_TRANS",
    "customize_sutnet_id": "0cf77cfb-3785-4065-a9c4-74b7bb2df071",
    "master_az": "az2xahz",
    "slave_az": "az3xahz"
  } ]
}

```

Example Response

Status code: 202

Accepted

```

{
  "results": [ {
    "id": "e11eaf8f-71ef-4fad-8890-aed7572ajb11",
    "name": "DRS-9228",
    "status": "CREATING",
    "create_time": "1599188556112"
  } ],
  "count": 1
}

```

Status Code

Status Code	Description
202	Accepted

Status Code	Description
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.2 Testing Connections in Batches

Function

This API is used to test connections in batches.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- After the task is created, you can test the connection only when the task status is **CONFIGURATION**.
- In the dual-active DR scenario, the backward task can be executed only when the forward task is in **INCRE_TRANSFER_STARTED** state. The parent task cannot call the API.
- You can call a maximum of 10 APIs in batches.

URI

POST /v3/{project_id}/jobs/batch-connection

Table 6-11 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-12 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-13 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of requests for testing connections in batches. For details, see Table 6-14 .

Table 6-14 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
id	Yes	String	DRS task ID, which can be obtained from the task list or task details page.
net_type	Yes	String	Network type. Value: <ul style="list-style-type: none"> • vpn • vpc • eip

Parameter	Mandatory	Type	Description
db_type	Yes	String	Database type. Value: <ul style="list-style-type: none">• mysql: MySQL• mongodb: MongoDB• gaussdbv5: GaussDB Distributed• taurus: GaussDB(for MySQL)• gaussdbv5ha: GaussDB Primary/Standby• kafka: Kafka• postgresql: PostgreSQL
ip	Yes	String	Database IP address.
db_port	No	Integer	Database port number. This parameter must be set to 0 for the Mongo and DDS databases.
inst_id	No	String	DB instance ID. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance.
db_user	Yes	String	Database account.
db_password	Yes	String	Database password.
ssl_link	No	Boolean	Whether SSL is enabled. If this parameter is set to true , you need to set parameters related to the SSL certificate.
ssl_cert_key	No	String	SSL certificate content, which is a character string encrypted using BASE64 after the SSL certificate is obtained. This parameter is mandatory when ssl_link is set to true .
ssl_cert_name	No	String	SSL certificate name. This parameter is mandatory when ssl_link is set to true .

Parameter	Mandatory	Type	Description
ssl_cert_check_sum	No	String	The checksum value of the SSL certificate content encrypted using SHA256 after the SSL certificate is obtained, which is used for backend verification. This parameter is mandatory when ssl_link is set to true .
ssl_cert_password	No	String	The SSL certificate password. The certificate file name extension is .p12 and requires a password.
vpc_id	No	String	ID of the VPC where the instance resides. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance.
subnet_id	No	String	ID of the subnet where the instance resides. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance.
end_point_type	Yes	String	Source database: so . Destination database: ta . Default value: so Values: <ul style="list-style-type: none">• so• ta
region	No	String	Region where the DB instance is located. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance.
project_id	No	String	Project ID of the region where the user is located.
db_name	No	String	Database user name, which is the DDS authentication database or the service name of the Oracle database.

Parameter	Mandatory	Type	Description
kafka_security_config	No	Object	This parameter is only for Kafka security authentication. For details, see Table 6-15 .

Table 6-15 Data structure description of field **kafka_security_config**

Parameter	Mandatory	Type	Description
trust_store_key_name	No	String	Certificate name. This parameter is mandatory when security authentication is used.
trust_store_key	No	String	Value of the security certificate transcoded using Base64. This parameter is mandatory for security authentication.
trust_store_password	No	String	Certificate password. This parameter is mandatory when security authentication is used.
type	No	String	Authentication type. PLAINTEXT indicates no authentication. This parameter is mandatory when security authentication is used. <ul style="list-style-type: none"> • PLAINTEXT • SASL_SSL

Response Parameters

Status code: 200

Table 6-16 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for the batch test connection. For details, see Table 6-17 .
count	Integer	Total number of records.

Table 6-17 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Test result. Value: <ul style="list-style-type: none"> ● success: indicates that the connection test is successful. ● failed: indicates that the connection test fails.
error_code	String	Error code.
error_msg	String	Error message.
success	Boolean	Whether the request is successful.

Example Request

- Testing connections for a DDS real-time migration task in which the destination database is DDS

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-connection`

```
{
  "jobs": [ {
    "id": "140b5236-88ad-43c8-811c-1268453jb101",
    "ip": "192.168.4.66:8635,192.168.4.83:8635",
    "net_type": "eip",
    "db_type": "mongodb",
    "db_port": 0,
    "db_user": "root",
    "db_password": "*****",
    "inst_id": "3cadd5a0ef724f55ac7fa5bcb5f4fc5fin02",
    "project_id": "0549a6a31000d4e82fd1c00c3d6f2d76",
    "region": "cn-xianhz-1",
    "end_point_type": "ta"
  } ]
}
```

- Testing connections for an RDS for MySQL real-time migration task in which the destination database is RDS for MySQL

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-connection`

```
{
  "jobs": [ {
    "id": "140b5236-88ad-43c8-811c-1268453jb101",
    "ip": "192.168.0.131",
    "net_type": "eip",
    "db_type": "mysql",
    "db_port": 3306,
    "db_user": "root",
    "db_password": "*****",
    "inst_id": "e05a3679efe241d8b5dee80b17c1a863in01",
    "project_id": "054ba152d480d55b2f5dc0069e7ddef0",
    "region": "cn-xianhz-1",
    "end_point_type": "ta"
  } ]
}
```

- Testing connections for a MySQL real-time migration task in which the source database is not RDS

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-connection
{
  "jobs": [ {
    "id": "140b5236-88ad-43c8-811c-1268453jb101",
    "ip": "192.168.0.27",
    "net_type": "eip",
    "db_type": "mysql",
    "db_port": 3306,
    "db_user": "root",
    "db_password": "*****",
    "ssl_link": false,
    "end_point_type": "so"
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "results": [ {
    "success": true,
    "id": "140b5236-88ad-43c8-811c-1268453jb101",
    "status": "success"
  } ],
  "count": 1
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.3 Testing Connections in Batches (Cluster Mode)

Function

- This API is used to test connections in cluster mode.
- This API is used to test connections for primary and standby tasks.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- After the task is created, you can test the connection only when the task status is **CONFIGURATION**.
- You can call a maximum of 10 APIs in batches.

URI

POST /v3/{project_id}/jobs/cluster/batch-connection

Table 6-18 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-19 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-20 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Requests for testing cluster connections in batches. For details, see Table 6-21 .

Table 6-21 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
action	Yes	String	Specific operation to be performed.
job_id	Yes	String	Task ID. (In cluster mode, the value is the ID of the parent task.).
property	Yes	String	The parameter that corresponds to the operation.

Table 6-22 property field description

Name	Mandatory	Type	Description
dbtype	Yes	String	Database type.
dbport	Yes	Integer	Database port. The value is 0 for the MongoDB engine.
ssllink	Yes	boolean	Whether the connection is an SSL connection. Valid values: <ul style="list-style-type: none"> • true • false
nettype	Yes	String	Network type. Valid values: <ul style="list-style-type: none"> • vpn • vpc • eip
endpointtype	Yes	String	Endpoint type. Valid values: <ul style="list-style-type: none"> • so: indicates the source database. • ta: indicates the destination database. • ls: indicates the sharded database. If the source database is a cluster database, the endpointtype value corresponding to the database IP address is so, and the endpointtype value corresponding to the sharded database is ls.
ip	Yes	String	Database IP address.

Name	Mandatory	Type	Description
dbName	Yes	String	Database name.
dbuser	Yes	String	Database username.
dbpassword	Yes	String	Database password.
sslcertkey	No	String	Content of the SSL certificate. This parameter is required for SSL connection.
sslcertname	No	String	Name of the SSL certificate. This parameter is required for SSL connection.
sslcertchecksum	No	String	Checksum value of the SSL certificate content, which is required for SSL connections.

Response Parameters

Status code: 200

Table 6-23 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for the batch test connection. For details, see Table 6-24 .
count	Integer	Total number of records.

Table 6-24 Data structure description of field results

Parameter	Type	Description
id	String	Task ID.
status	String	Test result. Value: <ul style="list-style-type: none"> true: indicates that the connection test is successful. false: indicates that the connection test fails.
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.
success	Boolean	Whether the request is successful.

Example Request

- Testing connections for a MySQL primary/standby task
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/cluster/batch-connection>

```
{
  "jobs": [{
    "action": "testConnection",
    "job_id": "0ac45233-8de7-4f02-9de1-d71cab7jb201",
    "property": "[{"ip":"192.168.2.232:3306","dbtype":"mysql","dbuser":"root","dbpassword":"*****","ssllink":false,"projectId":"054ba152d480d55b2f5dc0069e7ddef0","region":"cn-xianhz-1","nettype":"eip","endpointtype":"so"}]"
  }]
}
```
- Testing connections for a task in which the source database is DDS cluster
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/cluster/batch-connection>

```
{
  "jobs" : [ {
    "action" : "testConnection",
    "job_id" : "35d0d60b-4605-4686-b35d-3a3d059fjb15",
    "property" : "[{"dbtype":"mongodb","dbport":0,"ssllink":false,"nettype":"eip","endpointtype":"so","encrypt":{"elementId":"encrypt_switch","offLabel":"OFF","onLabel":"ON","disable":false,"ip":"192.168.7.217:8635","dbName":"admin","dbuser":"rwuser","dbpassword":"*****"},"dbtype":"mongodb","dbport":0,"ssllink":false,"nettype":"eip","endpointtype":"so","encrypt":{"elementId":"encrypt_switch","offLabel":"OFF","onLabel":"ON","disable":false,"ip":"192.168.7.72:8635","dbName":"admin","dbuser":"rwuser","dbpassword":"*****"},"ip":"192.168.7.37:8635","nettype":"eip","dbtype":"mongodb","dbport":0,"dbuser":"rwuser","dbpassword":"*****","ssllink":false,"sslcertkey":"","sslcertname":"","sslcertchecksum":"","endpointtype":"ls","dbName":"admin"}]"
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "results" : [ {
    "id" : "0eb704d0-5a1c-4cbd-b675-91152f06jb11",
    "status" : "true"
  } ],
  "count" : 1
}
```

Status Code

Status Code	Description
200	OK

Status Code	Description
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.4 Modifying Tasks in Batches

Function

This API is used to modify task names or descriptions in batches and set exception notification.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- After the test of connections to the source and destination databases is successful, you need to call this API. Enter the source and destination database information according to the example. Otherwise, errors may occur in subsequent tasks.
- This API can be invoked when the task name, description, or exception notification is modified but the task is not in the stopped or deleted state.
- This API is invoked after connections to the source and destination databases are tested. The task must be in **CONFIGURATION** state. In the dual-active DR scenario, the parent task cannot call the API.
- You can call a maximum of 10 APIs in batches.

URI

PUT /v3/{project_id}/jobs/batch-modification

Table 6-25 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-26 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-27 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Request body for modifying tasks. For details, see Table 6-28 .

Table 6-28 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
description	No	String	Task description. This parameter is mandatory when you modify the task description. Minimum length: 0 character Maximum length: 256
name	No	String	Task name. Set this parameter when you need to change the task name.
alarm_notify	No	Object	Set exception notification. For details, see Table 6-29 .

Parameter	Mandatory	Type	Description
task_type	No	String	Task mode. Values: <ul style="list-style-type: none"> ● FULL_TRANS: full migration ● INCR_TRANS: incremental migration ● FULL_INCR_TRANS: full +incremental migration
source_endpoint	No	Object	Source database information. This parameter is mandatory for calling the API after the connection test. For details, see Table 6-31 .
target_endpoint	No	Object	Destination database information. This parameter is mandatory for calling the API after the connection test. For details, see Table 6-31 .
node_type	No	String	Node specification type. This parameter is mandatory when this API is invoked to modify a task after the connection test. Default value: high Value: high

Parameter	Mandatory	Type	Description
engine_type	No	String	<p>Engine type of a DRS task. This parameter is mandatory when this API is invoked to modify a task after the connection test.</p> <p>Values:</p> <ul style="list-style-type: none"> • mysql: used for migration and synchronization from MySQL to MySQL • mongodb: used for migration from MongoDB to DDS • cloudDataGuard-mysql: used for DR from MySQL to MySQL • gaussdbv5: used for GaussDB synchronization • mysql-to-kafka: used for synchronization from MySQL to Kafka • taurus-to-kafka: used for synchronization from GaussDB(for MySQL) to Kafka • gaussdbv5ha-to-kafka: used for synchronization from GaussDB primary/standby to Kafka • postgresql: used for synchronization from PostgreSQL to PostgreSQL <p>For details, see Engine Types.</p>
net_type	No	String	<p>Network type. This parameter is mandatory after the connection test. Values:</p> <ul style="list-style-type: none"> • vpn • vpc • eip
store_db_info	No	Boolean	<p>Whether to save the database information. This parameter is mandatory when the API is called after the connection test.</p>

Parameter	Mandatory	Type	Description
is_recreate	No	Boolean	Whether the task is a rebuilding task.
job_direction	No	String	Task direction. This parameter is mandatory after the connection test. Values: <ul style="list-style-type: none"> • up: to-the-cloud scenarios and the current cloud is the standby cloud in the DR. • down: out-of-cloud scenarios and the current cloud is the active cloud in the DR. • non-dbs: self-built databases.
is_target_read_only	No	Boolean	Whether the destination DB instance can be read-only.
replace_definer	No	Boolean	Whether to migrate all Definers to the user. MySQL databases support this setting. This parameter is mandatory when this API is invoked to modify a task after the connection test. Values: <ul style="list-style-type: none"> • true: The Definers of all source database objects will be migrated to the user. Other users do not have permissions on database objects unless they are authorized. • false: The Definers of all source database objects will not be changed. You need to migrate all accounts and permissions of the source database in the next step.
tags	No	Array of object	Specifies the tag information. For details, see Table 6-32 .

Parameter	Mandatory	Type	Description
db_use_type	No	String	Migration type. Values: <ul style="list-style-type: none"> • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.
product_id	No	String	Product ID.

Table 6-29 Data structure description of field **alarm_notify**

Parameter	Mandatory	Type	Description
delay_time	No	Long	Subscription delay, in seconds. <ul style="list-style-type: none"> • Minimum value: 1 • Maximum value: 3600 • Default value: 0
rto_delay	No	Long	Recovery Time Objective (RTO) delay, in seconds. <ul style="list-style-type: none"> • Minimum value: 1 • Maximum value: 3600 • Default value: 0
rpo_delay	No	Long	Recovery Point Objective (RPO) delay, in seconds. <ul style="list-style-type: none"> • Minimum value: 1 • Maximum value: 3600 • Default value: 0
alarm_to_user	No	Boolean	Whether to notify users of alarms. The default value is false .
subscriptions	No	Array of objects	Receiving method and message body. Up to two receiving modes and message bodies are supported. For details, see Table 6-30 .

Table 6-30 Data structure description of field **subscriptions**

Parameter	Mandatory	Type	Description
endpoints	No	Array of strings	List of mobile numbers or email addresses. Use commas (,) to separate multiple mobile numbers or email addresses. Up to 10 mobile numbers or email addresses are supported.
protocol	No	String	Receiving method. Values: <ul style="list-style-type: none"> • sms: SMS message • email: email.

Table 6-31 Data structure description of fields **source_endpoint** and **target_endpoint**

Parameter	Mandatory	Type	Description
db_type	No	String	Database type. This parameter is mandatory when this API is invoked to modify a task after the connection test. Values: <ul style="list-style-type: none"> • mysql: MySQL • mongodb: MongoDB • gaussdbv5: GaussDB Distributed • taurus: GaussDB(for MySQL) • gaussdbv5ha: GaussDB Primary/Standby • kafka: Kafka • postgresql: PostgreSQL
az_code	No	String	Code of the AZ where the database is located.
region	No	String	Region where the DB instance is located. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance. In DR scenarios, if job_direction is set to down , this parameter is mandatory in source_endpoint . If job_direction is set to up , this parameter is mandatory in target_endpoint .

Parameter	Mandatory	Type	Description
inst_id	No	String	ID of the DB instance. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance. In DR scenarios, if job_direction is set to down , this parameter is mandatory in source_endpoint . If job_direction is set to up , this parameter is mandatory in target_endpoint .
vpc_id	No	String	ID of the VPC where the database is located.
subnet_id	No	String	ID of the subnet where the database is located.
security_group_id	No	String	ID of the security group to which the database belongs.
project_id	No	String	Project ID of an RDS instance.
db_name	No	String	The service name. This parameter is mandatory when the source database is an Oracle database. If this parameter is required, you need to manually create the corresponding database. The database name can be a maximum of 128 characters in length and cannot contain the following special characters: ! <>&'\\"
db_password	No	String	Database password. NOTE This parameter is mandatory when this API is invoked to modify a task after the connection test of other engines except the engine that does not require a password.
db_port	No	Integer	Database port. The value is an integer ranging from 1 to 65535.

Parameter	Mandatory	Type	Description
db_user	No	String	Database user. NOTE This parameter is mandatory when this API is invoked to modify a task after the connection test of other engines except the engine that does not require a username.
inst_name	No	String	RDS instance name.
ip	No	String	Database IP address. NOTE This parameter is mandatory when this API is invoked to modify a task after the connection test.
mongo_ha_mode	No	String	Mongo HA mode.
safe_mode	No	Integer	Running mode of an MRS cluster. Values: <ul style="list-style-type: none">• 0: Normal cluster• 1: Security cluster
ssl_cert_password	No	String	SSL certificate password. The certificate file name extension is .p12.
ssl_cert_checksum	No	String	The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database.
ssl_cert_key	No	String	SSL certificate content, which is encrypted using Base64.
ssl_cert_name	No	String	SSL certificate name.
ssl_link	No	Boolean	Whether SSL is enabled.
topic	No	String	Kafka topic name.

Parameter	Mandatory	Type	Description
cluster_mode	No	String	For MongoDB 4.0 or later, if the cluster instance cannot obtain the IP address of the sharded node, set cluster_mode in source_endpoint to Sharding4.0+ . Default value: Sharding4.0+ Value: Sharding4.0+

Table 6-32 Data structure description of field tags

Parameter	Mandatory	Type	Description
key	No	String	Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-). Set this parameter when you need to modify a tag.
value	No	String	Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-). Set this parameter when you need to modify a tag.

Response Parameters

Status code: 200

Table 6-33 Response body parameters

Parameter	Type	Description
count	Integer	Total number.
results	Array of objects	List of tasks that are modified in batches. For details, see Table 6-34 .

Table 6-34 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: <ul style="list-style-type: none"> ● success: The task is successful. ● failed: The task fails.
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Changing task names of specified instances in batches
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-modification>

```
{
  "jobs": [ {
    "job_id": "140b5236-88ad-43c8-811c-1268453jb101",
    "name": "testName"
  } ]
}
```
- Setting task exception notifications for specified instances in batches
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-modification>

```
{
  "jobs": [ {
    "job_id": "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
    "alarm_notify": {
      "delay_time": 0,
      "rto_delay": 0,
      "rpo_delay": 0,
      "alarm_to_user": false,
      "subscriptions": [ {
        "protocol": "sms",
        "endpoints": [ "150*****" ]
      }, {
        "protocol": "email",
        "endpoints": [ "abc@huawei.com" ]
      } ]
    }
  } ]
}
```
- Changing task names and descriptions of specified instances in batches
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-modification>

```
{
  "jobs": [ {
    "job_id": "140b5236-88ad-43c8-811c-1268453jb101",
    "name": "testName",
    "description": "test description"
  } ]
}
```
- Calling the API after the MySQL connection test
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-modification>

```
{
  "jobs": [ {
```

```
"job_id": "1fded2ab-ce99-4b0e-9cc9-9ce7e17jb101",
"name": "DRS-5646-linxiaolu",
"source_endpoint": {
  "ip": "192.168.0.27",
  "db_port": "3306",
  "db_user": "root",
  "db_password": "*****",
  "ssl_link": false,
  "db_type": "mysql",
  "project_id": "054ba152d480d55b2f5dc0069e7ddef0"
},
"target_endpoint": {
  "region": "cn-xianhz-1",
  "db_type": "mysql",
  "db_user": "root",
  "db_password": "*****",
  "project_id": "054ba152d480d55b2f5dc0069e7ddef0",
  "inst_id": "3def1ac7f8ab4ae48d7c025339f80414in01"
},
"node_type": "high",
"engine_type": "mysql",
"store_db_info": true,
"net_type": "eip",
  "job_direction": "up",
"replace_definer": true
}
}}
```

- Calling the API after the connection test for the migration task from MongoDB to DDS is successful.

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-modification>

```
{
  "jobs": [{
    "job_id": "741d91cf-67e8-4126-ad0f-32f6cccb105",
    "name": "DRS-4513",
    "source_endpoint": {
      "ip": "192.168.11.231:8635,192.168.10.12:8635",
      "db_port": 0,
      "db_user": "rwuser",
      "db_password": "*****",
      "ssl_link": false,
      "db_type": "mongodb",
      "project_id": "0549a6a31000d4e82fd1c00c3d6f2d76",
      "db_name": "admin"
    },
    "target_endpoint": {
      "region": "cn-xianhz-1",
      "db_type": "mongodb",
      "db_user": "rwuser",
      "db_password": "*****",
      "project_id": "0549a6a31000d4e82fd1c00c3d6f2d76",
      "inst_id": "3cadd5a0ef724f55ac7fa5bcb5f4fc5fin02"
    },
    "node_type": "high",
    "engine_type": "mongodb",
    "net_type": "eip",
      "job_direction": "up",
    "store_db_info": true
  }
}
}}
```

Example Response

Status code: 200

OK

```
{
  "results": [ {
    "id": "efa2bd29-8780-494f-a2ee-188b003ejb11",
    "status": "success"
  } ],
  "count": 1
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.5 Selecting Database Objects in Batches

Function

This API is used to select the databases or tables to be migrated.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- Only real-time migration and real-time synchronization support object selection.
- After a task is created, the task status is **CONFIGURATION**. The task can be invoked only after the test of connections to the source and destination databases is successful and the API for modifying the task is invoked.
- You can call a maximum of 10 APIs in batches.

URI

PUT /v3/{project_id}/jobs/batch-select-objects

Table 6-35 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-36 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-37 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Request task ID list for updating database objects in batches. For details, see Table 6-38 .

Table 6-38 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.

Parameter	Mandatory	Type	Description
selected	No	Boolean	Whether to select an object. If this parameter is not set, the default value is No . Yes: Customize the objects to be migrated. No: Migrate all VMs.
sync_database	No	Boolean	Whether to perform database-level synchronization.
job	No	Array of objects	Data object selection information. This parameter is mandatory when selected is set to true . For details, see Table 6-39 .

Table 6-39 Data structure description of field **job**

Parameter	Mandatory	Type	Description
id	No	String	When object_type is set to database , this parameter indicates the database name. If object_type is set to table or view , set the field value by referring to the example.
parent_id	No	String	Database name. This parameter is mandatory when object_type is set to table or view .
object_type	No	String	Type. Values: <ul style="list-style-type: none"> • database • table • schema • view
object_name	No	String	Database object name, database name, table name, and view name.

Parameter	Mandatory	Type	Description
select	No	String	Whether to migrate the database objects. true indicates that the database objects will be migrated. false indicates that the database objects will not be migrated. partial indicates some tables in the database will be migrated. If this parameter is not specified, the default value is false .
object_alias_name	No	String	Alias, which is the new mapped name. This parameter is used only for synchronization tasks.

Response Parameters

Status code: 202

Table 6-40 Response body parameters

Parameter	Type	Description
all_counts	Long	Total number.
results	Array of objects	Response list for selecting objects in batches. For details, see Table 6-41 .

Table 6-41 Data structure description of field **results**

Parameter	Type	Description
job_id	String	Task ID.
status	Boolean	The status that indicates that objects are selected.
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Selecting specified databases and tables for migration
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-select-objects>

```
{
  "jobs": [ {
    "job": [ {
      "id": "fastunit",
      "parent_id": null,
      "object_name": "fastunit",
      "object_type": "database",
      "select": "partial",
      "object_alias_name": null
    }, {
      "id": "fastunit-*-coll",
      "parent_id": "fastunit",
      "object_name": "coll",
      "object_type": "table",
      "select": "true",
      "object_alias_name": null
    }, {
      "id": "ycy1",
      "parent_id": null,
      "object_name": "ycy1",
      "object_type": "database",
      "select": "partial",
      "object_alias_name": null
    }, {
      "id": "ycy1-*-coll",
      "parent_id": "ycy1",
      "object_name": "coll",
      "object_type": "table",
      "select": "true",
      "object_alias_name": null
    }, {
      "id": "ycy1-*-collcount",
      "parent_id": "ycy1",
      "object_name": "collcount",
      "object_type": "table",
      "select": "true",
      "object_alias_name": null
    }
  ]
}, {
  "job_id": "57fd2692-0ebe-4714-9b59-fe7aa65djb15",
  "selected": true
}
} ]
}
```

- Selecting all objects for migration

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-select-objects>

```
{
  "jobs": [ {
    "job": [ ],
    "job_id": "e59f5eef-2bcc-4461-b9ac-10aded44jb15",
    "selected": false
  }
} ]
}
```

Example Response

Status code: 202

Accepted

```
{
  "all_counts": 1,
  "results": [ {
    "job_id": "4d700f6f-9a17-47e0-a7d6-1bc2155jb101",
    "status": true
  }
]
}
```

Status Code

Status Code	Description
202	Accepted
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.6 Performing a Batch Pre-Check

Function

This API is used to perform batch pre-check to check whether the migration, synchronization, DR can be performed.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- After a task is created, the task status is **CONFIGURATION**. The task can be invoked only after the test of connections to the source and destination databases is successful and the API for modifying the task is invoked.
- In the dual-active DR scenario, when the forward task status is **INCRE_TRANSFER_STARTED**, the backward task does not need to call this API, and the parent task cannot call this API.
- You can call a maximum of 10 APIs in batches.

URI

POST /v3/{project_id}/jobs/batch-precheck

Table 6-42 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-43 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-44 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	The list of batch pre-check requests. For details, see Table 6-45 .

Table 6-45 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
precheck_mode	Yes	String	Pre-check mode. Values: <ul style="list-style-type: none"> • forStartJob: This value is specified when the task is started for the first time during task configuration. • forRetryJob: This value is transferred for pre-check after object editing or retry after task failure during incremental task execution. <p>NOTE Specify the value based on the task status. Otherwise, the pre-check may fail, affecting task startup.</p>

Response Parameters

Status code: 200

Table 6-46 Response body parameters

Parameter	Type	Description
results	Array of objects	Pre-check response body. For details, see Table 6-47 .
count	Integer	Total number.

Table 6-47 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
precheck_id	String	Pre-check ID.
status	String	Success or failure status. Values: <ul style="list-style-type: none"> • success • failed
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Performing a pre-check for a MySQL real-time migration task

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-precheck`

```
{
  "jobs": [ {
    "job_id": "140b5236-88ad-43c8-811c-1268453jb101",
    "precheck_mode": "forStartJob"
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "results": [ {
    "id": "140b5236-88ad-43c8-811c-1268453jb101",
    "status": "success",
    "precheck_id": "140b5236-88ad-43c8-811c-1268453jb101"
  } ],
  "count": 1
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.7 Querying Pre-check Results in Batches

Function

This API is used to query the pre-check results of tasks in batches.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- This API can be called only when the pre-check API is invoked.

URI

POST /v3/{project_id}/jobs/batch-precheck-result

Table 6-48 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-49 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-50 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Request for querying pre-check results in batches. The value cannot be empty. The values must comply with the UUID rule. The task ID must be unique.

Response Parameters

Status code: 200

Table 6-51 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for querying pre-check results in batches. For details, see Table 6-52 .
count	Integer	Total number of records.

Table 6-52 Data structure description of field **results**

Parameter	Type	Description
precheck_id	String	ID of the task for querying the pre-check result.
result	Boolean	Whether the pre-check items are passed. true : indicates that the pre-check is passed. The task can be started only after the pre-check is passed.
process	String	Pre-check progress, in percentage.
total_passed_rate	String	Percentage of passed pre-checks.
rds_instance_id	String	RDS DB instance ID.
job_direction	String	Task direction. Values: <ul style="list-style-type: none">• up: to-the-cloud scenarios and the current cloud is the standby cloud in the DR.• down: out-of-cloud scenarios and the current cloud is the active cloud in the DR.• non-dbs: self-built databases.
precheck_result	Array of object	Pre-check results. For details, see Table 6-53 .
error_msg	String	Error message.
error_code	String	Error code.

Table 6-53 Data structure description of field **precheck_result**

Parameter	Type	Description
item	String	Check item.
result	String	Check results. Values: <ul style="list-style-type: none">• PASSED• ALARM• FAILED
failed_reason	String	Failure cause.
data	String	Encrypted data.
raw_error_msg	String	Row error message.
group	String	Check item group.

Parameter	Type	Description
failed_sub_jobs	Array of objects	Information about failed subtasks. For details, see Table 6-54 .

Table 6-54 Data structure description of field **failed_sub_jobs**

Parameter	Type	Description
id	String	ID of the subtask that fails to pass the pre-check.
name	String	The name of the subtask that fails to pass the pre-check.
check_result	String	Check results.

Example Request

- Querying pre-check results for a DDS real-time migration task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-precheck-result
```

```
{
  "jobs": [ "a281f62f-4631-45d6-a2d3-679a9f4jb105" ]
}
```
- Querying pre-check results for a MySQL real-time migration task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-precheck-result
```

```
{
  "jobs": [ "140b5236-88ad-43c8-811c-1268453jb101" ]
}
```

Example Response

Status code: 200

OK

- Example response for querying the pre-check result during real-time MySQL migration:

```
{
  "count": 1,
  "results": [ {
    "result": true,
    "process": "100%",
    "precheck_id": "140b5236-88ad-43c8-811c-1268453jb101",
    "total_passed_rate": "100%",
    "rds_instance_id": "e05a3679efe241d8b5dee80b17c1a863in01",
    "job_direction": "up",
    "precheck_result": [ {
      "item": "dstDbDiskSize",
      "result": "PASSED",
      "data": "{\"diskSizeTimes\": \"1.5\", \"dstVolumeSize\": \"3766000000\", \"srcIndexSize\": 0, \"size\": \"0\", \"srcIndexAmount\": 0}",
      "group": "db_disk_size"
    } ], {
      "item": "checkIncrSrcDbExistedInDstDb",
```

```
"result" : "PASSED",
"group" : "db_params"
}, {
  "item" : "dbCharacterSetConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "dbClockConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "dbCollationServerConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "dbIsolationLevelConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "dbParamConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "dbServerUuidConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "dstMaxAllowedPacketCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "hasForeignKeyOnUnselectedTable",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "innodbStrictModeConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "isUserRequireSslLink",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "sqlModeConsistency",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "sqlModeNoEngine",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcBinlogFormatCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcBinlogRowImageCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcDbBinlogExpireLogsDays",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcDbBinlogIsOff",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcDbExistUnsupportEngineTable",
  "result" : "PASSED",
```

```
"group" : "db_params"
}, {
  "item" : "srcDbIndexKeyLength",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcDbNameContainsUnsupportedSymbols",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcDbServerIdCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcDstTableNameCaseSensitiveCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcHasNoPkTableWhenTgtHasInvisiblePk",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcRoutinesWithoutPrivilegeCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcTableNameContainsNonAscii",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcTriggerAndEventCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srcViewNameContainsNonAscii",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "srclogSlaveUpdatesCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "userRequirementsIsEnoughForDefiner",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "userSelectObjectsCheck",
  "result" : "PASSED",
  "group" : "db_params"
}, {
  "item" : "dstStatusCheck",
  "result" : "PASSED",
  "data" : "",
  "group" : "db_target_status",
  "failed_reason" : ""
}, {
  "item" : "dstDbPrivilegesIsEnough",
  "result" : "PASSED",
  "group" : "db_user_privilege"
}, {
  "item" : "srcDbPrivilegesIsEnoughForIncr",
  "result" : "PASSED",
  "group" : "db_user_privilege"
}, {
  "item" : "dbVersionMeetRequirement",
  "result" : "PASSED",
  "group" : "db_version"
}, {
  "item" : "dstDbVersionSupport",
```

```
    "result": "PASSED",
    "group": "db_version"
  }, {
    "item": "srcDbVersionSupport",
    "result": "PASSED",
    "group": "db_version"
  }, {
    "item": "dstDbConnection",
    "result": "PASSED",
    "group": "network"
  }, {
    "item": "srcDbConnection",
    "result": "PASSED",
    "group": "network"
  }
]
}
```

- Example response for querying the pre-check result during real-time DDS migration:

```
{
  "count": 1,
  "results": [ {
    "result": true,
    "process": "100%",
    "precheck_id": "a281f62f-4631-45d6-a2d3-679a9f4jb105",
    "total_passed_rate": "100%",
    "rds_instance_id": "3cadd5a0ef724f55ac7fa5bcb5f4fc5fin02",
    "job_direction": "up",
    "precheck_result": [ {
      "item": "dstDbDiskSize",
      "result": "PASSED",
      "data": "{size: '5263360', 'dstVolumeSize': '19089431762', 'diskSizeTimes': '1.5'}",
      "group": "db_disk_size"
    }, {
      "item": "srcAndDstCappedCollConsistency",
      "result": "PASSED",
      "group": "db_object_conflict_check"
    }, {
      "item": "srcCollAlreadyExistedInDstColl",
      "result": "PASSED",
      "group": "db_object_conflict_check"
    }, {
      "item": "srcViewAlreadyExistedInDstView",
      "result": "PASSED",
      "group": "db_object_conflict_check"
    }, {
      "item": "rolesDependentCheck",
      "result": "PASSED",
      "group": "db_object_dependency_check"
    }, {
      "item": "usersDependentCheck",
      "result": "PASSED",
      "group": "db_object_dependency_check"
    }, {
      "item": "srcCollHasTtlIndex",
      "result": "ALARM",
      "data": "{srcHasTtlIndexColls: '\\fastunit.ttlsuoyin\\'",
      "group": "db_params",
      "failed_reason": "SRC_HAS_TTL_INDEXES"
    }, {
      "item": "dbSslConsistency",
      "result": "PASSED",
      "group": "db_params"
    }, {
      "item": "dstChunkNumCheck",
      "result": "PASSED",
      "group": "db_params"
    }, {
      "item": "mongoTypeFitTransferMode",
```

```

    "result" : "PASSED",
    "group" : "db_params"
  }, {
    "item" : "srcCollIndexNumCheck",
    "result" : "PASSED",
    "group" : "db_params"
  }, {
    "item" : "srcCollNameContainsUnsupportedSymbols",
    "result" : "PASSED",
    "group" : "db_params"
  }, {
    "item" : "srcDbInstancelEmpty",
    "result" : "PASSED",
    "group" : "db_params"
  }, {
    "item" : "srcDbNameContainsUnsupportedSymbols",
    "result" : "PASSED",
    "group" : "db_params"
  }, {
    "item" : "srcIdIndexCheck",
    "result" : "PASSED",
    "group" : "db_params"
  }, {
    "item" : "userSelectObjectsCheck",
    "result" : "PASSED",
    "group" : "db_params"
  }, {
    "item" : "dstStatusCheck",
    "result" : "PASSED",
    "data" : "",
    "group" : "db_target_status",
    "failed_reason" : ""
  }, {
    "item" : "dstDbPrivilegesIsEnough",
    "result" : "PASSED",
    "group" : "db_user_privilege"
  }, {
    "item" : "srcDbPrivilegesIsEnough",
    "result" : "PASSED",
    "group" : "db_user_privilege"
  }, {
    "item" : "dbVersionMeetRequirement",
    "result" : "PASSED",
    "group" : "db_version"
  }, {
    "item" : "dstDbVersionSupport",
    "result" : "PASSED",
    "group" : "db_version"
  }, {
    "item" : "srcDbVersionSupport",
    "result" : "PASSED",
    "group" : "db_version"
  }, {
    "item" : "dstDbConnection",
    "result" : "PASSED",
    "group" : "network"
  }, {
    "item" : "srcDbConnection",
    "result" : "PASSED",
    "group" : "network"
  }, {
    "item" : "srcShardKeyConfiguration",
    "result" : "ALARM",
    "data" : "{ \"notConfigShardIndexColls
\\\": \"ycsb.usertable,mgo.mycollection7,mgo.mycollection9,mgo.mycollection5,mgo.mycollection4,mgo.m
ycollection3,mgo.mycollection,mgo.mycollection8,mgo.mycollection2,mgo.mycollection6,testdb3.testuk
,testdb3.coll2,testdb3.coll6,testdb3.coll1,testdb3.Coll1,testdb3.testuk2,testdb3.coll5,testdb3.coll4,testdb1
.coll6,testdb1.coll1,testdb1.testuk2,testdb1.coll2,testdb1.testuk,testdb1.coll5,testdb1.coll4,testdb1.Coll1,
Testdb5.coll1,Testdb5.collx,Testdb5.Coll1,fastunit.gudingjihe,fastunit.geohaystack,fastunit.coll,fastunit.w

```

```
eiyisuoyin,fastunit.testSpecial\\\u4E2D\\\u6587~!@#%^&*()_+=-[]
{};:?,fastunit.log,fastunit.twoD,fastunit.lianhesuoyin,fastunit.xishusuoyin,fastunit.quanwensuoyin,fastu
nit.ttlsuoyin,fastunit.putongsuoyin,fastunit.collcount,fastunit.shuzusuoyin,fastunit.twodsphere,fastunit.q
iantaowendangsuoyin,fastunit.indexpartial\}]",
  "group" : "src_info_check",
  "failed_reason" : "SRC_INSTANCE_TYPE_IS_REPLICA_SET"
}, {
  "item" : "checkBalanceStatus",
  "result" : "PASSED",
  "group" : "src_info_check"
}, {
  "item" : "srcMongoInstanceType",
  "result" : "PASSED",
  "group" : "src_info_check"
}]
}]
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.8 Setting Flow Control for Tasks

Function

This API is used to enable or disable flow control for tasks. By default, the migration speed is not limited after a task is created.

- You can customize the maximum migration speed.
- If the migration speed is not limited, the outbound bandwidth of the source database is maximally used, which causes read consumption on the source database accordingly. For example, if the outbound bandwidth of the source database is 100 MB/s and 80% bandwidth is used, the I/O consumption on the source database is 80 MB/s.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- You can set the time range based on your service requirements. Flow can be controlled all day or during specific time ranges. The default value is **All day**.
- A maximum of three time ranges can be set, and they cannot overlap.

- The start time cannot be the same as the end time.
- If the start time is 16:00 and the end time is 15:59, the bandwidth is limited for the whole day.
- If **speed_limit** is set to [], the speed is not limited.
- The minute in the start time is ignored. The end time must be ended with 59. For example, 03:59 is equivalent to 04:00 (UTC) and the hour is a two-digit number.
- In the dual-active DR scenario, the parent task cannot call the API.
- This API cannot be used when the task mode is **INCR_TRANS**.

URI

PUT /v3/{project_id}/jobs/batch-limit-speed

Table 6-55 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-56 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none">• en-us• zh-cn

Table 6-57 Request body parameters

Parameter	Mandatory	Type	Description
speed_limits	Yes	Array of objects	Speed limit in DR. For details, see Table 6-58 .

Table 6-58 Data structure description of field `speed_limits`

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
speed_limit	Yes	Array of objects	Request body of flow control information. For details, see Table 6-59 .

Table 6-59 Data structure description of field `speed_limit`

Parameter	Mandatory	Type	Description
begin	Yes	String	Start time (UTC) of flow control. The start time is an integer in hh:mm format and the minutes part is ignored. hh indicates the hour, for example, 01:00.
end	Yes	String	End time (UTC) in the format of hh:mm, for example, 15:59. The value must end with 59.
speed	Yes	String	Speed. The value ranges from 1 to 9,999, in MB/s.
is_utc	No	Boolean	Whether the UTC time is used.

Response Parameters

Status code: 200

Table 6-60 Response body parameters

Parameter	Type	Description
count	Integer	Total number.
results	Array of objects	List of tasks that are modified in batches. For details, see Table 6-61 .

Table 6-61 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: <ul style="list-style-type: none"> ● success: The task is successful. ● failed: The task fails.
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Set flow control for DR tasks in batches, in which **speed** is set to **15 MB/s**

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-limit-speed`

```
{
  "speed_limits": [ {
    "job_id": "7d0504f1-aba3-435f-914f-936b861jb502",
    "speed_limit": [ {
      "begin": "16:00",
      "end": "15:59",
      "speed": "15"
    } ]
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "results": [ {
    "id": "efa2bd29-8780-494f-a2ee-188b003ejb11",
    "status": "success"
  } ],
  "count": 1
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.9 Obtaining Database Parameters in Batches

Function

To ensure that service applications are not affected after the migration, DRS provides parameter comparison to help you compare parameters between the source and destination databases. This API is used to obtain database parameters of the source and destination databases.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- Only MySQL migration and MySQL DR support parameter comparison.
- This API can be called only when **job_direction** is set to **up** and the task status is **CONFIGURATION**.
- In the dual-active DR scenario, the parent task cannot call the API.
- The value of **innodb_buffer_pool_size** is set to not exceed 70% of the total memory of the destination database. If you set a larger value for this parameter, the destination database startup may fail. To adjust the value to suit your services, view [Parameters for Comparison](#).

URI

POST /v3/{project_id}/jobs/batch-get-params

Table 6-62 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-63 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-64 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Request body for querying tasks in batches.
refresh	Yes	String	Whether to obtain database parameters again. 1 indicates yes, and 0 indicates no (obtaining parameters from the cache). Set this parameter to 1 when this API is called for the first time.

Response Parameters

Status code: 202

Table 6-65 Response body parameters

Parameter	Type	Description
params_list	Array of objects	Response body for querying database parameters. For details, see Table 6-66 .
count	Integer	Total number.

Table 6-66 Data structure description of field **params_list**

Parameter	Type	Description
params	Array of objects	Data parameter information body. For details, see Table 6-67 .

Table 6-67 Data structure description of field **params**

Parameter	Type	Description
compare_result	String	Parameter comparison result. Values: <ul style="list-style-type: none"> • true • false
data_type	String	Type
group	String	Metric Type Values: <ul style="list-style-type: none"> • common: common parameter. • performance: performance parameter.
key	String	Parameter name
need_restart	String	Whether the instance needs to be restarted. Values: <ul style="list-style-type: none"> • true • false
source_value	String	Source database parameter value.
target_value	String	Parameter value of the destination database.
value_range	String	Value Range
error_code	String	Error code.
error_message	String	Error message.

Example Request

Example of the request body for obtaining database parameters in batches:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-get-params
{
  "jobs" : [ "140b5236-88ad-43c8-811c-1268453jb101" ],
  "refresh": 1
}
```

Example Response

Status code: 202

Accepted

```
{
  "count" : 1,
  "params_list" : [ {
    "params" : [ {
      "group" : "performance",
      "key" : "binlog_cache_size",
      "source_value" : "16384",
      "target_value" : "32768",
      "compare_result" : "false",
      "data_type" : "figure",
      "value_range" : "4096-16777216",
      "need_restart" : "false"
    }, {
      "group" : "performance",
      "key" : "binlog_stmt_cache_size",
      "source_value" : "32768",
      "target_value" : "32768",
      "compare_result" : "true",
      "data_type" : "figure",
      "value_range" : "4096-16777216",
      "need_restart" : "false"
    }, {
      "group" : "performance",
      "key" : "bulk_insert_buffer_size",
      "source_value" : "8388608",
      "target_value" : "8388608",
      "compare_result" : "true",
      "data_type" : "figure",
      "value_range" : "0-18446744073709551615",
      "need_restart" : "false"
    }, {
      "group" : "common",
      "key" : "character_set_server",
      "source_value" : "utf8",
      "target_value" : "utf8",
      "compare_result" : "true",
      "data_type" : null,
      "value_range" : "utf8|latin1|gbk|utf8mb4",
      "need_restart" : "true"
    }, {
      "group" : "common",
      "key" : "collation_server",
      "source_value" : "utf8_general_ci",
      "target_value" : "utf8_general_ci",
      "compare_result" : "true",
      "data_type" : null,
      "value_range" : "latin1_german1_ci|latin1_swedish_ci|latin1_danish_ci|latin1_german2_ci|latin1_bin|
latin1_general_ci|latin1_general_cs|latin1_spanish_ci|gbk_chinese_ci|gbk_bin|utf8_general_ci|utf8_bin|
utf8_unicode_ci|utf8_icelandic_ci|utf8_latvian_ci|utf8_romanian_ci|utf8_slovenian_ci|utf8_polish_ci|
utf8_estonian_ci|utf8_spanish_ci|utf8_swedish_ci|utf8_turkish_ci|utf8_czech_ci|utf8_danish_ci|
utf8_lithuanian_ci|utf8_slovak_ci|utf8_spanish2_ci|utf8_roman_ci|utf8_persian_ci|utf8_esperanto_ci|
utf8_hungarian_ci|utf8_sinhala_ci|utf8mb4_general_ci|utf8mb4_bin|utf8mb4_unicode_ci|utf8mb4_icelandic_ci|
utf8mb4_latvian_ci|utf8mb4_romanian_ci|utf8mb4_slovenian_ci|utf8mb4_polish_ci|utf8mb4_estonian_ci|
utf8mb4_spanish_ci|utf8mb4_swedish_ci|utf8mb4_turkish_ci|utf8mb4_czech_ci|utf8mb4_danish_ci|
utf8mb4_lithuanian_ci|utf8mb4_slovak_ci|utf8mb4_spanish2_ci|utf8mb4_roman_ci|utf8mb4_persian_ci|
utf8mb4_esperanto_ci|utf8mb4_hungarian_ci|utf8mb4_sinhala_ci",
      "need_restart" : "true"
    }, {
      "group" : "common",
      "key" : "connect_timeout",
      "source_value" : "10",
      "target_value" : "10",
      "compare_result" : "true",
      "data_type" : null,
      "value_range" : "2-31536000",
      "need_restart" : "false"
    }, {
      "group" : "common",
```

```
"key": "explicit_defaults_for_timestamp",
"source_value": "OFF",
"target_value": "OFF",
"compare_result": "true",
"data_type": null,
"value_range": "ON|OFF",
"need_restart": "true"
}, {
"key": "innodb_buffer_pool_size",
"source_value": "536870912",
"target_value": "536870912",
"compare_result": "true",
"data_type": "figure",
"value_range": "5242880-2147483648",
"need_restart": "true"
}, {
"key": "innodb_flush_log_at_trx_commit",
"source_value": "1",
"target_value": "1",
"compare_result": "true",
"data_type": null,
"value_range": "0|1|2",
"need_restart": "false"
}, {
"key": "innodb_lock_wait_timeout",
"source_value": "50",
"target_value": "50",
"compare_result": "true",
"data_type": null,
"value_range": "1-1073741824",
"need_restart": "false"
}, {
"key": "key_buffer_size",
"source_value": "16777216",
"target_value": "16777216",
"compare_result": "true",
"data_type": "figure",
"value_range": "8-9223372036854771712",
"need_restart": "false"
}, {
"key": "long_query_time",
"source_value": "1.000000",
"target_value": "1.000000",
"compare_result": "true",
"data_type": "figure",
"value_range": "0.03-3600",
"need_restart": "false"
}, {
"key": "max_connections",
"source_value": "800",
"target_value": "800",
"compare_result": "true",
"data_type": null,
"value_range": "1-100000",
"need_restart": "false"
}, {
"key": "net_read_timeout",
"source_value": "30",
"target_value": "30",
"compare_result": "true",
"data_type": null,
"value_range": "1-31536000",
```


Error Code

For details, see [Error Code](#).

6.1.10 Modifying Database Parameters

Function

This API is to modify database parameters.

Constraints

- This API can be called only for MySQL migration and MySQL DR.
- This API can be called only when **job_direction** is set to **up** and the task status is **CONFIGURATION**.
- This API can be called only after the API in [Obtaining Database Parameters in Batches](#) is successfully called.
- In the dual-active DR scenario, the parent task cannot call the API.

URI

POST /v3/{project_id}/jobs/{job_id}/params

Table 6-68 Path parameters

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-69 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-70 Request body parameters

Parameter	Mandatory	Type	Description
group	Yes	String	Parameter Groups Values: <ul style="list-style-type: none"> • common • performance
params	Yes	Array of objects	Information about the parameters to be modified. For details, see Table 6-71 .

Table 6-71 Data structure description of field **params**

Parameter	Mandatory	Type	Description
key	Yes	String	Database parameter name.
target_value	Yes	String	Parameter value of the destination database.

Response Parameters

Status code: 202

Table 6-72 Response body parameters

Parameter	Type	Description
success	Boolean	Whether the parameters are modified.
should_restart	String	Whether the instance needs to be restarted. Values: <ul style="list-style-type: none"> • true • false
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.

Example Request

Changing the value of **binlog_stmt_cache_size** to **32678** and **bulk_insert_buffer_size** to **8388608**

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/140b5236-88ad-43c8-811c-1268453jb101/params
{
  "group": "performance",
  "params": [ {
    "key": "binlog_stmt_cache_size",
    "target_value": "32678"
  }, {
    "key": "bulk_insert_buffer_size",
    "target_value": "8388608"
  } ]
}
```

Example Response

Status code: 202

Accepted

```
{
  "success": true,
  "should_restart": "false"
}
```

Status Code

Status Code	Description
202	Accepted
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.11 Starting Tasks in Batches

Function

This API is used to start real-time migration, synchronization, and disaster recovery tasks in batches.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- This API can be called only after all tasks are configured. For details, see [Task Creation Process](#).
- In the dual-active DR scenario, this operation can be performed only when the forward task status is **INCRE_TRANSFER_STARTED** and **RPO&RTO** is less than 60s. For backward tasks, this operation can be performed only after all tasks are configured. The parent task does not support this operation.
- When a yearly/monthly task created using APIs is started, an order is created and automatically paid.

URI

POST /v3/{project_id}/jobs/batch-starting

Table 6-73 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-74 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none">• en-us• zh-cn

Table 6-75 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Request list for starting tasks in batches. For details, see Table 6-76 .

Table 6-76 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
start_time	No	String	Task start time. The timestamp is accurate to milliseconds, for example, 1608188903063. If the value is empty, the task is started immediately.

Response Parameters

Status code: 202

Table 6-77 Response body parameters

Parameter	Type	Description
results	Array of StartJobResp objects	List of real-time disaster recovery tasks that are started in batches.
count	Integer	Total number.

Table 6-78 StartJobResp

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: <ul style="list-style-type: none"> • success • failed
order_id	String	Order ID. NOTE This parameter is returned for yearly/monthly tasks created using APIs.

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Starting specified DR tasks in batches

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-starting
{
  "jobs": [ {
    "job_id": "140b5236-88ad-43c8-811c-1268453jb101"
  } ]
}
```

Example Response

Status code: 202

Accepted

```
{
  "count": 1,
  "results": [ {
    "id": "140b5236-88ad-43c8-811c-1268453jb101",
    "status": "success"
  } ]
}
```

Status Code

Status Code	Description
202	Accepted
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.12 Resuming or Retrying Tasks in Batches

Function

- This API is used to retry failed tasks.
- You can resume a suspended task.
- In the dual-active DR scenario, the parent task cannot call the API.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

URI

POST /v3/{project_id}/jobs/batch-retry-task

Table 6-79 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-80 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none">• en-us• zh-cn

Table 6-81 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of requests for resuming upload tasks in batches. For details, see Table 6-82 .

Table 6-82 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
is_sync_re_edit	No	Boolean	This parameter is mandatory when a task is resumed or retried and must be set to true .

Response Parameters

Status code: 200

Table 6-83 Response body parameters

Parameter	Type	Description
results	Array of objects	List of tasks that can be resumed in batches. For details, see Table 6-84 .
count	Integer	Total number.

Table 6-84 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Resuming specified tasks in batches

`https://{endpoint}/v3/054babbbde80d4602f5cc0043a40ed8c/jobs/batch-retry-task`

```
{
  "jobs": [ {
    "job_id": "140b5236-88ad-43c8-811c-1268453jb101"
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "results": [ {
    "id": "140b5236-88ad-43c8-811c-1268453jb101",
    "status": "success"
  } ],
  "count": 1
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.13 Pausing Tasks in Batches

Function

This API is used to pause tasks in batches.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- You can pause a task that is being migrated, being synchronized, or being used for disaster recovery.
- In the dual-active DR scenario, the parent task cannot call the API.

URI

POST /v3/{project_id}/jobs/batch-pause-task

Table 6-85 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-86 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-87 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	The value cannot contain empty objects. The value of job_id must comply with the UUID rule. For details, see Table 6-88 .

Table 6-88 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
pause_mode	Yes	String	Pause type. target : Stop replay. all : Stop log capturing and replay. Values: <ul style="list-style-type: none"> • target • all

Response Parameters

Status code: 200

Table 6-89 Response body parameters

Parameter	Type	Description
results	Array of objects	List of tasks to be suspended in batches. For details, see Table 6-90 .
count	Integer	Total number.

Table 6-90 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Pause result.
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Pausing specified tasks in batches

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-pause-task
{
  "jobs": [ {
    "job_id": "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
    "pause_mode": "target"
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "results": [ {
    "id": "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
    "status": "success"
  } ],
  "count": 1
}
```

Status Code

Status Code	Description
200	OK

Status Code	Description
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.14 Stopping or Deleting Tasks in Batches

Function

This API is used to stop tasks in batches or delete real-time migration, real-time synchronization, and real-time DR tasks.

After a yearly/monthly task is started, unsubscribe from the order and then call this API to delete the task. For details, see [Unsubscribing from a Yearly/Monthly Task](#).

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- Only tasks in the **CREATE_FAILED**, **RELEASE_RESOURCE_COMPLETE**, or **RELEASE_CHILD_TRANSFER_COMPLETE** state can be deleted. To delete a task in other states, stop the task first.
- The parent task can call the API only in the dual-active DR scenario.

URI

DELETE /v3/{project_id}/jobs/batch-jobs

Table 6-91 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-92 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-93 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of requests for stopping or deleting tasks in batches. For details, see Table 6-94 .

Table 6-94 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
delete_type	Yes	String	The value can be terminate , force_terminate , or delete . terminate indicates that the migration task is stopped, force_terminate indicates that the migration task is forcibly stopped, and delete indicates that the migration task is deleted. Values: <ul style="list-style-type: none"> • terminate • force_terminate • delete NOTE You need to manually unsubscribe from a yearly/monthly task, and then set delete_type to delete to delete the task.
job_id	Yes	String	Task ID.
is_show_break_point_position	No	Boolean	Specifies whether to display breakpoint information when a real-time migration, synchronization, or DR task with MySQL serving as the source is complete. The default value is null , indicating that the breakpoint information is not displayed.

Response Parameters

Status code: 202

Table 6-95 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for stopping or deleting tasks in batches. For details, see Table 6-96 .
count	Integer	Total number.

Table 6-96 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: <ul style="list-style-type: none"> ● success ● failed
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Stopping two specified tasks

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-jobs`

```
{
  "jobs": [ {
    "delete_type": "terminate",
    "job_id": "4c6ac8c0-2f51-426a-97b2-cb2c668jb201"
  }, {
    "delete_type": "terminate",
    "job_id": "6211d20d-0006-41da-836e-db3301ajb20b"
  } ]
}
```

- Deleting a specified task

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-jobs`

```
{
  "jobs": [ {
    "delete_type": "delete",
    "job_id": "140b5236-88ad-43c8-811c-1268453jb101"
  } ]
}
```

- Displaying breakpoint information when a task is complete

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-jobs`

```
{
  "jobs": [ {
    "delete_type": "terminate",
    "job_id": "6211d20d-0006-41da-836e-db3301ajb20b",
    "is_show_breakpoint_position": true
  } ]
}
```

Example Response

Status code: 202

Accepted

- Example response for stopping a task

```
{
  "count": 2,
  "results": [ {
    "id": "4c6ac8c0-2f51-426a-97b2-cb2c668jb201",
    "status": "success"
  } ]
}
```



```
}, {  
  "id" : "6211d20d-0006-41da-836e-db3301ajb20b",  
  "status" : "failed",  
  "error_code" : "DRS.M01504",  
  "error_msg" : "Another operation is being performed on the migration task or the migration task is  
abnormal. Try again later."  
}]  
}
```

- Example response for deleting a task

```
{  
  "count" : 1,  
  "results" : [ {  
    "id" : "140b5236-88ad-43c8-811c-1268453jb101",  
    "status" : "success"  
  } ]  
}
```

Status Code

Status Code	Description
202	Accepted
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.15 Changing the Passwords of the Source and Destination Databases in Batches

Function

This API is used to change the passwords of the source and destination databases after a task is started.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

- This API can be called only when the task is in the **STARTJOBING**, **STARTJOB_FAILED**, **FULL_TRANSFER_STARTED**, **FULL_TRANSFER_FAILED**, **FULL_TRANSFER_COMPLETE**, **INCRE_TRANSFER_STARTED**, **INCRE_TRANSFER_FAILED** or **PAUSING** state.
- In the dual-active DR scenario, the parent task cannot call the API.

URI

PUT /v3/{project_id}/jobs/batch-modify-pwd

Table 6-97 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-98 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-99 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of database passwords to be changed in batches. For details, see Table 6-100 .

Table 6-100 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
db_password	Yes	String	Database password.

Parameter	Mandatory	Type	Description
end_point_type	Yes	String	Type. so indicates the source database. ta indicates the destination database. Values: <ul style="list-style-type: none"> • so • ta
job_id	Yes	String	Task ID.
kerberos	No	Object	Information required for Kerberos authentication. For details, see Table 6-101 .

Table 6-101 Data structure description of field **kerberos**

Parameter	Mandatory	Type	Description
krb5_conf_file	No	String	krb5 configuration file.
key_tab_file	No	String	Key file.
domain_name	No	String	Domain name.
user_principal	No	String	Kerberos user object.

Response Parameters

Status code: 200

Table 6-102 Response body parameters

Parameter	Type	Description
count	Integer	Total number.
results	Array of objects	List of tasks that are modified in batches. For details, see Table 6-103 .

Table 6-103 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.

Parameter	Type	Description
status	String	Status Values: <ul style="list-style-type: none"> ● success: The task is successful. ● failed: The task fails.
end_point_type	String	Type. so indicates the source database. ta indicates the destination database.
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing the passwords of the source and destination databases of specified tasks in batches

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-modify-pwd
```

```
{
  "jobs": [ {
    "db_password": "*****#",
    "end_point_type": "so",
    "job_id": "25df459d-a37c-41b9-bc2b-8c00ba32jb52"
  }, {
    "db_password": "*****#",
    "end_point_type": "ta",
    "job_id": "25df459d-a37c-41b9-bc2b-8c00ba32jb52"
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "results": [ {
    "id": "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
    "status": "success",
    "end_point_type": "so"
  }, {
    "id": "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
    "status": "success",
    "end_point_type": "ta"
  } ],
  "count": 2
}
```

Status Code

Status Code	Description
200	OK

Status Code	Description
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.16 Setting Definers in Batches

Function

The API is used to set whether to migrate Definers to the user in batches.

- If you select **Yes**, the Definers of all source database objects will be migrated to the user. Other users do not have permissions on database objects unless they are authorized.
- If you select **No**, the Definers of all source database objects will not be changed. You need to migrate all accounts and permissions of the source database in the next step.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

This API can be called only when the task status is **CONFIGURATION**.

URI

POST /v3/{project_id}/jobs/batch-replace-definer

Table 6-104 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-105 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-106 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of requests for setting replaceDefiners in batches. For details, see Table 6-107 .

Table 6-107 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
replace_definer	Yes	Boolean	Whether to replace the definer with the destination database user.

Response Parameters

Status code: 200

Table 6-108 Response body parameters

Parameter	Type	Description
count	Integer	Total number.

Parameter	Type	Description
results	Array of objects	List of tasks that are modified in batches. For details, see Table 6-109 .

Table 6-109 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: <ul style="list-style-type: none"> ● success: The task is successful. ● failed: The task fails.
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Setting definers for specified tasks in batches

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-replace-definer
{
  "jobs": [ {
    "job_id": "7c685701-bfb5-4bb9-89f1-d0567f5jb502",
    "replace_definer": true
  } ]
}
```

Example Response

Status code: 200

OK

```
{
  "count": 1,
  "results": [ {
    "id": "7c685701-bfb5-4bb9-89f1-d0567f5jb502",
    "status": "success"
  } ]
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.17 Creating a Comparison Task

Function

This API is used to create a comparison task

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

In the current version, a comparison task can be created only when the task is in the **INCRE_TRANSFER_STARTED** state. The parent task cannot call the API.

URI

POST /v3/{project_id}/jobs/create-compare-task

Table 6-110 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-111 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-112 Request body parameters

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
object_level_compare_type	No	String	Object-level comparison type. If the value is empty, the object-level comparison is not created. If both object_level_compare_type and data_level_compare_info are left empty, only the created comparison task list is queried. Value: objects
data_level_compare_info	No	Object	Data-level comparison information. If no data-level comparison is created, this parameter does not need to be transferred. If both object_level_compare_type and data_level_compare_info are left empty, only the created comparison task list is queried. For details, see Table 6-113 .

Table 6-113 Data structure description of field **data_level_compare_info**

Parameter	Mandatory	Type	Description
conflict_policy	Yes	String	Only one unfinished data-level comparison task can exist. This field determines how to process unfinished data-level comparison tasks. cancel : Cancel the unfinished task and create a new one. keep : Retain the unfinished task. Values: <ul style="list-style-type: none"> • cancel • keep
compare_type	Yes	String	Data-level comparison type. lines : indicates row comparison. contents : indicates value comparison. Values: <ul style="list-style-type: none"> • lines • contents NOTE Object-level comparison and value comparison cannot be performed at the same time.
compare_mode	No	String	Data-level comparison mode. If the value is empty, the object information needs to be transferred in compare_object_infos or compare_object_infos_with_token . quick_comparison : indicates quick comparison, which can be used only by whitelisted users. Default value: quick_comparison Value: quick_comparison
start_time	No	String	Start time of a comparison task. If the value is empty, the task is started immediately.

Parameter	Mandatory	Type	Description
compare_object_infos	No	Array of objects	Data-level comparison object. In non-quick comparison mode, either compare_object_infos or compare_object_infos_with_token must be specified based on the migration scenario. For details, see Table 6-114 .
compare_object_infos_with_token	No	Array of objects	Object for data-level comparison (Cassandra DR only, with token information). In non-quick comparison mode, either compare_object_infos or compare_object_infos_with_token must be specified based on the migration scenario. For details, see Table 6-115 .

Table 6-114 Data structure description of field **compare_object_infos**

Parameter	Mandatory	Type	Description
db_name	Yes	String	Database name.
table_name	No	Array of strings	List of table names in the database.

Table 6-115 Data structure description of field **compare_object_infos_with_token**

Parameter	Mandatory	Type	Description
db_name	Yes	String	Database name.
table_name_with_token	No	Array of objects	List of tables (with tokens) in the database. For details, see Table 6-116 .

Table 6-116 Data structure description of field **table_name_with_token**

Parameter	Mandatory	Type	Description
table_name	Yes	String	Table name
min_token	No	String	Min token of a table.

Parameter	Mandatory	Type	Description
max_token	No	String	Max token of a table.

Response Parameters

Status code: 200

Table 6-117 Response body parameters

Parameter	Type	Description
job_id	String	Task ID
object_level_compare_create_result	Object	Result of creating an object-level comparison task. For details, see Table 6-118 .
data_level_compare_create_result	Object	Result of creating a data-level comparison task. For details, see Table 6-118 .
error_code	String	Error code.
error_msg	String	Error message.

Table 6-118 Data structure description of fields
object_level_compare_create_result and **data_level_compare_create_result**

Parameter	Type	Description
compare_task_id	String	After the comparison task is created, the ID of the comparison task is returned for querying the result of the comparison task.
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Creating object-level comparison and data-level row comparison tasks

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/create-compare-task
{
  "job_id": "94800607-3cd8-4f7d-a340-63a10f8jb502",
  "object_level_compare_type": "objects",
  "data_level_compare_info": {
    "conflict_policy": "keep",
    "compare_type": "lines",
    "compare_mode": null,
  }
}
```

```
"start_time": null,
"compare_object_infos": [ {
  "db_name": "may_5",
  "table_name": [ "table_name_0", "table_name_1" ]
} ]
}
```

Example Response

Status code: 200

OK

```
{
  "job_id": "94800607-3cd8-4f7d-a340-63a10f8jb502",
  "object_level_compare_create_result": {
    "compare_task_id": "dc1683d9-bdf2-4be9-967f-6ef0953369bc"
  },
  "data_level_compare_create_result": {
    "compare_task_id": "08cad1f8-9de2-42fa-b8ce-6c36daf730f6"
  }
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.18 Querying Comparison Results

Function

This API is used to query the comparison result.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

Constraints

This API can be called only after the API in [Creating a Comparison Task](#) is successfully called.

URI

POST /v3/{project_id}/jobs/query-compare-result

Table 6-119 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-120 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none">• en-us• zh-cn

Table 6-121 Request body parameters

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID
object_level_compare_id	No	String	ID of the object-level comparison task that requests the query result.
line_compare_id	No	String	ID of the row comparison task that requests the query result.
content_compare_id	No	String	ID of the value comparison task that requests the query result.

Parameter	Mandatory	Type	Description
current_page	Yes	Integer	Current page number for pagination query, which is valid for the query result of comparison tasks.
per_page	Yes	Integer	Number of records on each page. This parameter is valid only for query results of comparison tasks.

Response Parameters

Status code: 200

Table 6-122 Response body parameters

Parameter	Type	Description
job_id	String	Task ID
object_level_compare_results	Object	Object-level comparison result. For details, see Table 6-123 .
line_compare_results	Object	Row comparison result. For details, see Table 6-126 .
content_compare_results	Object	Value comparison result. For details, see Table 6-130 .
compare_task_list_results	Object	List of comparison tasks. For details, see Table 6-136 .
error_code	String	Error code.
error_msg	String	Error message.

Table 6-123 Data structure description of field **object_level_compare_results**

Parameter	Type	Description
compare_task_id	String	ID of an object-level comparison task.
object_compare_overview	Array of objects	Overview of object comparison results. For details, see Table 6-124 .

Parameter	Type	Description
object_compare_details	Map<String,Array<ObjectCompareResultDetails>>	Object comparison result details. The key value is the object type in the object comparison result overview. For details, see Table 6-125 .
error_code	String	Error code.
error_msg	String	Error message.

Table 6-124 Data structure description of field **object_compare_overview**

Parameter	Type	Description
object_type	String	Object type. Values: <ul style="list-style-type: none"> ● DB-database ● TABLE-table ● VIEW-view ● EVENT-event ● ROUTINE - stored procedure and function ● INDEX: index ● TRIGGER: trigger ● SYNONYM - synonym ● FUNCTION-function ● PROCEDURE: stored procedure ● TYPE: user-defined type ● RULE-rule ● DEFAULT_TYPE: default value ● PLAN_GUIDE-execution plan ● CONSTRAINT-constraint ● FILE_GROUP-file group ● PARTITION_FUNCTION-partition function ● PARTITION_SCHEME-partition scheme ● TABLE_COLLATION-table sorting rule ● EXTENSIONS - Plugin

Parameter	Type	Description
object_compare_result	String	Comparison result. Values: <ul style="list-style-type: none"> ● CONSISTENT: consistent ● INCONSISTENT: inconsistent ● COMPARING: The comparison is in progress ● WAITING_FOR_COMPARISON: waiting for comparison ● FAILED_TO_COMPARE: comparison failure ● TARGET_DB_NOT_EXIT-Destination database does not exist ● CAN_NOT_COMPARE-Cannot be compared
target_count	Integer	Number of objects of this type in the destination database.
source_count	Integer	Number of objects of this type in the source database.
diff_count	Integer	Number of differences between the source and destination databases.

Table 6-125 Data structure description of field **object_compare_details**

Parameter	Type	Description
source_db_name	String	Source database name.
target_db_name	String	Destination database name.
source_db_value	String	Value in the source database.
target_db_value	String	Value in the destination database.
error_message	String	Error message.

Table 6-126 Data structure description of field **line_compare_results**

Parameter	Type	Description
compare_task_id	String	ID of a row comparison task.

Parameter	Type	Description
line_compare_overview	Array of objects	Row comparison result overview. For details, see Table 6-127 .
line_compare_overview_count	Integer	Row comparison result overview.
line_compare_details	Array of objects	Row comparison result details. For details, see Table 6-128 .
error_code	String	Error code.
error_msg	String	Error message.

Table 6-127 Data structure description of field **line_compare_overview**

Parameter	Type	Description
source_db_name	String	Source database name.
target_db_name	String	Destination database name.
line_compare_result	String	Comparison result. Values: <ul style="list-style-type: none"> ● CONSISTENT: consistent ● INCONSISTENT: inconsistent ● COMPARING: The comparison is in progress ● WAITING_FOR_COMPARISON: waiting for comparison ● FAILED_TO_COMPARE: comparison failure ● TARGET_DB_NOT_EXIST-Destination database does not exist ● CAN_NOT_COMPARE-Cannot be compared

Table 6-128 Data structure description of field **line_compare_details**

Parameter	Type	Description
source_db_name	String	Source database name.
line_compare_detail	Array of objects	Row comparison details of the tables in the database. For details, see Table 6-129 .

Parameter	Type	Description
line_compare_detail_count	Integer	Total number of row comparison results in the database.

Table 6-129 Data structure description of field **line_compare_detail**

Parameter	Type	Description
source_table_name	String	Table name of the source database.
target_table_name	String	Table name of the destination database.
source_row_num	Integer	Number of table rows in the source database.
target_row_num	Integer	Number of table rows in the destination database.
diff_row_num	Integer	Difference between the tables in the source and destination databases.
line_compare_result	String	Comparison result. Values: <ul style="list-style-type: none"> ● CONSISTENT: consistent ● INCONSISTENT: inconsistent ● COMPARING: The comparison is in progress ● WAITING_FOR_COMPARISON: waiting for comparison ● FAILED_TO_COMPARE: comparison failure ● TARGET_DB_NOT_EXIST-Destination database does not exist ● CAN_NOT_COMPARE-Cannot be compared
message	String	Additional information.

Table 6-130 Data structure description of field **content_compare_results**

Parameter	Type	Description
compare_task_id	String	ID of a value comparison task.
content_compare_overview	Array of objects	Content comparison result overview. For details, see Table 6-131 .

Parameter	Type	Description
content_compare_overview_count	Integer	Total number of value comparison results.
content_compare_details	Array of objects	Value comparison result details. For details, see Table 6-132 .
content_compare_diffs	Array of objects	The value comparison results are different. For details, see Table 6-134 .
error_code	String	Error code.
error_msg	String	Error message.

Table 6-131 Data structure description of field **content_compare_overview**

Parameter	Type	Description
source_db_name	String	Source database name.
target_db_name	String	Destination database name.
content_compare_result	String	Comparison result. Values: <ul style="list-style-type: none"> ● CONSISTENT: consistent ● INCONSISTENT: inconsistent ● COMPARING: The comparison is in progress ● WAITING_FOR_COMPARISON: waiting for comparison ● FAILED_TO_COMPARE: comparison failure ● TARGET_DB_NOT_EXIST-Destination database does not exist ● CAN_NOT_COMPARE-Cannot be compared

Table 6-132 Data structure description of field **content_compare_details**

Parameter	Type	Description
source_db_name	String	Source database name.
content_compare_detail	Array of objects	Value comparison details of the tables in the database. For details, see Table 6-133 .

Parameter	Type	Description
content_compare_detail_count	Integer	Total number of value comparison results.
content_uncompare_detail	Array of objects	Value comparison details of tables in the database (tables that cannot be compared). For details, see Table 6-133 .
content_uncompare_detail_count	Integer	Total number of value comparison results (tables that cannot be compared).

Table 6-133 Data structure description of fields **content_compare_detail** and **content_uncompare_detail**

Parameter	Type	Description
source_db_name	String	Source database name.
target_db_name	String	Destination database name.
source_table_name	String	Source database name.
target_table_name	String	Name of a table in the destination database.
source_row_num	Integer	Number of rows in the table of the source database.
target_row_num	Integer	Number of rows in the table of the destination database.
diff_row_num	Integer	Difference between the tables in the source and destination databases.
line_compare_result	String	Row comparison result. Values: <ul style="list-style-type: none"> ● CONSISTENT: consistent ● INCONSISTENT: inconsistent ● COMPARING: The comparison is in progress ● WAITING_FOR_COMPARISON: waiting for comparison ● FAILED_TO_COMPARE: comparison failure ● TARGET_DB_NOT_EXIT-Destination database does not exist ● CAN_NOT_COMPARE-Cannot be compared

Parameter	Type	Description
content_compare_result	String	Value comparison result. Values: <ul style="list-style-type: none"> ● CONSISTENT: consistent ● INCONSISTENT: inconsistent ● COMPARING: The comparison is in progress ● WAITING_FOR_COMPARISON: waiting for comparison ● FAILED_TO_COMPARE: comparison failure ● TARGET_DB_NOT_EXIST-Destination database does not exist ● CAN_NOT_COMPARE-Cannot be compared
message	String	Provides additional information.

Table 6-134 Data structure description of field **content_compare_diffs**

Parameter	Type	Description
source_db_name	String	Source database name.
source_table_name	String	Table name of the source database.
content_compare_diff	Array of objects	The value comparison results are different. For details, see Table 6-135 .
content_compare_diff_count	Integer	Total number of differences in the value comparison result.

Table 6-135 Data structure description of field **content_compare_diff**

Parameter	Type	Description
target_select_sql	String	Query the SQL statements of the destination database.
source_select_sql	String	Query the SQL statements of the source database.
source_key_value	Array of strings	Key value list of the source database.
target_key_value	Array of strings	Key value list of the destination database.

Table 6-136 Data structure description of field **compare_task_list_results**

Parameter	Type	Description
compare_task_list	Array of objects	List of comparison tasks. For details, see Table 6-137 .
compare_task_list_count	Integer	Total number of comparison tasks.
error_msg	String	Error message.
error_code	String	Error code.

Table 6-137 Data structure description of field **compare_task_list**

Parameter	Type	Description
compare_task_id	String	ID of a comparison task.
compare_type	String	Type of a comparison task.
compare_task_status	String	Status of a comparison task. Values: <ul style="list-style-type: none"> ● RUNNING: The instance is running. ● WAITING_FOR_RUNNING: waiting to be started ● SUCCESSFUL: complete ● FAILED: The migration task failed. ● CANCELLED: canceled ● TIMEOUT_INTERRUPT: timeout interrupt ● FULL_DOING: Full verification is in progress ● INCRE_DOING: incremental verification in progress
create_time	String	Comparison start time
end_time	String	Comparison end time

Example Request

Request for querying the comparison result:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/query-compare-result
```

```
{
  "job_id": "94800607-3cd8-4f7d-a340-63a10f8jb502",
  "object_level_compare_id": "dc1683d9-bdf2-4be9-967f-6ef0953369bc",
  "line_compare_id": "d45d569d-0a80-4cef-a412-da2a3bcd9b7",
  "content_compare_id": "79e206e6-13eb-4556-8cd5-c994c9cbd4e6",
  "current_page": 1,
```

```
"per_page" : 2  
}
```

Example Response

Status code: 200

OK

```
{  
  "job_id" : "c6e65e6a-de99-4112-9697-7c1923ajb201",  
  "object_level_compare_results" : {  
    "compare_task_id" : "dc1683d9-bdf2-4be9-967f-6ef0953369bc",  
    "object_compare_overview" : [ {  
      "object_type" : "DB",  
      "object_compare_result" : "CONSISTENT",  
      "source_count" : 1,  
      "target_count" : 1,  
      "diff_count" : 0  
    }, {  
      "object_type" : "INDEX",  
      "object_compare_result" : "CONSISTENT",  
      "source_count" : 12,  
      "target_count" : 12,  
      "diff_count" : 0  
    }, {  
      "object_type" : "TABLE",  
      "object_compare_result" : "CONSISTENT",  
      "source_count" : 6,  
      "target_count" : 6,  
      "diff_count" : 0  
    }  
  ],  
  "object_compare_details" : {  
    "TABLE" : [ {  
      "source_db_name" : "may_5",  
      "target_db_name" : "may_5",  
      "source_db_value" : "add_table_name_0",  
      "target_db_value" : "add_table_name_0"  
    }, {  
      "source_db_name" : "may_5",  
      "target_db_name" : "may_5",  
      "source_db_value" : "table_name_3",  
      "target_db_value" : "table_name_3"  
    }  
  ],  
    "INDEX" : [ {  
      "source_db_name" : "may_5",  
      "target_db_name" : "may_5",  
      "source_db_value" : "add_table_name_0`.PRIMARY",  
      "target_db_value" : "add_table_name_0`.PRIMARY"  
    }, {  
      "source_db_name" : "may_5",  
      "target_db_name" : "may_5",  
      "source_db_value" : "add_table_name_0`.bak0`",  
      "target_db_value" : "add_table_name_0`.bak0`"  
    }  
  ],  
    "DB" : [ {  
      "source_db_name" : "may_5",  
      "target_db_name" : "may_5",  
      "source_db_value" : "may_5",  
      "target_db_value" : "may_5"  
    }  
  ]  
},  
  "line_compare_results" : {  
    "compare_task_id" : "d45d569d-0a80-4cef-a412-da2a3bccd9b7",  
    "line_compare_overview" : [ {  
      "source_db_name" : "may_5",  
      "target_db_name" : "may_5",  
      "line_compare_result" : "INCONSISTENT"  
    }  
  ]  
}
```



```
    }],  
    "line_compare_overview_count" : 1,  
    "line_compare_details" : [ {  
      "source_db_name" : "may_5",  
      "line_compare_detail" : [ {  
        "source_table_name" : "table_name_0",  
        "source_row_num" : 0,  
        "target_table_name" : "table_name_0",  
        "target_row_num" : 1,  
        "diff_row_num" : 1,  
        "line_compare_result" : "INCONSISTENT"  
      } ],  
      "source_table_name" : "table_name_1",  
      "source_row_num" : 0,  
      "target_table_name" : "table_name_1",  
      "target_row_num" : 0,  
      "diff_row_num" : 0,  
      "line_compare_result" : "CONSISTENT"  
    } ],  
    "line_compare_detail_count" : 2  
  } ]  
},  
"content_compare_results" : {  
  "compare_task_id" : "79e206e6-13eb-4556-8cd5-c994c9cbd4e6",  
  "content_compare_overview" : [ {  
    "source_db_name" : "may_5",  
    "target_db_name" : "may_5",  
    "content_compare_result" : "INCONSISTENT"  
  } ],  
  "content_compare_overview_count" : 1,  
  "content_compare_details" : [ {  
    "source_db_name" : "may_5",  
    "content_compare_detail" : [ {  
      "source_db_name" : "may_5",  
      "target_db_name" : "may_5",  
      "source_table_name" : "table_name_0",  
      "target_table_name" : "table_name_0",  
      "source_row_num" : 0,  
      "target_row_num" : 1,  
      "diff_row_num" : 1,  
      "line_compare_result" : "INCONSISTENT",  
      "content_compare_result" : "INCONSISTENT"  
    } ],  
    "source_db_name" : "may_5",  
    "target_db_name" : "may_5",  
    "source_table_name" : "table_name_1",  
    "target_table_name" : "table_name_1",  
    "source_row_num" : 0,  
    "target_row_num" : 0,  
    "diff_row_num" : 0,  
    "line_compare_result" : "CONSISTENT",  
    "content_compare_result" : "CONSISTENT"  
  } ],  
  "content_compare_detail_count" : 2,  
  "content_uncompare_detail" : [ ],  
  "content_uncompare_detail_count" : 0  
} ],  
"content_compare_diffs" : [ {  
  "source_db_name" : "may_5",  
  "source_table_name" : "table_name_0",  
  "content_compare_diff" : [ {  
    "target_key_value" : [ "5" ],  
    "target_select_sql" : "select * from may_5.table_name_0 where id = 5"  
  } ],  
  "content_compare_diff_count" : 1  
} ]  
},  
"compare_task_list_results" : {  
  "compare_task_list_count" : 8,
```

```
"compare_task_list" : [ {
  "compare_task_id" : "08cad1f8-9de2-42fa-b8ce-6c36daf730f6",
  "compare_type" : "contents",
  "compare_task_status" : "SUCCESSFUL",
  "create_time" : "1607766111833",
  "end_time" : "1607766310812"
}, {
  "compare_task_id" : "dc1683d9-bdf2-4be9-967f-6ef0953369bc",
  "compare_type" : "object_comparison",
  "compare_task_status" : "SUCCESSFUL",
  "create_time" : "1607766110535",
  "end_time" : "1607766127373"
}
]
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [Error Code](#).

6.1.19 Querying Tasks of a Tenant

Function

This API is used to query tenant tasks by engine type, network type, task status, task name, or task ID.

Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

URI

POST /v3/{project_id}/jobs

Table 6-138 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region For details about how to obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 6-139 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: <ul style="list-style-type: none"> • en-us • zh-cn

Table 6-140 Request body parameters

Parameter	Mandatory	Type	Description
cur_page	Yes	Integer	Current page. Set the value to 0 to obtain all items. If per_page is set to 0 , cur_page can only be set to 0 or 1 . Default value: 1
per_page	Yes	Integer	Number of records on each page. If this parameter is set to 0 , cur_page can only be set to 0 or 1 . <ul style="list-style-type: none"> • Default value: 10 • Minimum value: 0 • Maximum value: 100
db_use_type	Yes	String	Migration scenario. The value can be migration (real-time migration), sync (real-time synchronization), or cloudDataGuard (real-time disaster recovery). Values: <ul style="list-style-type: none"> • migration • sync • cloudDataGuard

Parameter	Mandatory	Type	Description
engine_type	No	String	<p>Engine type of a DRS task. Default value: mysql</p> <p>Values:</p> <ul style="list-style-type: none"> • mysql: used for migration and synchronization from MySQL to MySQL • mongodb: used for migration from MongoDB to DDS • cloudDataGuard-mysql: used for DR from MySQL to MySQL • gaussdbv5: used for GaussDB synchronization • mysql-to-kafka: used for synchronization from MySQL to Kafka • taurus-to-kafka: used for synchronization from GaussDB(for MySQL) to Kafka • gaussdbv5ha-to-kafka: used for synchronization from GaussDB primary/standby to Kafka • postgresql: used for synchronization from PostgreSQL to PostgreSQL <p>For details, see Engine Types.</p>
enterprise_project_id	No	String	Enterprise project. If no value is specified, this parameter is set to null . This parameter cannot be left blank. When enterprise project is enabled, this parameter can be set.
name	No	String	Name or ID.
net_type	No	String	<p>Network type. Values:</p> <ul style="list-style-type: none"> • vpn • vpc • eip
service_name	No	String	Service name.

Parameter	Mandatory	Type	Description
status	No	String	<p>Task status.</p> <ul style="list-style-type: none"> ● CREATING: The task is being created. ● CREATE_FAILED: The task fails to be created. ● CONFIGURATION: The task is being configured. ● STARTJOBING: The task is being started. ● WAITING_FOR_START: The task is waiting to be started. ● START_JOB_FAILED: The task fails to be started. ● PAUSING: The task is paused. ● FULL_TRANSFER_STARTED : Full migration or synchronization starts. Initialization is in progress in the DR scenario. ● FULL_TRANSFER_FAILED: Full migration or synchronization fails. Initialization fails in the DR scenario. ● FULL_TRANSFER_COMPLETE: Full migration or synchronization is complete. Initialization is complete in the DR scenario. ● INCRE_TRANSFER_STARTED: Incremental migration or synchronization starts. The DR task is in progress. ● INCRE_TRANSFER_FAILED: Incremental migration or synchronization fails. A DR exception occurs. ● RELEASE_RESOURCE_STARTED: The task is being stopped. ● RELEASE_RESOURCE_FAILED: The task fails to be stopped.

Parameter	Mandatory	Type	Description
			<ul style="list-style-type: none"> ● RELEASE_RESOURCE_COMPLETE: The task is stopped. ● REBUILD_NODE_STARTED: The task is being recovered. ● REBUILD_NODE_FAILED: The task fails to be recovered. ● CHANGE_JOB_STARTED: The task is being changed. ● CHANGE_JOB_FAILED: The task fails to be changed. ● DELETED: The task is deleted. ● CHILD_TRANSFER_STARTING: The subtask is being started. ● CHILD_TRANSFER_STARTED: The subtask is being migrated. ● CHILD_TRANSFER_COMPLETE: The subtask migration is complete. ● CHILD_TRANSFER_FAILED: The subtask fails to be migrated. ● RELEASE_CHILD_TRANSFER_STARTED: The subtask is being stopped. ● RELEASE_CHILD_TRANSFER_COMPLETE: The subtask is stopped. ● NODE_UPGRADE_START: The upgrade starts. ● NODE_UPGRADE_COMPLETE: The upgrade is complete. ● NODE_UPGRADE_FAILED: The upgrade fails. <p>Enumerated values:</p> <ul style="list-style-type: none"> ● CREATING ● CREATE_FAILED ● CONFIGURATION ● STARTJOBING ● WAITING_FOR_START

Parameter	Mandatory	Type	Description
			<ul style="list-style-type: none"> • START_JOB_FAILED • PAUSING • FULL_TRANSFER_STARTED • FULL_TRANSFER_FAILED • FULL_TRANSFER_COMPLETE • INCRE_TRANSFER_STARTED • INCRE_TRANSFER_FAILED • RELEASE_RESOURCE_STARTED • RELEASE_RESOURCE_FAILED • RELEASE_RESOURCE_COMPLETE • REBUILD_NODE_STARTED • REBUILD_NODE_FAILED • CHANGE_JOB_STARTED • CHANGE_JOB_FAILED • DELETED • CHILD_TRANSFER_STARTING • CHILD_TRANSFER_STARTED • CHILD_TRANSFER_COMPLETE • CHILD_TRANSFER_FAILED • RELEASE_CHILD_TRANSFER_STARTED • RELEASE_CHILD_TRANSFER_COMPLETE • NODE_UPGRADE_START • NODE_UPGRADE_COMPLETE • NODE_UPGRADE_FAILED
tags	No	Map<String,String>	Tags. For details, see Table 6-6 .

Parameter	Mandatory	Type	Description
instance_ids	No	Array of strings	List of database instance IDs. The default value is null , indicating that database instance IDs are not used for task filtering.
instance_ip	No	String	IP address of the database instance bound to the DRS. The default value is "", indicating that the IP address of the database instance bound to the DRS is not used for task filtering.

Response Parameters

Status code: 200

Table 6-141 Response body parameters

Parameter	Type	Description
total_record	Integer	Total number of tasks
jobs	Array of objects	Task details. For details, see Table 6-142 .

Table 6-142 Data structure description of field **jobs**

Parameter	Type	Description
id	String	Task ID.
name	String	Task name.

Parameter	Type	Description
status	String	<p>Task status.</p> <ul style="list-style-type: none"> ● CREATING: The task is being created. ● CREATE_FAILED: The task fails to be created. ● CONFIGURATION: The task is being configured. ● STARTJOBING: The task is being started. ● WAITING_FOR_START: The task is waiting to be started. ● START_JOB_FAILED: The task fails to be started. ● PAUSING: The task is paused. ● FULL_TRANSFER_STARTED: Full migration or synchronization starts. Initialization is in progress in the DR scenario. ● FULL_TRANSFER_FAILED: Full migration or synchronization fails. Initialization fails in the DR scenario. ● FULL_TRANSFER_COMPLETE: Full migration or synchronization is complete. Initialization is complete in the DR scenario. ● INCRE_TRANSFER_STARTED: Incremental migration or synchronization starts. The DR task is in progress. ● INCRE_TRANSFER_FAILED: Incremental migration or synchronization fails. A DR exception occurs. ● RELEASE_RESOURCE_STARTED: The task is being stopped. ● RELEASE_RESOURCE_FAILED: The task fails to be stopped. ● RELEASE_RESOURCE_COMPLETE: The task is stopped. ● REBUILD_NODE_STARTED: The task is being recovered. ● REBUILD_NODE_FAILED: The task fails to be recovered. ● CHANGE_JOB_STARTED: The task is being changed. ● CHANGE_JOB_FAILED: The task fails to be changed. ● DELETED: The task is deleted. ● CHILD_TRANSFER_STARTING: The subtask is being started.

Parameter	Type	Description
		<ul style="list-style-type: none"> ● CHILD_TRANSFER_STARTED: The subtask is being migrated. ● CHILD_TRANSFER_COMPLETE: The subtask migration is complete. ● CHILD_TRANSFER_FAILED: The subtask fails to be migrated. ● RELEASE_CHILD_TRANSFER_STARTED: The subtask is being stopped. ● RELEASE_CHILD_TRANSFER_COMPLETE: The subtask is stopped. ● NODE_UPGRADE_START: The upgrade starts. ● NODE_UPGRADE_COMPLETE: The upgrade is complete. ● NODE_UPGRADE_FAILED: The upgrade fails. <p>Enumerated values:</p> <ul style="list-style-type: none"> ● CREATING ● CREATE_FAILED ● CONFIGURATION ● STARTJOBING ● WAITING_FOR_START ● START_JOB_FAILED ● PAUSING ● FULL_TRANSFER_STARTED ● FULL_TRANSFER_FAILED ● FULL_TRANSFER_COMPLETE ● INCRE_TRANSFER_STARTED ● INCRE_TRANSFER_FAILED ● RELEASE_RESOURCE_STARTED ● RELEASE_RESOURCE_FAILED ● RELEASE_RESOURCE_COMPLETE ● REBUILD_NODE_STARTED ● REBUILD_NODE_FAILED ● CHANGE_JOB_STARTED ● CHANGE_JOB_FAILED ● DELETED ● CHILD_TRANSFER_STARTING ● CHILD_TRANSFER_STARTED ● CHILD_TRANSFER_COMPLETE ● CHILD_TRANSFER_FAILED

Parameter	Type	Description
		<ul style="list-style-type: none"> • RELEASE_CHILD_TRANSFER_STARTED • RELEASE_CHILD_TRANSFER_COMPLETE • NODE_UPGRADE_START • NODE_UPGRADE_COMPLETE • NODE_UPGRADE_FAILED
description	String	Task description.
create_time	String	Time when a task is created
engine_type	String	Engine type of a DRS task. Values: <ul style="list-style-type: none"> • mysql: used for migration and synchronization from MySQL to MySQL • mongodb: used for migration from MongoDB to DDS • cloudDataGuard-mysql: used for DR from MySQL to MySQL • gaussdbv5: used for GaussDB synchronization • mysql-to-kafka: used for synchronization from MySQL to Kafka • taurus-to-kafka: used for synchronization from GaussDB(for MySQL) to Kafka • gaussdbv5ha-to-kafka: used for synchronization from GaussDB primary/standby to Kafka • postgresql: used for synchronization from PostgreSQL to PostgreSQL For details, see Engine Types .
net_type	String	Network type. Values: <ul style="list-style-type: none"> • vpn • vpc • eip
billing_tag	Boolean	Billing tag.
job_direction	String	Task direction. Values: <ul style="list-style-type: none"> • up: to-the-cloud scenarios and the current cloud is the standby cloud in the DR. • down: out-of-cloud scenarios and the current cloud is the active cloud in the DR. • non-dbs: self-built databases.

Parameter	Type	Description
db_use_type	String	Task scenario. Values: <ul style="list-style-type: none"> • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.
task_type	String	Task mode. Values: <ul style="list-style-type: none"> • FULL_TRANS: full migration • FULL_INCR_TRANS: full+incremental migration • INCR_TRANS: incremental migration
children	Array of objects	Subtask information body. For details, see Table 6-143 .
node_newFramework	Boolean	Whether the framework is a new framework.
job_action	Object	The matrix of task operation commands. For details, see Table 6-144 .

Table 6-143 Data structure description of field **children**

Parameter	Type	Description
billing_tag	Boolean	Billing tag.
create_time	String	Time when a task is created
db_use_type	String	Replication scenario. Values: <ul style="list-style-type: none"> • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.
description	String	Task description.

Parameter	Type	Description
engine_type	String	Engine type of a DRS task. Values: <ul style="list-style-type: none">● mysql: used for migration and synchronization from MySQL to MySQL● mongodb: used for migration from MongoDB to DDS● cloudDataGuard-mysql: used for DR from MySQL to MySQL● gaussdbv5: used for GaussDB synchronization● mysql-to-kafka: used for synchronization from MySQL to Kafka● taurus-to-kafka: used for synchronization from GaussDB(for MySQL) to Kafka● gaussdbv5ha-to-kafka: used for synchronization from GaussDB primary/standby to Kafka● postgresql: used for synchronization from PostgreSQL to PostgreSQL For details, see Engine Types .
error_msg	String	Task failure cause.
id	String	Task ID.
job_direction	String	Migration direction. Values: <ul style="list-style-type: none">● up: The current cloud is the standby cloud in the DR and to-the-cloud scenarios.● down: The current cloud is the active cloud in the DR and out-of-cloud scenarios.● non-dbs: self-built databases.
name	String	Task name.
net_type	String	Network type. Values: <ul style="list-style-type: none">● vpc● vpn● eip
node_newFramework	Boolean	New framework

Parameter	Type	Description
status	String	<p>Task status.</p> <ul style="list-style-type: none"> ● CREATING: The task is being created. ● CREATE_FAILED: The task fails to be created. ● CONFIGURATION: The task is being configured. ● STARTJOBING: The task is being started. ● WAITING_FOR_START: The task is waiting to be started. ● START_JOB_FAILED: The task fails to be started. ● PAUSING: The task is paused. ● FULL_TRANSFER_STARTED: Full migration or synchronization starts. Initialization is in progress in the DR scenario. ● FULL_TRANSFER_FAILED: Full migration or synchronization fails. Initialization fails in the DR scenario. ● FULL_TRANSFER_COMPLETE: Full migration or synchronization is complete. Initialization is complete in the DR scenario. ● INCRE_TRANSFER_STARTED: Incremental migration or synchronization starts. The DR task is in progress. ● INCRE_TRANSFER_FAILED: Incremental migration or synchronization fails. A DR exception occurs. ● RELEASE_RESOURCE_STARTED: The task is being stopped. ● RELEASE_RESOURCE_FAILED: The task fails to be stopped. ● RELEASE_RESOURCE_COMPLETE: The task is stopped. ● REBUILD_NODE_STARTED: The task is being recovered. ● REBUILD_NODE_FAILED: The task fails to be recovered. ● CHANGE_JOB_STARTED: The task is being changed. ● CHANGE_JOB_FAILED: The task fails to be changed. ● DELETED: The task is deleted. ● CHILD_TRANSFER_STARTING: The subtask is being started.

Parameter	Type	Description
		<ul style="list-style-type: none"> ● CHILD_TRANSFER_STARTED: The subtask is being migrated. ● CHILD_TRANSFER_COMPLETE: The subtask migration is complete. ● CHILD_TRANSFER_FAILED: The subtask fails to be migrated. ● RELEASE_CHILD_TRANSFER_STARTED: The subtask is being stopped. ● RELEASE_CHILD_TRANSFER_COMPLETE: The subtask is stopped. ● NODE_UPGRADE_START: The upgrade starts. ● NODE_UPGRADE_COMPLETE: The upgrade is complete. ● NODE_UPGRADE_FAILED: The upgrade fails. <p>Enumerated values:</p> <ul style="list-style-type: none"> ● CREATING ● CREATE_FAILED ● CONFIGURATION ● STARTJOBING ● WAITING_FOR_START ● START_JOB_FAILED ● PAUSING ● FULL_TRANSFER_STARTED ● FULL_TRANSFER_FAILED ● FULL_TRANSFER_COMPLETE ● INCRE_TRANSFER_STARTED ● INCRE_TRANSFER_FAILED ● RELEASE_RESOURCE_STARTED ● RELEASE_RESOURCE_FAILED ● RELEASE_RESOURCE_COMPLETE ● REBUILD_NODE_STARTED ● REBUILD_NODE_FAILED ● CHANGE_JOB_STARTED ● CHANGE_JOB_FAILED ● DELETED ● CHILD_TRANSFER_STARTING ● CHILD_TRANSFER_STARTED ● CHILD_TRANSFER_COMPLETE ● CHILD_TRANSFER_FAILED

Parameter	Type	Description
		<ul style="list-style-type: none"> ● RELEASE_CHILD_TRANSFER_STARTED ● RELEASE_CHILD_TRANSFER_COMPLETE ● NODE_UPGRADE_START ● NODE_UPGRADE_COMPLETE ● NODE_UPGRADE_FAILED
task_type	String	Task mode. Values: <ul style="list-style-type: none"> ● FULL_TRANS: full migration ● FULL_INCR_TRANS: full+incremental migration ● INCR_TRANS: incremental migration
job_action	Object	The matrix of task operation commands. For details, see Table 6-144 .

Table 6-144 Data structure description of field **job_action**

Parameter	Type	Description
available_actions	Array of strings	<p>The collection of operation commands that can be executed for a task.</p> <p>Values:</p> <ul style="list-style-type: none"> ● CREATE: indicates the operation command for creating a task. ● CHOOSE_OBJECT: indicates the operation command for selecting an object. ● PRE_CHECK: indicates the operation command for pre-check. ● CHANGE_MODE: indicates the operation command for changing the task mode. ● FREE_RESOURCE: indicates the operation command for releasing resources. ● MODIFY_DB_CONFIG: indicates the operation command for modifying database configurations. ● RESET_DB_PWD: indicates the operation command for resetting the password of the source or destination database. ● MODIFY_CONFIGURATION: indicates the operation command for modifying task configurations. ● PAUSE: indicates the operation command for pausing a task. ● START: indicates the operation command for starting a task. ● CHANGE: indicates the operation command for modifying a task. ● RETRY: indicates the operation command for retrying a task. ● RESET: indicates the operation command for resetting a task. ● DELETE: indicates the operation command for deleting a task. ● QUERY_PRE_CHECK: indicates the operation command for performing a pre-check. ● SWITCH_OVER: indicates the operation command for performing a DR switchover. ● START_INCR: indicates the operation command for starting an incremental Cassandra task.

Parameter	Type	Description
		<ul style="list-style-type: none"> ● MODIFY_TASK_NUMBER: indicates the operation command for modifying the number of Cassandra threads. ● CONTINUE_JOB: indicates the operation command for resuming a failed or stopped task from Oracle to GaussDB distributed. ● STOP_JOB: indicates the operation command for stopping a task from Oracle to GaussDB distributed. ● CONTINUE_CAPTURE: indicates the operation command for starting data capture for a task from Oracle to GaussDB distributed. ● STOP_CAPTURE: indicates the operation command for stopping data capture for a task from Oracle to GaussDB distributed. ● CONTINUE_APPLY: indicates the operation command for starting data replay for a task from Oracle to GaussDB distributed. ● STOP_APPLY: indicates the operation command for stopping data replay for a task from Oracle to GaussDB distributed. ● PAY_ORDER: indicates the operation command for paying a yearly/monthly order. ● UNSUBSCRIBE: indicates the operation command for unsubscribing from a yearly/monthly subscription. ● TO_PERIOD: indicates the operation command for changing the billing mode from pay-per-use to yearly/monthly. ● TO_RENEW: indicates the operation command for renewing a yearly/monthly subscription. ● ORDER_INFO: indicates the operation command for querying order details. ● CHANGE_FLAVOR: indicates the operation command for changing task specifications. ● CLONE: indicates the operation command for cloning a task.

Parameter	Type	Description
unavailable_actions	Array of strings	<p>The collection of operation commands that cannot be executed for a task.</p> <p>Values:</p> <ul style="list-style-type: none"> ● CREATE: indicates the operation command for creating a task. ● CHOOSE_OBJECT: indicates the operation command for selecting an object. ● PRE_CHECK: indicates the operation command for pre-check. ● CHANGE_MODE: indicates the operation command for changing the task mode. ● FREE_RESOURCE: indicates the operation command for releasing resources. ● MODIFY_DB_CONFIG: indicates the operation command for modifying database configurations. ● RESET_DB_PWD: indicates the operation command for resetting the password of the source or destination database. ● MODIFY_CONFIGURATION: indicates the operation command for modifying task configurations. ● PAUSE: indicates the operation command for pausing a task. ● START: indicates the operation command for starting a task. ● CHANGE: indicates the operation command for modifying a task. ● RETRY: indicates the operation command for retrying a task. ● RESET: indicates the operation command for resetting a task. ● DELETE: indicates the operation command for deleting a task. ● QUERY_PRE_CHECK: indicates the operation command for performing a pre-check. ● SWITCH_OVER: indicates the operation command for performing a DR switchover. ● START_INCR: indicates the operation command for starting an incremental Cassandra task. ● MODIFY_TASK_NUMBER: indicates the operation command for modifying the number of Cassandra threads.

Parameter	Type	Description
		<ul style="list-style-type: none"> ● CONTINUE_JOB: indicates the operation command for resuming a failed or stopped task from Oracle to GaussDB distributed. ● STOP_JOB: indicates the operation command for stopping a task from Oracle to GaussDB distributed. ● CONTINUE_CAPTURE: indicates the operation command for starting data capture for a task from Oracle to GaussDB distributed. ● STOP_CAPTURE: indicates the operation command for stopping data capture for a task from Oracle to GaussDB distributed. ● CONTINUE_APPLY: indicates the operation command for starting data replay for a task from Oracle to GaussDB distributed. ● STOP_APPLY: indicates the operation command for stopping data replay for a task from Oracle to GaussDB distributed. ● PAY_ORDER: indicates the operation command for paying a yearly/monthly order. ● UNSUBSCRIBE: indicates the operation command for unsubscribing from a yearly/monthly subscription. ● TO_PERIOD: indicates the operation command for changing the billing mode from pay-per-use to yearly/monthly. ● TO_RENEW: indicates the operation command for renewing a yearly/monthly subscription. ● ORDER_INFO: indicates the operation command for querying order details. ● CHANGE_FLAVOR: indicates the operation command for changing task specifications. ● CLONE: indicates the operation command for cloning a task.
current_action	String	<p>The current operation. Values:</p> <ul style="list-style-type: none"> ● SWITCH_OVER: indicates that a DR switchover is in progress. ● STOP_JOB: indicates that a task is being paused.

Example Request

- Example of querying the real-time synchronization task list:

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs`

```
{
  "cur_page" : 1,
  "db_use_type" : "sync",
  "engine_type" : "",
  "name" : "",
  "net_type" : "",
  "per_page" : 5,
  "status" : ""
}
```

- Example of querying the real-time migration task list:

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs`

```
{
  "cur_page" : 1,
  "db_use_type" : "migration",
  "engine_type" : "",
  "name" : "",
  "net_type" : "",
  "per_page" : 5,
  "status" : ""
}
```

- Example of querying the real-time synchronization tasks based on the database instance ID:

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs`

```
{
  "cur_page" : 1,
  "db_use_type" : "sync",
  "engine_type" : "",
  "enterprise_project_id" : "",
  "name" : "",
  "net_type" : "",
  "per_page" : 5,
  "instance_ids" : [ "id1", "id2" ],
  "status" : ""
}
```

- Example of querying the real-time synchronization tasks based on the database instance IP address:

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs`

```
{
  "cur_page" : 1,
  "db_use_type" : "sync",
  "engine_type" : "",
  "enterprise_project_id" : "",
  "name" : "",
  "net_type" : "",
  "per_page" : 5,
  "instance_ip" : "127.0.0.1",
  "status" : ""
}
```

Example Response

Status code: 200

OK

- Example response for querying the real-time migration tasks:

```
{
  "jobs" : [ {
    "id" : "24834eb6-be30-464e-a299-f7aa730jb101",
    "name" : "DRS-3999-lws",
    "status" : "INCRE_TRANSFER_FAILED",
    "description" : "",
    "create_time" : "2020-12-21 10:57:49",
    "error_msg" : "service LOGMANAGER failed, cause by: Unable to connect to DBMS: url=jdbc:mysql://172.22.74.56:3306?useUnicode=true&allowLoadLocalInfile=false&characterEncoding=UTF-8&connectTimeout=5000&useSSL=false&allowPublicKeyRetrieval=true&verifyServerCertificate=false&serverTimezone=UTC user=root",
    "engine_type" : "mysql",
    "net_type" : "eip",
    "billing_tag" : false,
    "job_direction" : "up",
    "db_use_type" : "migration",
    "task_type" : "FULL_INCR_TRANS",
    "node_newFramework" : false
    "job_action":{
      "available_actions": [
        "CREATE",
        "CHOOSE_OBJECT",
        "PRE_CHECK",
        "CHANGE_MODE",
        "FREE_RESOURCE",
        "MODIFY_DB_CONFIG",
        "RESET_DB_PWD",
        "MODIFY_CONFIGURATION",
        "PAUSE",
        "RETRY",
        "RESET",
      ],
      "unavailable_actions": [
        "START",
        "CHANGE",
        "DELETE",
        "QUERY_PRE_CHECK",
        "SWITCH_OVER",
        "MODIFY_SPECIFICATION_ID",
        "START_INCR",
        "MODIFY_TASK_NUMBER",
        "CONTINUE_JOB",
        "STOP_JOB",
        "CONTINUE_CAPTURE",
        "STOP_CAPTURE",
        "CONTINUE_APPLY",
        "API_CONFIGURATION_ACTION",
        "STOP_APPLY",
        "PAY_ORDER",
        "UNSUBSCRIBE",
        "TO_PERIOD",
        "TO_RENEW",
        "ORDER_INFO",
        "CHANGE_FLAVOR",
        "CLONE"
      ]
    }
  }
], {
  "id" : "140b5236-88ad-43c8-811c-1268453jb101",
  "name" : "DRS-0042-linxiaolu",
  "status" : "CONFIGURATION",
  "description" : "",
  "create_time" : "2020-12-19 16:23:24",
  "engine_type" : "mysql",
  "net_type" : "eip",
  "billing_tag" : false,
  "job_direction" : "up",
  "db_use_type" : "migration",
  "task_type" : "FULL_INCR_TRANS",
}
```

```
"node_newFramework" : false
"job_action": {
  "available_actions": [
    "CREATE",
    "START",
    "CHANGE",
    "CHOOSE_OBJECT",
    "PRE_CHECK",
    "CHANGE_MODE",
    "FREE_RESOURCE",
    "MODIFY_DB_CONFIG",
    "API_CONFIGURATION_ACTION"
  ],
  "unavailable_actions": [
    "RETRY",
    "RESET",
    "DELETE",
    "QUERY_PRE_CHECK",
    "SWITCH_OVER",
    "MODIFY_SPECIFICATION_ID",
    "RESET_DB_PWD",
    "MODIFY_CONFIGURATION",
    "PAUSE",
    "JUMP_RETRY",
    "START_INCR",
    "MODIFY_TASK_NUMBER",
    "CONTINUE_JOB",
    "STOP_JOB",
    "CONTINUE_CAPTURE",
    "STOP_CAPTURE",
    "CONTINUE_APPLY",
    "STOP_APPLY",
    "PAY_ORDER",
    "UNSUBSCRIBE",
    "TO_PERIOD",
    "TO_RENEW",
    "ORDER_INFO",
    "CHANGE_FLAVOR",
    "CLONE"
  ]
}
}, {
  "id" : "7f8e6f74-72d2-4ddd-bb8f-6c41397jb101",
  "name" : "DRS-0796",
  "status" : "RELEASE_RESOURCE_COMPLETE",
  "description" : "",
  "create_time" : "2020-12-18 10:48:11",
  "engine_type" : "mysql",
  "net_type" : "eip",
  "billing_tag" : false,
  "job_direction" : "non-dbs",
  "db_use_type" : "migration",
  "task_type" : "FULL_INCR_TRANS",
  "node_newFramework" : false
"job_action": {
  "available_actions": [
    "CREATE",
    "DELETE",
    "PRE_CHECK",
    "CHANGE_MODE",
    "MODIFY_DB_CONFIG",
    "CLONE"
  ],
  "unavailable_actions": [
    "FREE_RESOURCE",
    "START",
    "CHANGE",
    "CHOOSE_OBJECT",
    "RETRY",
```

```

"RESET",
"QUERY_PRE_CHECK",
"SWITCH_OVER",
"MODIFY_SPECIFICATION_ID",
"RESET_DB_PWD",
"MODIFY_CONFIGURATION",
"PAUSE",
"JUMP_RETRY",
"START_INCR",
"MODIFY_TASK_NUMBER",
"CONTINUE_JOB",
"STOP_JOB",
"CONTINUE_CAPTURE",
"STOP_CAPTURE",
"CONTINUE_APPLY",
"STOP_APPLY",
"PAY_ORDER",
"UNSUBSCRIBE",
"TO_PERIOD",
"TO_RENEW",
"ORDER_INFO",
"CHANGE_FLAVOR"
]
}
}, {
  "id": "14d88eeb-ee7e-4d30-a46e-a5ec8eajb101",
  "name": "masj-mysql_migration_down-1",
  "status": "INCRE_TRANSFER_STARTED",
  "description": "[using] api test 2\n1. This API is used to configure the source and destination database information. Before selecting a table, you must perform this operation. \n2. If the description of a task in the configuration is successfully modified, 202 success is returned. \n3. If the description of a task in an incremental migration fails to be modified, 202 failed DRS.M01504\nAnother operation is being performed on the migration task or the migration task is abnormal. Try again later./",
  "create_time": "2020-12-15 15:43:02",
  "engine_type": "mysql",
  "net_type": "eip",
  "billing_tag": true,
  "job_direction": "down",
  "db_use_type": "migration",
  "task_type": "FULL_INCR_TRANS",
  "node_newFramework": false
  "job_action": {
    "available_actions": [
      "CREATE",
      "CHOOSE_OBJECT",
      "PRE_CHECK",
      "CHANGE_MODE",
      "FREE_RESOURCE",
      "MODIFY_DB_CONFIG",
      "RESET_DB_PWD",
      "MODIFY_CONFIGURATION",
      "PAUSE",
    ],
    "unavailable_actions": [
      "START",
      "RETRY",
      "RESET",
      "CHANGE",
      "DELETE",
      "QUERY_PRE_CHECK",
      "SWITCH_OVER",
      "MODIFY_SPECIFICATION_ID",
      "START_INCR",
      "MODIFY_TASK_NUMBER",
      "CONTINUE_JOB",
      "STOP_JOB",
      "CONTINUE_CAPTURE",
      "STOP_CAPTURE",
      "CONTINUE_APPLY",
    ]
  }
}

```



```

"API_CONFIGURATION_ACTION",
"STOP_APPLY",
"PAY_ORDER",
"UNSUBSCRIBE",
"TO_PERIOD",
"TO_RENEW",
"ORDER_INFO",
"CHANGE_FLAVOR",
"CLONE"
]
}
}, {
  "id": "d54691d2-f105-434d-a75d-809b017jb101",
  "name": "masj-2-mysql_migration_down",
  "status": "CONFIGURATION",
  "description": "[using] api test 2\n1. This API is used to configure the source and destination database information. Before selecting a table, you must perform this operation. \n2. If the description of a task in the configuration is successfully modified, 202 success is returned. \n3. If the description of a task in an incremental migration fails to be modified, 202 failed DRS.M01504\nAnother operation is being performed on the migration task or the migration task is abnormal. Try again later./",
  "create_time": "2020-12-14 21:39:07",
  "engine_type": "mysql",
  "net_type": "eip",
  "billing_tag": false,
  "job_direction": "down",
  "db_use_type": "migration",
  "task_type": "FULL_INCR_TRANS",
  "node_newFramework": false
  "job_action": {
    "available_actions": [
      "CREATE",
      "START",
      "CHANGE",
      "CHOOSE_OBJECT",
      "PRE_CHECK",
      "CHANGE_MODE",
      "FREE_RESOURCE",
      "MODIFY_DB_CONFIG",
      "API_CONFIGURATION_ACTION"
    ],
    "unavailable_actions": [
      "RETRY",
      "RESET",
      "DELETE",
      "QUERY_PRE_CHECK",
      "SWITCH_OVER",
      "MODIFY_SPECIFICATION_ID",
      "RESET_DB_PWD",
      "MODIFY_CONFIGURATION",
      "PAUSE",
      "JUMP_RETRY",
      "START_INCR",
      "MODIFY_TASK_NUMBER",
      "CONTINUE_JOB",
      "STOP_JOB",
      "CONTINUE_CAPTURE",
      "STOP_CAPTURE",
      "CONTINUE_APPLY",
      "STOP_APPLY",
      "PAY_ORDER",
      "UNSUBSCRIBE",
      "TO_PERIOD",
      "TO_RENEW",
      "ORDER_INFO",
      "CHANGE_FLAVOR",
      "CLONE"
    ]
  }
}
}],

```

- ```
"total_record" : 7
}
```
- Example response for querying the real-time synchronization tasks:

```
{
 "jobs" : [{
 "id" : "7994aac9-0a15-4fdb-bcc5-667f088jb20b",
 "name" : "DRS-8200",
 "status" : "CREATE_FAILED",
 "description" : "",
 "create_time" : "2020-12-21 18:02:36",
 "error_msg" : "system error!",
 "engine_type" : "oracle-to-mysql",
 "net_type" : "eip",
 "billing_tag" : false,
 "job_direction" : "up",
 "db_use_type" : "sync",
 "task_type" : "FULL_INCR_TRANS",
 "node_newFramework" : false
 "job_action": {
 "available_actions": [
 "CREATE",
 "DELETE",
 "START",
 "CHANGE",
 "CHOOSE_OBJECT",
 "PRE_CHECK",
 "CHANGE_MODE",
 "MODIFY_DB_CONFIG",
 "API_CONFIGURATION_ACTION"
],
 "unavailable_actions": [
 "FREE_RESOURCE",
 "RETRY",
 "RESET",
 "QUERY_PRE_CHECK",
 "SWITCH_OVER",
 "MODIFY_SPECIFICATION_ID",
 "RESET_DB_PWD",
 "MODIFY_CONFIGURATION",
 "PAUSE",
 "JUMP_RETRY",
 "START_INCR",
 "MODIFY_TASK_NUMBER",
 "CONTINUE_JOB",
 "STOP_JOB",
 "CONTINUE_CAPTURE",
 "STOP_CAPTURE",
 "CONTINUE_APPLY",
 "STOP_APPLY",
 "PAY_ORDER",
 "UNSUBSCRIBE",
 "TO_PERIOD",
 "TO_RENEW",
 "ORDER_INFO",
 "CHANGE_FLAVOR",
 "CLONE"
]
 }
 }
], {
 "id" : "f463331d-e079-4689-bbef-4553202jb20b",
 "name" : "DRS-1285",
 "status" : "CONFIGURATION",
 "description" : "",
 "create_time" : "2020-12-21 17:19:38",
 "engine_type" : "oracle-to-mysql",
 "net_type" : "eip",
 "billing_tag" : false,
 "job_direction" : "up",
 "db_use_type" : "sync",
```

```
"task_type" : "FULL_INCR_TRANS",
"node_newFramework" : false
"job_action": {
 "available_actions": [
 "CREATE",
 "START",
 "CHANGE",
 "CHOOSE_OBJECT",
 "PRE_CHECK",
 "CHANGE_MODE",
 "FREE_RESOURCE",
 "MODIFY_DB_CONFIG",
 "API_CONFIGURATION_ACTION"
],
 "unavailable_actions": [
 "RETRY",
 "RESET",
 "DELETE",
 "QUERY_PRE_CHECK",
 "SWITCH_OVER",
 "MODIFY_SPECIFICATION_ID",
 "RESET_DB_PWD",
 "MODIFY_CONFIGURATION",
 "PAUSE",
 "JUMP_RETRY",
 "START_INCR",
 "MODIFY_TASK_NUMBER",
 "CONTINUE_JOB",
 "STOP_JOB",
 "CONTINUE_CAPTURE",
 "STOP_CAPTURE",
 "CONTINUE_APPLY",
 "STOP_APPLY",
 "PAY_ORDER",
 "UNSUBSCRIBE",
 "TO_PERIOD",
 "TO_RENEW",
 "ORDER_INFO",
 "CHANGE_FLAVOR",
 "CLONE"
]
}
}, {
 "id" : "7f13c511-c35b-4f82-92ae-83bcfb0jb201",
 "name" : "DRS-9383",
 "status" : "CONFIGURATION",
 "description" : "",
 "create_time" : "2020-12-21 17:18:44",
 "engine_type" : "mysql",
 "net_type" : "eip",
 "billing_tag" : false,
 "job_direction" : "up",
 "db_use_type" : "sync",
 "task_type" : "FULL_INCR_TRANS",
 "node_newFramework" : false
"job_action": {
 "available_actions": [
 "CREATE",
 "START",
 "CHANGE",
 "CHOOSE_OBJECT",
 "PRE_CHECK",
 "CHANGE_MODE",
 "FREE_RESOURCE",
 "MODIFY_DB_CONFIG",
 "API_CONFIGURATION_ACTION"
],
 "unavailable_actions": [
 "RETRY",
```



```
"job_action": {
 "available_actions": [
 "CREATE",
 "START",
 "CHANGE",
 "CHOOSE_OBJECT",
 "PRE_CHECK",
 "CHANGE_MODE",
 "FREE_RESOURCE",
 "MODIFY_DB_CONFIG",
 "API_CONFIGURATION_ACTION"
],
 "unavailable_actions": [
 "RETRY",
 "RESET",
 "DELETE",
 "QUERY_PRE_CHECK",
 "SWITCH_OVER",
 "MODIFY_SPECIFICATION_ID",
 "RESET_DB_PWD",
 "MODIFY_CONFIGURATION",
 "PAUSE",
 "JUMP_RETRY",
 "START_INCR",
 "MODIFY_TASK_NUMBER",
 "CONTINUE_JOB",
 "STOP_JOB",
 "CONTINUE_CAPTURE",
 "STOP_CAPTURE",
 "CONTINUE_APPLY",
 "STOP_APPLY",
 "PAY_ORDER",
 "UNSUBSCRIBE",
 "TO_PERIOD",
 "TO_RENEW",
 "ORDER_INFO",
 "CHANGE_FLAVOR",
 "CLONE"
]
}
}, {
 "id" : "5b2c2ec8-430e-4de0-937b-9d9547ajb201",
 "name" : "DRS-2899",
 "status" : "RELEASE_RESOURCE_COMPLETE",
 "description" : "",
 "create_time" : "2020-12-21 16:24:24",
 "engine_type" : "mysql",
 "net_type" : "eip",
 "billing_tag" : false,
 "job_direction" : "up",
 "db_use_type" : "sync",
 "task_type" : "FULL_INCR_TRANS",
 "node_newFramework" : false
 "job_action": {
 "available_actions": [
 "CREATE",
 "DELETE",
 "PRE_CHECK",
 "CHANGE_MODE",
 "MODIFY_DB_CONFIG",
 "CLONE"
],
 "unavailable_actions": [
 "FREE_RESOURCE",
 "START",
 "CHANGE",
 "CHOOSE_OBJECT",
 "RETRY",
 "RESET",

```

```
"QUERY_PRE_CHECK",
"SWITCH_OVER",
"MODIFY_SPECIFICATION_ID",
"RESET_DB_PWD",
"MODIFY_CONFIGURATION",
"PAUSE",
"JUMP_RETRY",
"START_INCR",
"MODIFY_TASK_NUMBER",
"CONTINUE_JOB",
"STOP_JOB",
"CONTINUE_CAPTURE",
"STOP_CAPTURE",
"CONTINUE_APPLY",
"STOP_APPLY",
"PAY_ORDER",
"UNSUBSCRIBE",
"TO_PERIOD",
"TO_RENEW",
"ORDER_INFO",
"CHANGE_FLAVOR"
]
}
}],
"total_record" : 18
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 6.1.20 Querying Task Details in Batches

### Function

This API is used to query task details in batches by task ID.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### Constraints

You can call a maximum of 10 APIs in batches.

### URI

POST /v3/{project\_id}/jobs/batch-detail

**Table 6-145** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 6-146** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                   |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                         |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

**Table 6-147** Request body parameters

| Parameter | Mandatory | Type             | Description                                                               |
|-----------|-----------|------------------|---------------------------------------------------------------------------|
| jobs      | Yes       | Array of strings | Querying task details in batches                                          |
| page_req  | No        | Object           | Pagination information.<br>For details, see <a href="#">Table 6-148</a> . |

**Table 6-148** Data structure description of field **page\_req**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                          |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cur_page  | No        | Integer | Current page number, which cannot exceed the maximum number of pages. (Number of pages = Number of transferred job IDs/Number of tasks on each page) <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b>.</li> <li>• Default value: <b>1</b></li> </ul> |
| per_page  | No        | Integer | Number of items on each page. If this parameter is set to <b>0</b> , all items are obtained. <ul style="list-style-type: none"> <li>• Minimum value: <b>0</b></li> <li>• Maximum value: <b>100</b></li> <li>• Default value: <b>5</b></li> </ul>                     |

## Response Parameters

Status code: 200

**Table 6-149** Response body parameters

| Parameter | Type             | Description                                                     |
|-----------|------------------|-----------------------------------------------------------------|
| count     | Integer          | Number of tasks.                                                |
| results   | Array of objects | Task details.<br>For details, see <a href="#">Table 6-150</a> . |

**Table 6-150** Data structure description of field **results**

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| id        | String | Task ID.        |
| parent_id | String | Parent task ID. |
| name      | String | Task name.      |



| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | <p>Task status.</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b>: The task is being created.</li> <li>● <b>CREATE_FAILED</b>: The task fails to be created.</li> <li>● <b>CONFIGURATION</b>: The task is being configured.</li> <li>● <b>STARTJOBING</b>: The task is being started.</li> <li>● <b>WAITING_FOR_START</b>: The task is waiting to be started.</li> <li>● <b>START_JOB_FAILED</b>: The task fails to be started.</li> <li>● <b>PAUSING</b>: The task is paused.</li> <li>● <b>FULL_TRANSFER_STARTED</b>: Full migration or synchronization starts. Initialization is in progress in the DR scenario.</li> <li>● <b>FULL_TRANSFER_FAILED</b>: Full migration or synchronization fails. Initialization fails in the DR scenario.</li> <li>● <b>FULL_TRANSFER_COMPLETE</b>: Full migration or synchronization is complete. Initialization is complete in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_STARTED</b>: Incremental migration or synchronization starts. The DR task is in progress.</li> <li>● <b>INCRE_TRANSFER_FAILED</b>: Incremental migration or synchronization fails. A DR exception occurs.</li> <li>● <b>RELEASE_RESOURCE_STARTED</b>: The task is being stopped.</li> <li>● <b>RELEASE_RESOURCE_FAILED</b>: The task fails to be stopped.</li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b>: The task is stopped.</li> <li>● <b>REBUILD_NODE_STARTED</b>: The task is being recovered.</li> <li>● <b>REBUILD_NODE_FAILED</b>: The task fails to be recovered.</li> <li>● <b>CHANGE_JOB_STARTED</b>: The task is being changed.</li> <li>● <b>CHANGE_JOB_FAILED</b>: The task fails to be changed.</li> <li>● <b>DELETED</b>: The task is deleted.</li> <li>● <b>CHILD_TRANSFER_STARTING</b>: The subtask is being started.</li> </ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"> <li>● <b>CHILD_TRANSFER_STARTED</b>: The subtask is being migrated.</li> <li>● <b>CHILD_TRANSFER_COMPLETE</b>: The subtask migration is complete.</li> <li>● <b>CHILD_TRANSFER_FAILED</b>: The subtask fails to be migrated.</li> <li>● <b>RELEASE_CHILD_TRANSFER_STARTED</b>: The subtask is being stopped.</li> <li>● <b>RELEASE_CHILD_TRANSFER_COMPLETE</b>: The subtask is stopped.</li> <li>● <b>NODE_UPGRADE_START</b>: The upgrade starts.</li> <li>● <b>NODE_UPGRADE_COMPLETE</b>: The upgrade is complete.</li> <li>● <b>NODE_UPGRADE_FAILED</b>: The upgrade fails.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>CONFIGURATION</b></li> <li>● <b>STARTJOBING</b></li> <li>● <b>WAITING_FOR_START</b></li> <li>● <b>START_JOB_FAILED</b></li> <li>● <b>PAUSING</b></li> <li>● <b>FULL_TRANSFER_STARTED</b></li> <li>● <b>FULL_TRANSFER_FAILED</b></li> <li>● <b>FULL_TRANSFER_COMPLETE</b></li> <li>● <b>INCRE_TRANSFER_STARTED</b></li> <li>● <b>INCRE_TRANSFER_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_STARTED</b></li> <li>● <b>RELEASE_RESOURCE_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b></li> <li>● <b>REBUILD_NODE_STARTED</b></li> <li>● <b>REBUILD_NODE_FAILED</b></li> <li>● <b>CHANGE_JOB_STARTED</b></li> <li>● <b>CHANGE_JOB_FAILED</b></li> <li>● <b>DELETED</b></li> <li>● <b>CHILD_TRANSFER_STARTING</b></li> <li>● <b>CHILD_TRANSFER_STARTED</b></li> <li>● <b>CHILD_TRANSFER_COMPLETE</b></li> <li>● <b>CHILD_TRANSFER_FAILED</b></li> </ul> |

| Parameter                   | Type             | Description                                                                                                                                                                                                                                                    |
|-----------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |                  | <ul style="list-style-type: none"> <li>• <b>RELEASE_CHILD_TRANSFER_STARTED</b></li> <li>• <b>RELEASE_CHILD_TRANSFER_COMPLETE</b></li> <li>• <b>NODE_UPGRADE_START</b></li> <li>• <b>NODE_UPGRADE_COMPLETE</b></li> <li>• <b>NODE_UPGRADE_FAILED</b></li> </ul> |
| description                 | String           | Description.                                                                                                                                                                                                                                                   |
| create_time                 | String           | Creation time, in timestamp format.                                                                                                                                                                                                                            |
| task_type                   | String           | Task mode. Values: <ul style="list-style-type: none"> <li>• <b>FULL_TRANS</b>: full migration</li> <li>• <b>INCR_TRANS</b>: incremental migration</li> <li>• <b>FULL_INCR_TRANS</b>: full+incremental migration</li> </ul>                                     |
| source_endpoint             | Object           | Source database information.<br>For details, see <a href="#">Table 6-151</a> .                                                                                                                                                                                 |
| dmq_endpoint                | Object           | DMQ information body.<br>For details, see <a href="#">Table 6-151</a> .                                                                                                                                                                                        |
| source_sharding             | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 6-151</a> .                                                                                                                                                              |
| target_endpoint             | Object           | Information body of the destination database.<br>For details, see <a href="#">Table 6-151</a> .                                                                                                                                                                |
| net_type                    | String           | Network type. Values: <ul style="list-style-type: none"> <li>• <b>vpn</b></li> <li>• <b>vpc</b></li> <li>• <b>eip</b></li> </ul>                                                                                                                               |
| failed_reason               | String           | Failure cause.                                                                                                                                                                                                                                                 |
| inst_info                   | Object           | Replication instance information.<br>For details, see <a href="#">Table 6-152</a> .                                                                                                                                                                            |
| actual_start_time           | String           | Start time, in timestamp format.                                                                                                                                                                                                                               |
| full_transfer_complete_time | String           | Full migration completion time, in timestamp format.                                                                                                                                                                                                           |
| update_time                 | String           | Update time, in timestamp format.                                                                                                                                                                                                                              |

| Parameter           | Type             | Description                                                                                                                                                                                                                                                                                                              |
|---------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_direction       | String           | Task direction. Values: <ul style="list-style-type: none"> <li>● <b>up</b>: The current cloud is the standby cloud in the DR and to-the-cloud scenarios.</li> <li>● <b>down</b>: The current cloud is the active cloud in the DR and out-of-cloud scenarios.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> |
| db_use_type         | String           | Migration scenario Values: <ul style="list-style-type: none"> <li>● <b>migration</b>: real-time migration.</li> <li>● <b>sync</b>: real-time synchronization.</li> <li>● <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul>                                                                                  |
| need_restart        | Boolean          | Whether the instance needs to be restarted.                                                                                                                                                                                                                                                                              |
| is_target_read_only | Boolean          | Whether the destination instance is restricted to read-only.                                                                                                                                                                                                                                                             |
| conflict_policy     | String           | Conflict policy. Values: <ul style="list-style-type: none"> <li>● <b>stop</b>: The conflict fails.</li> <li>● <b>overwrite</b>: Conflicting data is overwritten.</li> <li>● <b>ignore</b>: The conflict is ignored.</li> </ul>                                                                                           |
| filter_ddl_policy   | String           | DDL filtering policy. Values: <ul style="list-style-type: none"> <li>● <b>drop_database</b>: Filters DDLs.</li> <li>● <b>drop_databasefilter_all</b>: Filters out all DLLs.</li> <li>● <b>""</b>: No filter.</li> </ul>                                                                                                  |
| speed_limit         | Array of objects | Migration speed limit.<br>For details, see <a href="#">Table 6-153</a> .                                                                                                                                                                                                                                                 |
| schema_type         | String           | Migration schemes. Values: <ul style="list-style-type: none"> <li>● <b>Replication</b>: primary/standby replication.</li> <li>● <b>Tungsten</b>: parses logs.</li> <li>● <b>PGBaseBackup</b>: PostgreSQL backup.</li> </ul>                                                                                              |
| node_num            | String           | The number of nodes.                                                                                                                                                                                                                                                                                                     |
| object_switch       | Boolean          | Whether to select objects.                                                                                                                                                                                                                                                                                               |
| master_job_id       | String           | Main task ID                                                                                                                                                                                                                                                                                                             |
| full_mode           | String           | Full snapshot mode.                                                                                                                                                                                                                                                                                                      |
| struct_trans        | Boolean          | Whether to migrate the structure.                                                                                                                                                                                                                                                                                        |
| index_trans         | Boolean          | Whether to migrate indexes.                                                                                                                                                                                                                                                                                              |

| Parameter           | Type    | Description                                                                                                             |
|---------------------|---------|-------------------------------------------------------------------------------------------------------------------------|
| replace_definer     | Boolean | Whether to replace the definer with the user of the destination database.                                               |
| migrate_user        | Boolean | Whether to migrate users.                                                                                               |
| sync_database       | Boolean | Whether to perform database-level synchronization.                                                                      |
| error_code          | String  | Error code.                                                                                                             |
| error_message       | String  | Error message.                                                                                                          |
| target_root_db      | Object  | Information about the root node database of the destination instance.<br>For details, see <a href="#">Table 6-154</a> . |
| az_code             | String  | AZ where the node is located.                                                                                           |
| vpc_id              | String  | VPC to which the node belongs.                                                                                          |
| subnet_id           | String  | Subnet where the node is located.                                                                                       |
| security_group_id   | String  | Security group to which the node belongs.                                                                               |
| multi_write         | Boolean | Whether the task is a multi-active DR task. The value is <b>true</b> when the task is a dual-active DR task.            |
| support_ip_v6       | Boolean | Whether IPv6 is supported                                                                                               |
| inherit_id          | String  | Inherited task ID.                                                                                                      |
| gtid                | String  | GTID set of breakpoints.                                                                                                |
| alarm_notify        | Object  | Exception notification settings.<br>For details, see <a href="#">Table 6-155</a> .                                      |
| is_multi_az         | Boolean | Whether the task is a primary/standby task.                                                                             |
| az_name             | String  | AZ name of the node.                                                                                                    |
| master_az           | String  | Primary AZ of the primary/standby task.                                                                                 |
| slave_az            | String  | Standby AZ of the primary/standby task.                                                                                 |
| node_role           | String  | Primary/Standby role of a task.                                                                                         |
| incr_start_position | String  | Start point of an incremental task.                                                                                     |

| Parameter              | Type             | Description                                                                                                                                                                                                                                                                                                              |
|------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_order           | Object           | Yearly/Monthly information.<br>For details, see <a href="#">Table 6-157</a> .<br><b>NOTE</b><br>This parameter is returned only for yearly/monthly tasks.                                                                                                                                                                |
| object_infos           | Array of objects | Synchronized object information.<br>For details, see <a href="#">Table 6-158</a> .                                                                                                                                                                                                                                       |
| original_job_direction | String           | Task direction. Values: <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and the current cloud is the standby cloud in the DR.</li> <li>● <b>down</b>: out-of-cloud scenarios and the current cloud is the active cloud in the DR.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> |
| data_transformation    | Object           | Data filtering configuration information.<br>For details, see <a href="#">Table 6-159</a> .                                                                                                                                                                                                                              |
| tags                   | Array of objects | Task tag.<br>For details, see <a href="#">Table 6-164</a> .                                                                                                                                                                                                                                                              |
| public_ip_list         | Array of objects | Information about a specified EIP.<br>For details, see <a href="#">Table 6-165</a> .                                                                                                                                                                                                                                     |
| bind_public_ip_state   | String           | Whether an EIP is successfully bound.                                                                                                                                                                                                                                                                                    |
| children               | Array of objects | In the case of multiple tasks, if an EIP fails to be bound to a subtask, the subtask information is returned.<br>For details, see <a href="#">Table 6-166</a> .                                                                                                                                                          |

**Table 6-151** Data structure description of fields **source\_endpoint**, **dmq\_endpoint**, **source\_sharding**, and **target\_endpoint**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                    |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type   | String | Database type. Values: <ul style="list-style-type: none"> <li>● <b>mysql</b>: MySQL</li> <li>● <b>mongodb</b>: MongoDB</li> <li>● <b>gaussdbv5</b>: GaussDB Distributed</li> <li>● <b>taurus</b>: GaussDB(for MySQL)</li> <li>● <b>gaussdbv5ha</b>: GaussDB Primary/Standby</li> <li>● <b>kafka</b>: Kafka</li> <li>● <b>postgresql</b>: PostgreSQL</li> </ul> |

| Parameter                | Type    | Description                                                                                                                                                                                                              |
|--------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| az_code                  | String  | Code of the AZ where the database is located.                                                                                                                                                                            |
| region                   | String  | Region where the DB instance is located. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance.                                                                                |
| inst_id                  | String  | DB instance ID. This parameter is mandatory when the database is a cloud instance, for example, an RDS instance.                                                                                                         |
| vpc_id                   | String  | ID of the VPC where the database is located.                                                                                                                                                                             |
| subnet_id                | String  | ID of the subnet where the database is located.                                                                                                                                                                          |
| security_group_id        | String  | ID of the security group to which the database belongs.                                                                                                                                                                  |
| project_id               | String  | Project ID of an RDS DB instance.                                                                                                                                                                                        |
| db_name                  | String  | The service name. This parameter is mandatory when the source database is an Oracle database. The database name can be a maximum of 128 characters in length and cannot contain the following special characters: !<>&\" |
| db_password              | String  | Database password.                                                                                                                                                                                                       |
| db_port                  | Integer | Database port. The value is an integer ranging from 1 to 65535.                                                                                                                                                          |
| db_user                  | String  | Database user.                                                                                                                                                                                                           |
| inst_name                | String  | RDS instance name.                                                                                                                                                                                                       |
| ip                       | String  | Database IP address.                                                                                                                                                                                                     |
| mongo_ha_mode            | String  | Mongo HA mode.                                                                                                                                                                                                           |
| safe_mode                | Integer | Running mode of an MRS cluster. Values: <ul style="list-style-type: none"><li>● 0: Normal cluster</li><li>● 1: Security cluster</li></ul>                                                                                |
| ssl_certificate_password | String  | SSL certificate password. The certificate file name extension is .p12.                                                                                                                                                   |
| ssl_certificate_checksum | String  | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database.                                                             |
| ssl_certificate_key      | String  | SSL certificate content, which is encrypted using Base64.                                                                                                                                                                |

| Parameter     | Type    | Description                                                                                                                                                                                                                            |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_name | String  | SSL certificate name.                                                                                                                                                                                                                  |
| ssl_link      | Boolean | Whether SSL is enabled.                                                                                                                                                                                                                |
| topic         | String  | Kafka topic name.                                                                                                                                                                                                                      |
| cluster_mode  | String  | For MongoDB 4.0 or later, if the cluster instance cannot obtain the IP address of the sharded node, set <b>source_endpoint</b> to <b>Sharding4.0+</b> .<br>Default value: <b>Sharding4.0+</b><br>Enumerated value: <b>Sharding4.0+</b> |

**Table 6-152** Data structure description of field **inst\_info**

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type | String | Engine type of a DRS task. Values: <ul style="list-style-type: none"> <li>• <b>mysql</b>: used for migration and synchronization from MySQL to MySQL</li> <li>• <b>mongodb</b>: used for migration from MongoDB to DDS</li> <li>• <b>cloudDataGuard-mysql</b>: used for DR from MySQL to MySQL</li> <li>• <b>gaussdbv5</b>: used for GaussDB synchronization</li> <li>• <b>mysql-to-kafka</b>: used for synchronization from MySQL to Kafka</li> <li>• <b>taurus-to-kafka</b>: used for synchronization from GaussDB(for MySQL) to Kafka</li> <li>• <b>gaussdbv5ha-to-kafka</b>: used for synchronization from GaussDB primary/standby to Kafka</li> <li>• <b>postgresql</b>: used for synchronization from PostgreSQL to PostgreSQL</li> </ul> For details, see <a href="#">Engine Types</a> . |
| inst_type   | String | DB instance type. Value: <b>high</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ip          | String | Private IP address of the replication instance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| public_ip   | String | EIP of the replication instance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| start_time  | String | Scheduled start time of a replication instance task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



| Parameter   | Type    | Description                                                                                                                   |
|-------------|---------|-------------------------------------------------------------------------------------------------------------------------------|
| status      | String  | Replication instance status. Values: <ul style="list-style-type: none"><li>• <b>active</b></li><li>• <b>deleted</b></li></ul> |
| volume_size | Integer | Storage space of a replication instance.                                                                                      |

**Table 6-153** Data structure description of field **speed\_limit**

| Parameter | Type    | Description                   |
|-----------|---------|-------------------------------|
| begin     | String  | Start time of flow control.   |
| end       | String  | End time of flow control.     |
| is_utc    | Boolean | Whether the UTC time is used. |
| speed     | String  | Flow control                  |

**Table 6-154** Data structure description of field **target\_root\_db**

| Parameter   | Type   | Description     |
|-------------|--------|-----------------|
| db_name     | String | Database name.  |
| db_encoding | String | Encoding format |

**Table 6-155** Data structure description of field **alarm\_notify**

| Parameter     | Type             | Description                                                        |
|---------------|------------------|--------------------------------------------------------------------|
| subscriptions | Array of objects | SMN information.<br>For details, see <a href="#">Table 6-156</a> . |
| topic_name    | String           | Topic name.                                                        |
| delay_time    | Long             | Subscription delay.                                                |
| rto_delay     | Long             | RTO delay.                                                         |
| rpo_delay     | Long             | RPO delay.                                                         |
| alarm_to_user | Boolean          | Whether to notify users of alarms.                                 |

**Table 6-156** Data structure description of field **subscriptions**

| Parameter | Type             | Description                                                                                                                                                               |
|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoints | Array of strings | SMS or email list.                                                                                                                                                        |
| protocol  | String           | Notification methods. <b>sms</b> : SMS; <b>email</b> : Email.<br>Enumerated value: <ul style="list-style-type: none"> <li>• <b>sms</b></li> <li>• <b>email</b></li> </ul> |

**Table 6-157** Data structure description of field **period\_order**

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                          |
|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status        | String  | Order status.                                                                                                                                                                                                                                                                                        |
| order_id      | String  | Order ID.                                                                                                                                                                                                                                                                                            |
| charging_mode | Integer | Billing mode.<br>Values: <ul style="list-style-type: none"> <li>• <b>0</b>: indicates the monthly/yearly billing.</li> <li>• <b>1</b>: indicates the pay-per-use billing.</li> </ul>                                                                                                                 |
| period_type   | Integer | Subscription period type.<br>Values: <ul style="list-style-type: none"> <li>• <b>2</b>: indicates that the service is subscribed by month.</li> <li>• <b>3</b>: indicates that the service is subscribed by year.</li> </ul>                                                                         |
| period_num    | Integer | Number of subscription periods.<br>Values: <ul style="list-style-type: none"> <li>• If <b>period_type</b> is set to <b>2</b> (month), the value ranges from <b>1</b> to <b>9</b>.</li> <li>• If <b>period_type</b> is set to <b>3</b> (year), the value ranges from <b>1</b> to <b>3</b>.</li> </ul> |
| is_auto_renew | Integer | Whether auto renewal is enabled.<br>Values: <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that auto renewal is disabled.</li> <li>• <b>1</b>: indicates that auto renewal is enabled.</li> </ul>                                                                                      |
| eff_time      | String  | Time when the resource takes effect ( time when the resource is created). The value is UTC time in yyyy-MM-ddTHH:mm:ssZ (2016-06-28T00:00:00Z) format.                                                                                                                                               |

| Parameter | Type   | Description                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| exp_time  | String | Time when the resource expires. If the resource is renewed, it indicates the expiration time after the renewal. The value is UTC time in yyyy-MM-ddTHH:mm:ssZ (2016-03-28T00:00:00Z) format. |

**Table 6-158** Data structure description of field **object\_infos**

| Parameter  | Type   | Description                                                                                                                                                                                      |
|------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id         | String | When <b>type</b> is set to <b>database</b> , this parameter indicates the database name. If <b>type</b> is set to <b>table</b> or <b>view</b> , set the field value by referring to the example. |
| parent_id  | String | When <b>type</b> is set to <b>table</b> or <b>view</b> , this parameter indicates the database name.                                                                                             |
| type       | String | Type. Values: <ul style="list-style-type: none"> <li>● <b>database</b></li> <li>● <b>table</b></li> <li>● <b>schema</b></li> <li>● <b>view</b></li> </ul>                                        |
| name       | String | Database object name, including the database name, table name, and view name.                                                                                                                    |
| alias_name | String | Alias, which is the new mapped name.                                                                                                                                                             |

**Table 6-159** Data structure description of field **data\_transformation**

| Parameter         | Type             | Description                                                                                                                                                        |
|-------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| total_count       | Long             | Total number of data filtering criteria.                                                                                                                           |
| filter_conditions | Array of objects | Data filtering configuration information. Constraints: A maximum of 10,000 data filtering criteria can be returned. For details, see <a href="#">Table 6-160</a> . |

**Table 6-160** Data structure description of field **filter\_conditions**

| Parameter                        | Type             | Description                                                                                  |
|----------------------------------|------------------|----------------------------------------------------------------------------------------------|
| transformation_info              | Object           | Common configuration for data filtering.<br>For details, see <a href="#">Table 6-162</a> .   |
| config_transformation            | Object           | Advanced configuration for data filtering.<br>For details, see <a href="#">Table 6-163</a> . |
| data_transformation_object_infos | Array of objects | Data filtering object information.<br>For details, see <a href="#">Table 6-161</a> .         |

**Table 6-161** Data structure description of field **data\_transformation\_object\_infos**

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                     |
|--------------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id                       | No        | String | Database object, database table name, and processing type. For example, the format is <b>db1-**-tb1-**-***conditionFilter--</b> .                                                                                                                                                                                               |
| data_transformation_type | No        | String | <ul style="list-style-type: none"> <li>The processing rule value is <b>contentConditionalFilter</b>.</li> <li>The configuration rule value is <b>configConditionalFilter</b>.<br/>Values: <ul style="list-style-type: none"> <li><b>contentConditionalFilter</b></li> <li><b>configConditionalFilter</b></li> </ul> </li> </ul> |
| schema_name              | No        | String | Name of the schema for data processing.                                                                                                                                                                                                                                                                                         |
| table_name               | No        | String | Name of the table for data processing.                                                                                                                                                                                                                                                                                          |

**Table 6-162** Data structure description of field **transformation\_info**

| Parameter           | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| transformation_type | Yes       | String | <ul style="list-style-type: none"> <li>The processing rule value is <b>contentConditionalFilter</b>.</li> <li>The configuration rule value is <b>configConditionalFilter</b>.<br/>Values: <ul style="list-style-type: none"> <li><b>contentConditionalFilter</b></li> <li><b>configConditionalFilter</b></li> </ul> </li> </ul> |
| value               | Yes       | String | Filter criteria. The processing rule value is a SQL statement, and the configuration rule value is <b>config</b> . The value contains a maximum of 256 characters.                                                                                                                                                              |

**Table 6-163** Data structure description of field **config\_transformation**

| Parameter         | Mandatory | Type   | Description                                                                                                                                               |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_table_name     | Yes       | String | <i>Database-name.Table-name</i> , for example, <b>lxl_test1.test_1</b> , where <b>lxl_test1</b> is the database name and <b>test_1</b> is the table name. |
| db_name           | Yes       | String | Database name. The value contains a maximum of 256 characters.                                                                                            |
| table_name        | Yes       | String | Table name. The value contains a maximum of 256 characters.                                                                                               |
| col_names         | Yes       | String | Column name. The value contains a maximum of 256 characters.                                                                                              |
| prim_key_or_index | Yes       | String | Primary key or unique index. The value contains a maximum of 256 characters.                                                                              |
| indexs            | Yes       | String | Index that requires optimization. The value contains a maximum of 256 characters.                                                                         |

| Parameter | Mandatory | Type   | Description                                                         |
|-----------|-----------|--------|---------------------------------------------------------------------|
| values    | Yes       | String | Filtering criteria. The value contains a maximum of 256 characters. |

**Table 6-164** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| key       | Yes       | String | Tag key.    |
| value     | Yes       | String | Tag value.  |

**Table 6-165** Data structure description of field **public\_ip\_list**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | ID of a specified EIP.                                                                                                                                                                                                                                                                                                                                                       |
| public_ip | String | EIP.                                                                                                                                                                                                                                                                                                                                                                         |
| type      | String | Type of a task with an EIP bound. <ul style="list-style-type: none"> <li>In a primary/standby task, <b>master</b> indicates the primary task, and <b>slave</b> indicates the standby task.</li> <li>In other cases, the value is fixed to <b>master</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>master</b></li> <li><b>slave</b></li> </ul> |

**Table 6-166** Data structure description of field **children**

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| id        | String | Subtask ID.   |
| name      | String | Subtask name. |

## Example Request

Request for querying task details:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-detail
```

```
{
 "jobs" : ["24834eb6-be30-464e-a299-f7aa730jb101", "140b5236-88ad-43c8-811c-1268453jb101"],
 "page_req" : {
```

```
"cur_page" : 1,
"per_page" : 10
}
}
```

## Example Response

Status code: 200

OK

```
{
 "count" : 2,
 "results" : [{
 "id" : "24834eb6-be30-464e-a299-f7aa730jb101",
 "name" : "DRS-3999-lws",
 "status" : "STARTJOBING",
 "description" : "",
 "create_time" : "1608519469412",
 "task_type" : "FULL_INCR_TRANS",
 "source_endpoint" : {
 "ip" : "172.22.74.56",
 "region" : "cn-xianhz-1",
 "db_type" : "mysql",
 "db_port" : 3306,
 "ssl_link" : false,
 "project_id" : "054ba152d480d55b2f5dc0069e7ddef0",
 "db_user" : "root"
 },
 "target_endpoint" : {
 "ip" : "172.21.176.219",
 "region" : "cn-xianhz-1",
 "db_type" : "mysql",
 "db_port" : 3306,
 "ssl_link" : false,
 "inst_id" : "3ef57dbcc8db478a9e346d26ef2575bfin01",
 "project_id" : "054ba152d480d55b2f5dc0069e7ddef0",
 "inst_name" : "rds-lws-target",
 "db_user" : "root",
 "vpc_id" : "0ff8df7b-f0e9-4b16-ac16-1db3dacb69e4",
 "subnet_id" : "f857d371-2f03-4622-85f6-2b7d42d0d82c"
 },
 "inst_info" : {
 "ip" : "172.16.213.101",
 "inst_type" : "high",
 "engine_type" : "mysql",
 "volume_size" : 100,
 "public_ip" : "10.154.219.202",
 "start_time" : "0"
 },
 "actual_start_time" : "1608520069393",
 "update_time" : "1608520068979",
 "job_direction" : "up",
 "db_use_type" : "migration",
 "need_restart" : false,
 "is_target_readonly" : true,
 "speed_limit" : [],
 "schema_type" : "Tungsten",
 "object_switch" : true,
 "replace_definer" : true,
 "migrate_user" : false,
 "az_code" : "az2xahz",
 "vpc_id" : "0ff8df7b-f0e9-4b16-ac16-1db3dacb69e4",
 "subnet_id" : "f857d371-2f03-4622-85f6-2b7d42d0d82c",
 "security_group_id" : "d90c971b-4b9d-402c-9c59-5c239389b8dd",
 "support_ip_v6" : false,
 "original_job_direction" : "up"
 "object_infos":{{
 "id":"test",
```

```
"type": "database",
"name": "test",
"select": "true"
},{
"id": "test-*.table01",
"type": "table",
"name": "table01",
"select": "true",
"parent_id": "test"
}]
}, {
"id": "140b5236-88ad-43c8-811c-1268453jb101",
"name": "DRS-0042-linxiaolu",
"status": "CONFIGURATION",
"description": "",
"create_time": "1608366204171",
"task_type": "FULL_INCR_TRANS",
"source_endpoint": {
"ip": "192.168.0.27",
"region": "cn-xianhz-1",
"db_type": "mysql",
"db_port": 3306,
"ssl_link": false,
"project_id": "054ba152d480d55b2f5dc0069e7ddef0",
"db_user": "root"
},
"target_endpoint": {
"ip": "192.168.0.131",
"region": "cn-xianhz-1",
"db_type": "mysql",
"db_port": 3306,
"ssl_link": false,
"inst_id": "e05a3679efe241d8b5dee80b17c1a863in01",
"project_id": "054ba152d480d55b2f5dc0069e7ddef0",
"inst_name": "rds-1417-lxl",
"db_user": "root",
"vpc_id": "65f0391c-0582-44a6-aa50-248f97ed82e1",
"subnet_id": "352ad828-3467-4f03-987a-c55a5a9dd417"
},
"inst_info": {
"ip": "192.168.0.229",
"status": "ACTIVE",
"inst_type": "high",
"engine_type": "mysql",
"volume_size": 100,
"public_ip": "10.154.219.72",
"start_time": "0"
},
"actual_start_time": "1608369232412",
"full_transfer_complete_time": "1608369510202",
"update_time": "1608517066434",
"job_direction": "up",
"db_use_type": "migration",
"need_restart": false,
"is_target_readonly": true,
"speed_limit": [],
"schema_type": "Tungsten",
"object_switch": false,
"replace_definer": true,
"migrate_user": false,
"tags": [{
"key1": "value1",
"key2": "value2"
}],
"az_code": "az2xahz",
"vpc_id": "65f0391c-0582-44a6-aa50-248f97ed82e1",
"subnet_id": "352ad828-3467-4f03-987a-c55a5a9dd417",
"security_group_id": "d90c971b-4b9d-402c-9c59-5c239389b8dd",
"support_ip_v6": false,
```



```

"original_job_direction": "up"
"object_infos": [{
 "id": "test2",
 "type": "database",
 "name": "test2",
 "select": "true",
}, {
 "id": "test2-**-table02",
 "type": "table",
 "name": "table02",
 "select": "true",
 "parent_id": "test2"
}]
}, {
 "data_transformation": {
 "total_count": 2,
 "filter_conditions": [
 {
 "data_transformation_object_infos": [
 {
 "id": "test02-**-table02-**-conditionFilter-",
 "db_name": "test02",
 "table_name": "table02",
 "data_transformation_type": "contentConditionalFilter"
 }
],
 "transformation_info": {
 "value": "id1<1",
 "transformation_type": "contentConditionalFilter"
 }
 }
],
 {
 "data_transformation_object_infos": [
 {
 "id": "test02-**-table01-**-configConditionFilter-",
 "db_name": "test02",
 "table_name": "table01",
 "data_transformation_type": "configConditionalFilter"
 }
],
 "transformation_info": {
 "value": "config",
 "transformation_type": "configConditionalFilter"
 },
 "config_transformation": {
 "indexes": "id",
 "values": "id <= 6",
 "db_table_name": "test02.table01",
 "db_name": "test02",
 "table_name": "table01",
 "col_names": "id",
 "prim_key_or_index": "id"
 }
 }
]
}
}

```

### Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 6.1.21 Querying Task Statuses in Batches

### Function

This API is used to query task statuses in batches by task ID.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### URI

POST /v3/{project\_id}/jobs/batch-status

**Table 6-167** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

### Request Parameters

**Table 6-168** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                   |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                         |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

**Table 6-169** Request body parameters

| Parameter | Mandatory | Type             | Description                                                               |
|-----------|-----------|------------------|---------------------------------------------------------------------------|
| jobs      | Yes       | Array of strings | Querying task details in batches                                          |
| page_req  | No        | Object           | Pagination information.<br>For details, see <a href="#">Table 6-170</a> . |

**Table 6-170** Data structure description of field **page\_req**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                       |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cur_page  | No        | Integer | Current page number, which cannot exceed the maximum number of pages. (Number of pages = Number of transferred job IDs/Number of tasks on each page) <ul style="list-style-type: none"><li>• Minimum value: <b>1</b>.</li><li>• Default value: <b>1</b></li></ul> |
| per_page  | No        | Integer | Number of items on each page. If this parameter is set to <b>0</b> , all items are obtained. <ul style="list-style-type: none"><li>• Minimum value: <b>0</b></li><li>• Maximum value: <b>100</b></li><li>• Default value: <b>5</b></li></ul>                      |

## Response Parameters

Status code: 200

**Table 6-171** Response body parameters

| Parameter | Type             | Description                                                               |
|-----------|------------------|---------------------------------------------------------------------------|
| results   | Array of objects | Task status information<br>For details, see <a href="#">Table 6-172</a> . |
| count     | Integer          | Number of returned tasks.                                                 |

**Table 6-172** Data structure description of field **results**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | Task ID.    |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | <p>Task status.</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b>: The task is being created.</li> <li>● <b>CREATE_FAILED</b>: The task fails to be created.</li> <li>● <b>CONFIGURATION</b>: The task is being configured.</li> <li>● <b>STARTJOBING</b>: The task is being started.</li> <li>● <b>WAITING_FOR_START</b>: The task is waiting to be started.</li> <li>● <b>START_JOB_FAILED</b>: The task fails to be started.</li> <li>● <b>PAUSING</b>: The task is paused.</li> <li>● <b>FULL_TRANSFER_STARTED</b>: Full migration or synchronization starts. Initialization is in progress in the DR scenario.</li> <li>● <b>FULL_TRANSFER_FAILED</b>: Full migration or synchronization fails. Initialization fails in the DR scenario.</li> <li>● <b>FULL_TRANSFER_COMPLETE</b>: Full migration or synchronization is complete. Initialization is complete in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_STARTED</b>: Incremental migration or synchronization starts. The DR task is in progress.</li> <li>● <b>INCRE_TRANSFER_FAILED</b>: Incremental migration or synchronization fails. A DR exception occurs.</li> <li>● <b>RELEASE_RESOURCE_STARTED</b>: The task is being stopped.</li> <li>● <b>RELEASE_RESOURCE_FAILED</b>: The task fails to be stopped.</li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b>: The task is stopped.</li> <li>● <b>REBUILD_NODE_STARTED</b>: The task is being recovered.</li> <li>● <b>REBUILD_NODE_FAILED</b>: The task fails to be recovered.</li> <li>● <b>CHANGE_JOB_STARTED</b>: The task is being changed.</li> <li>● <b>CHANGE_JOB_FAILED</b>: The task fails to be changed.</li> <li>● <b>DELETED</b>: The task is deleted.</li> <li>● <b>CHILD_TRANSFER_STARTING</b>: The subtask is being started.</li> </ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"> <li>● <b>CHILD_TRANSFER_STARTED</b>: The subtask is being migrated.</li> <li>● <b>CHILD_TRANSFER_COMPLETE</b>: The subtask migration is complete.</li> <li>● <b>CHILD_TRANSFER_FAILED</b>: The subtask fails to be migrated.</li> <li>● <b>RELEASE_CHILD_TRANSFER_STARTED</b>: The subtask is being stopped.</li> <li>● <b>RELEASE_CHILD_TRANSFER_COMPLETE</b>: The subtask is stopped.</li> <li>● <b>NODE_UPGRADE_START</b>: The upgrade starts.</li> <li>● <b>NODE_UPGRADE_COMPLETE</b>: The upgrade is complete.</li> <li>● <b>NODE_UPGRADE_FAILED</b>: The upgrade fails.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>CONFIGURATION</b></li> <li>● <b>STARTJOBING</b></li> <li>● <b>WAITING_FOR_START</b></li> <li>● <b>START_JOB_FAILED</b></li> <li>● <b>PAUSING</b></li> <li>● <b>FULL_TRANSFER_STARTED</b></li> <li>● <b>FULL_TRANSFER_FAILED</b></li> <li>● <b>FULL_TRANSFER_COMPLETE</b></li> <li>● <b>INCRE_TRANSFER_STARTED</b></li> <li>● <b>INCRE_TRANSFER_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_STARTED</b></li> <li>● <b>RELEASE_RESOURCE_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b></li> <li>● <b>REBUILD_NODE_STARTED</b></li> <li>● <b>REBUILD_NODE_FAILED</b></li> <li>● <b>CHANGE_JOB_STARTED</b></li> <li>● <b>CHANGE_JOB_FAILED</b></li> <li>● <b>DELETED</b></li> <li>● <b>CHILD_TRANSFER_STARTING</b></li> <li>● <b>CHILD_TRANSFER_STARTED</b></li> <li>● <b>CHILD_TRANSFER_COMPLETE</b></li> <li>● <b>CHILD_TRANSFER_FAILED</b></li> </ul> |

| Parameter     | Type   | Description                                                                                                                                                                                                                 |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |        | <ul style="list-style-type: none"> <li>● RELEASE_CHILD_TRANSFER_STARTED</li> <li>● RELEASE_CHILD_TRANSFER_COMPLETE</li> <li>● NODE_UPGRADE_START</li> <li>● NODE_UPGRADE_COMPLETE</li> <li>● NODE_UPGRADE_FAILED</li> </ul> |
| error_code    | String | Error code.                                                                                                                                                                                                                 |
| error_message | String | Error message.                                                                                                                                                                                                              |

## Example Request

Example of querying task statuses in batches:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-status
{
 "jobs": ["9a470239-2308-4bb5-a6bc-1040402fjb21", "dc67695a-ee3e-49b8-a022-a099bd81jb21"],
 "page_req": {
 "cur_page": 1,
 "per_page": 10
 }
}
```

## Example Response

**Status code: 200**

OK

```
{
 "results": [{
 "id": "9a470239-2308-4bb5-a6bc-1040402fjb21",
 "status": "INCRE_TRANSFER_STARTED"
 }, {
 "id": "dc67695a-ee3e-49b8-a022-a099bd81jb21",
 "status": "INCRE_TRANSFER_FAILED"
 }],
 "count": 2
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 6.1.22 Configuring Exception Notifications

### Function

- This API is used to set alarm information in batches. This parameter cannot be set for stopped tasks.
- You can select an existing SMN topic or manually enter a mobile number or email address.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### URI

POST /v3/{project\_id}/jobs/batch-set-smn

**Table 6-173** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

### Request Parameters

**Table 6-174** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                       |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                                     |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |



| Parameter    | Mandatory | Type   | Description                                                                                |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | Content type, which is application/json.<br>The default value is <b>application/json</b> . |

**Table 6-175** Request body parameters

| Parameter         | Mandatory | Type             | Description                                                                            |
|-------------------|-----------|------------------|----------------------------------------------------------------------------------------|
| jobs              | Yes       | Array of objects | Task information.<br>For details, see <a href="#">Table 6-176</a> .                    |
| alarm_notify_info | Yes       | Object           | Notification method and information.<br>For details, see <a href="#">Table 6-177</a> . |

**Table 6-176** Data structure description of field **jobs**

| Parameter | Mandatory | Type   | Description  |
|-----------|-----------|--------|--------------|
| job_id    | Yes       | String | Task ID.     |
| status    | Yes       | String | Task status. |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type | Yes       | String | <p>Engine type of a DRS task. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>mysql</b>: used for migration and synchronization from MySQL to MySQL</li> <li>• <b>mongodb</b>: used for migration from MongoDB to DDS</li> <li>• <b>cloudDataGuard-mysql</b>: used for DR from MySQL to MySQL</li> <li>• <b>gaussdbv5</b>: used for GaussDB synchronization</li> <li>• <b>mysql-to-kafka</b>: used for synchronization from MySQL to Kafka</li> <li>• <b>taurus-to-kafka</b>: used for synchronization from GaussDB(for MySQL) to Kafka</li> <li>• <b>gaussdbv5ha-to-kafka</b>: used for synchronization from GaussDB primary/standby to Kafka</li> <li>• <b>postgresql</b>: used for synchronization from PostgreSQL to PostgreSQL</li> </ul> <p>For details, see <a href="#">Engine Types</a>.</p> |

**Table 6-177** Data structure description of field **alarm\_notify\_info**

| Parameter     | Mandatory | Type             | Description                                                                                                                      |
|---------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------|
| subscriptions | No        | Array of objects | <p>Entered when the mobile number or email address is manually entered.</p> <p>For details, see <a href="#">Table 6-178</a>.</p> |
| topic_urn     | No        | String           | Topic resource ID.                                                                                                               |
| delay_time    | No        | Long             | Subscription delay.                                                                                                              |
| rto_delay     | No        | Long             | RTO delay.                                                                                                                       |
| rpo_delay     | No        | Long             | RPO delay.                                                                                                                       |

| Parameter     | Mandatory | Type    | Description                                                                                                         |
|---------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------|
| alarm_to_user | No        | Boolean | Whether to notify users of abnormal alarms. If this parameter is not specified, the default value is <b>false</b> . |

**Table 6-178** Data structure description of field **subscriptions**

| Parameter | Mandatory | Type             | Description                                                                                                                                                                |
|-----------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoints | No        | Array of strings | SMS or email list.                                                                                                                                                         |
| protocol  | No        | String           | Notification methods. <b>sms</b> : SMS; <b>email</b> : Email.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>sms</b></li> <li>• <b>email</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 6-179** Response body parameters

| Parameter | Type             | Description                                                                        |
|-----------|------------------|------------------------------------------------------------------------------------|
| results   | Array of objects | Response body for inputting SMN.<br>For details, see <a href="#">Table 6-180</a> . |
| count     | Integer          | Total number of input SMNs.                                                        |

**Table 6-180** Data structure description of field **results**

| Parameter  | Type   | Description    |
|------------|--------|----------------|
| id         | String | Task ID.       |
| status     | String | Task status.   |
| error_code | String | Error code.    |
| error_msg  | String | Error message. |

## Example Request

- Associating an existing SMN topic with a MySQL task that is being configuring

`https://{endpoint}/v3/0ac6eb2c8000d2ee2fd9c006dededbe6/jobs/batch-set-smn`

```
{
 "jobs": [{
 "job_id": "c7296a3b-0d9f-424c-8d74-816ca62jb2a2",
 "status": "CONFIGURATION",
 "engine_type": "mysql"
 }],
 "alarm_notify_info": {
 "topic_urn": "urn:smn:cn-north-7:04f9aca88c00d3202fd4c01ed679daf0:drs-zw",
 "delay_time": 1200
 }
}
```

- Manually entering the mobile number and email address for an incremental task

`https://{endpoint}/v3/0ac6eb2c8000d2ee2fd9c006dededbe6/jobs/batch-set-smn`

```
{
 "jobs": [{
 "job_id": "2b36da5c-44a7-41af-8889-247b14djb2a2",
 "status": "INCRE_TRANSFER_STARTED",
 "engine_type": "oracle-to-dws"
 }],
 "alarm_notify_info": {
 "subscriptions": [{
 "protocol": "sms",
 "endpoints": ["12345678910"]
 }, {
 "protocol": "email",
 "endpoints": ["123456@abc.com"]
 }],
 "delay_time": 100
 }
}
```

## Example Response

**Status code: 200**

OK

```
{
 "count": 1,
 "results": [{
 "id": "ed3723ca-d34a-42b0-9829-0baef12jb20b",
 "status": "success"
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 6.1.23 Querying Available Node Specifications

### Function

This API is used to query available node specifications.

### URI

GET /v3/{project\_id}/node-type

**Table 6-181** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

**Table 6-182** Query parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                              |
|-------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type | Yes       | String | Engine type.                                                                                                                                                                                                                                                                                                                                                             |
| db_use_type | Yes       | String | Migration scenario. <ul style="list-style-type: none"><li>• <b>migration</b>: real-time migration.</li><li>• <b>sync</b>: real-time synchronization.</li><li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li></ul> Enumerated values: <ul style="list-style-type: none"><li>• <b>migration</b></li><li>• <b>sync</b></li><li>• <b>cloudDataGuard</b></li></ul> |

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                    |
|---------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_direction       | Yes       | String  | Migration direction. The value can be <b>up</b> (to the cloud), <b>down</b> (out of the cloud), or <b>non-dbs</b> (self-built databases).<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>up</b></li> <li>• <b>down</b></li> <li>• <b>non-dbs</b></li> </ul> |
| is_use_sellout_info | No        | Boolean | Whether to check if resources are sold out.<br>Default value: <b>false</b>                                                                                                                                                                                                     |
| is_multi_write      | No        | Boolean | Whether dual-active disaster recovery is used.<br>Default value: <b>false</b>                                                                                                                                                                                                  |

## Request Parameters

**Table 6-183** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                          |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                                        |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 6-184** Response body parameters

| Parameter  | Type             | Description                                                                |
|------------|------------------|----------------------------------------------------------------------------|
| node_types | Array of objects | Node specification list.<br>For details, see <a href="#">Table 6-185</a> . |

**Table 6-185** Data structure description of field **node\_types**

| Parameter  | Type    | Description                          |
|------------|---------|--------------------------------------|
| node_type  | String  | Specifications.                      |
| is_sellout | Boolean | Whether specifications are sold out. |

## Example Request

Querying available node specifications

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/node_type?
db_use_type=sync&engine_type=mysql&job_direction=up&is_multi_write=false&is_use_sellout_info=true
```

## Example Response

**Status code: 200**

OK

```
{
 "node_types": [{
 "is_sellout": false,
 "node_type": "micro"
 }, {
 "is_sellout": false,
 "node_type": "small"
 }, {
 "is_sellout": false,
 "node_type": "medium"
 }, {
 "is_sellout": false,
 "node_type": "high"
 }, {
 "is_sellout": false,
 "node_type": "xlarge"
 }
]
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.M00202",
 "error_msg": "The value of job_direction is invalid."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

# 6.2 Real-Time Migration Management

## 6.2.1 Updating Migrated User Information in Batches

### Function

This API is used to set the users and roles to be migrated in batches.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### Constraints

This API is supported only in migration scenarios and PostgreSQL synchronization.

### URI

PUT /v3/{project\_id}/jobs/batch-update-user

**Table 6-186** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |



## Request Parameters

**Table 6-187** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                              |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                      |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                            |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 6-188** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                        |
|-----------|-----------|------------------|----------------------------------------------------------------------------------------------------|
| jobs      | Yes       | Array of objects | Requests for updating migrated users in batches.<br>For details, see <a href="#">Table 6-189</a> . |

**Table 6-189** Data structure description of field **jobs**

| Parameter       | Mandatory | Type             | Description                                                                                                                           |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| job_id          | Yes       | String           | Task ID.                                                                                                                              |
| password        | No        | String           | Global password.                                                                                                                      |
| list            | No        | Array of objects | User migration information.<br>This parameter is mandatory when a user is migrated.<br>For details, see <a href="#">Table 6-190</a> . |
| user_roles      | No        | Array of objects | Role migration information.<br>This parameter is mandatory when a user is migrated.<br>For details, see <a href="#">Table 6-191</a> . |
| is_set_password | Yes       | Boolean          | Whether to set a password                                                                                                             |

| Parameter                | Mandatory | Type    | Description                                                                                                                                                        |
|--------------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_migrate_user          | Yes       | Boolean | Whether to migrate users.                                                                                                                                          |
| is_sync_object_privilege | No        | Boolean | Whether to synchronize permissions. If this parameter is not specified, the default value is <b>false</b> . This parameter is used for PostgreSQL synchronization. |

**Table 6-190** Data structure description of field list

| Name            | Mandatory | Type             | Description                     |
|-----------------|-----------|------------------|---------------------------------|
| id              | Yes       | String           | User ID.                        |
| account         | Yes       | String           | User.                           |
| comment         | No        | String           | Description.                    |
| is_transfer     | Yes       | Boolean          | Whether migration is supported. |
| privileges      | No        | String           | Permissions.                    |
| password        | No        | String           | Password.                       |
| is_set_password | No        | Boolean          | Whether to reset the password.  |
| roles           | Yes       | Array of strings | Role.                           |
| selected        | Yes       | Boolean          | Whether to select.              |

**Table 6-191** Data structure description of field user\_roles

| Name           | Mandatory | Type             | Description                     |
|----------------|-----------|------------------|---------------------------------|
| role           | Yes       | String           | Role.                           |
| comment        | No        | String           | Description.                    |
| is_transfer    | Yes       | Boolean          | Whether migration is supported. |
| privileges     | Yes       | String           | Permissions.                    |
| inherits_roles | No        | Array of strings | Inherited roles.                |

| Name     | Mandatory | Type    | Description                                                                                |
|----------|-----------|---------|--------------------------------------------------------------------------------------------|
| selected | No        | Boolean | Whether to select. If this parameter is left blank, migration is not performed by default. |

## Response Parameters

Status code: 200

**Table 6-192** Response body parameters

| Parameter  | Type             | Description                                                                 |
|------------|------------------|-----------------------------------------------------------------------------|
| all_counts | Integer          | Total number.                                                               |
| results    | Array of objects | Migrate user information.<br>For details, see <a href="#">Table 6-193</a> . |

**Table 6-193** Data structure description of field **results**

| Parameter          | Type             | Description                                                       |
|--------------------|------------------|-------------------------------------------------------------------|
| job_id             | String           | Task ID.                                                          |
| is_global_password | String           | Whether to use the global password.                               |
| message            | String           | Error code.                                                       |
| user_list          | Array of objects | User list data.<br>For details, see <a href="#">Table 6-194</a> . |
| roles_list         | Array of objects | Role list data.<br>For details, see <a href="#">Table 6-195</a> . |
| is_success         | Boolean          | Whether the request is successful.                                |

**Table 6-194** Data structure description of field **user\_list**

| Parameter | Type   | Description  |
|-----------|--------|--------------|
| id        | String | Account ID.  |
| account   | String | Account.     |
| comment   | String | Description. |

| Parameter         | Type             | Description                                                                |
|-------------------|------------------|----------------------------------------------------------------------------|
| is_transfer       | Boolean          | Whether to migrate.                                                        |
| privileges        | Array of strings | Permissions.                                                               |
| password          | String           | Password.                                                                  |
| roles             | Array of strings | Role of the user.                                                          |
| selected          | Boolean          | Whether to select.                                                         |
| no_privileges     | String           | User permissions cannot be synchronized.                                   |
| parent_account    | String           | Parent user                                                                |
| no_parent_account | String           | The parent user with the parent-child relationship cannot be synchronized. |

**Table 6-195** Data structure description of field **roles\_list**

| Parameter      | Type             | Description         |
|----------------|------------------|---------------------|
| role           | String           | Role.               |
| comment        | String           | Description.        |
| is_transfer    | Boolean          | Whether to migrate. |
| privileges     | String           | Permissions.        |
| inherits_roles | Array of strings | Inherited role.     |
| selected       | Boolean          | Whether to select.  |

## Example Request

- Setting users to be migrated for a specified task  
<https://{{endpoint}}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-update-user>

```
{
 "jobs": [{
 "is_migrate_user": true,
 "is_set_password": false,
 "job_id": "36c368d7-c03f-46e1-839a-b5c5bddjb105",
 "list": [{
 "account": "admin.testuser2",
 "comment": "",
 "id": "admin.testuser2",
 "is_set_password": true,
 "is_transfer": true,
 "password": null,
 "privileges": null,
 "roles": ["admin.clusterAdmin"],
```

```

 "selected": true
 },
 "password": "",
 "user_roles": [{
 "comment": "",
 "inherits_roles": [
 "admin.roletest1",
 "admin.roletest3",
 "fastunit.roletest1"
],
 "is_transfer": true,
 "privileges": "[{u'resource': {u'cluster': True}, u'actions': [u'addShard']}, {u'resource': {u'db': u'fastunit', u'collection': u'coll'}, u'actions': [u'find', u'insert', u'remove', u'update']}, {u'resource': {u'db': u'mgo', u'collection': u'mycollection3'}, u'actions': [u'insert', u'remove', u'update']}, {u'resource': {u'db': u'', u'collection': u''}, u'actions': [u'find']}, {u'resource': {u'db': u'admin', u'collection': u''}, u'actions': [u'find']}]",
 "role": "admin.roletest4",
 "selected": true
 }
]
}

```

- Setting users that do not need to be migrated for a specified task  
<https://{endpoint}/v3/0549a6a31000d4e82fd1c00c3d6f2d76/jobs/batch-update-user>

```

{
 "jobs": [{
 "is_migrate_user" : false,
 "is_set_password" : false,
 "job_id" : "a281f62f-4631-45d6-a2d3-679a9f4jb105"
 }]
}

```

## Example Response

**Status code: 200**

OK

```

{
 "all_counts" : 1,
 "results": [{
 "job_id" : "71604be1-f441-42f1-a09f-c5a52f0djb15",
 "is_success" : true
 }]
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 6.2.2 Obtaining Migration Users of the Source Database

### Function

This API is used to query the user information of the source database.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### Constraints

This parameter is available only in the migration scenario and PostgreSQL synchronization.

### URI

GET /v3/{project\_id}/jobs/{job\_id}/get-src-user

**Table 6-196** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| job_id     | Yes       | String | Task ID.                                                                                                                           |
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

### Request Parameters

**Table 6-197** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                         |
|--------------|-----------|--------|---------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                       |

| Parameter  | Mandatory | Type   | Description                                                                                                                                           |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

## Response Parameters

Status code: 200

**Table 6-198** Response body parameters

| Parameter          | Type             | Description                                                       |
|--------------------|------------------|-------------------------------------------------------------------|
| job_id             | String           | Task ID.                                                          |
| is_global_password | String           | Whether to use the global password.                               |
| message            | String           | Error code.                                                       |
| user_list          | Array of objects | User list data.<br>For details, see <a href="#">Table 6-199</a> . |
| roles_list         | Array of objects | Role list data.<br>For details, see <a href="#">Table 6-200</a> . |
| is_success         | Boolean          | Whether the request is successful.                                |

**Table 6-199** Data structure description of field **user\_list**

| Parameter   | Type             | Description                     |
|-------------|------------------|---------------------------------|
| id          | String           | Account ID.                     |
| account     | String           | Account.                        |
| comment     | String           | Description.                    |
| is_transfer | Boolean          | Whether migration is supported. |
| privileges  | String           | Permissions.                    |
| password    | String           | Password.                       |
| roles       | Array of strings | Role of the user.               |
| selected    | Boolean          | Whether to select.              |

| Parameter         | Type   | Description                                                                |
|-------------------|--------|----------------------------------------------------------------------------|
| no_privileges     | String | User permissions cannot be synchronized.                                   |
| parent_account    | String | Parent user                                                                |
| no_parent_account | String | The parent user with the parent-child relationship cannot be synchronized. |

**Table 6-200** Data structure description of field **roles\_list**

| Parameter      | Type             | Description                     |
|----------------|------------------|---------------------------------|
| role           | String           | Role.                           |
| comment        | String           | Description.                    |
| is_transfer    | Boolean          | Whether migration is supported. |
| privileges     | String           | Permissions.                    |
| inherits_roles | Array of strings | Inherited role.                 |
| selected       | Boolean          | Whether to select.              |

## Example Request

```
https://{endpoint}/v3/0549a6a31000d4e82fd1c00c3d6f2d76/jobs/7f3aaf02-b994-4450-b3fb-6314aa9jb105/get-src-user
```

## Example Response

**Status code: 200**

OK

```
{
 "message": "SUCCESS",
 "user_list": [{
 "id": "admin.testuser2",
 "account": "admin.testuser2",
 "comment": "",
 "privileges": null,
 "password": null,
 "roles": ["admin.clusterAdmin"],
 "selected": null,
 "is_transfer": true
 }, {
 "id": "admin.test_inc_admin_mgo",
 "account": "admin.test_inc_admin_mgo",
 "comment": "",
 "privileges": null,
 "password": null,
 "roles": ["mgo.read", "admin.readAnyDatabase", "local.read"],
 "selected": null,
 "is_transfer": true
 }
]
```



```

}, {
 "id": "fastunit.test_full_fastunit_noread",
 "account": "fastunit.test_full_fastunit_noread",
 "comment": "",
 "privileges": null,
 "password": null,
 "roles": ["admin.readAnyDatabase"],
 "selected": null,
 "is_transfer": true
}, {
 "id": "admin.test_full",
 "account": "admin.test_full",
 "comment": "",
 "privileges": null,
 "password": null,
 "roles": ["fastunit.read", "admin.readAnyDatabase"],
 "selected": null,
 "is_transfer": true
}],
"roles_list": [{
 "role": "admin.roletest4",
 "comment": "",
 "privileges": "GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, RELOAD, PROCESS,
REFERENCES, INDEX, ALTER, SHOW DATABASES, CREATE TEMPORARY TABLES, LOCK TABLES, EXECUTE,
REPLICATION SLAVE, REPLICATION CLIENT, CREATE VIEW, SHOW VIEW, CREATE ROUTINE, ALTER
ROUTINE, CREATE USER, EVENT, TRIGGER ON *.* GRANT XA_RECOVER_ADMIN ON *.*",
 "selected": null,
 "is_transfer": true,
 "inherits_roles": ["admin.roletest1", "admin.roletest3", "fastunit.roletest1"]
}]
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

# 6.3 Real-Time Synchronization Management

## 6.3.1 Processing Data in Batches

### Function

This API is used to add rules for data processing.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

## Constraints

- You can call the API for starting a task only after the task is created and database objects are selected. For details, see [Task Creation Process](#).
- Each table has only one verification rule.
- The Oracle source database supports a maximum of 20,000 tables at a time, and the MySQL source database supports a maximum of 10,000 tables at a time.
- The filter criteria do not support the package, function, variable, and constant that are unique to a certain database engine. You must use standardized SQL.

## URI

POST /v3/{project\_id}/jobs/batch-transformation

**Table 6-201** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 6-202** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                   |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                         |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

**Table 6-203** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                             |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------|
| jobs      | Yes       | Array of objects | Requests for adding data processing rules in batches.<br>For details, see <a href="#">Table 6-204</a> . |

**Table 6-204** Data structure description of field **jobs**

| Parameter             | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_id                | No        | String           | Task ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| object_info           | No        | Array of objects | Object information. This parameter is mandatory when a processing rule is generated.<br>For details, see <a href="#">Table 6-205</a> .                                                                                                                                                                                                                                                                                                                                                                                                                    |
| transformation_info   | Yes       | Object           | Processing information.<br>For details, see <a href="#">Table 6-206</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| config_transformation | No        | Object           | <ul style="list-style-type: none"> <li>• Configuration information. If there are multiple associated tables, generate multiple configuration rules. The data that meets the configuration conditions is temporarily stored in the cache and used in the data filtering scenario.</li> <li>• The database name and table name can contain digits, letters, and underscores (_).</li> <li>• Ensure that the column names, primary keys, and indexes are the same as those in the source database.</li> </ul> For details, see <a href="#">Table 6-207</a> . |

**Table 6-205** Data structure description of field **object\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | No        | String | Database name and database table name. For example, the format is <b>lxl_test1-*-*-test_1</b> , where <b>lxl_test1</b> is the database name and <b>test_1</b> is the table name. |
| select    | No        | String | Whether to select advanced configuration. The value is <b>true</b> .                                                                                                             |

**Table 6-206** Data structure description of field **transformation\_info**

| Parameter           | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| transformation_type | Yes       | String | <ul style="list-style-type: none"> <li>The processing rule value is <b>contentConditionalFilter</b>.</li> <li>The configuration rule value is <b>configConditionalFilter</b>.<br/>Values: <ul style="list-style-type: none"> <li><b>contentConditionalFilter</b></li> <li><b>configConditionalFilter</b></li> </ul> </li> </ul> |
| value               | Yes       | String | Filter criteria. The processing rule value is a SQL statement, and the configuration rule value is <b>config</b> . The value contains a maximum of 256 characters.                                                                                                                                                              |

**Table 6-207** Data structure description of field **config\_transformation**

| Parameter     | Mandatory | Type   | Description                                                                                                                                               |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_table_name | Yes       | String | <i>Database-name.Table-name</i> , for example, <b>lxl_test1.test_1</b> , where <b>lxl_test1</b> is the database name and <b>test_1</b> is the table name. |
| db_name       | Yes       | String | Database name. The value contains a maximum of 256 characters.                                                                                            |

| Parameter         | Mandatory | Type   | Description                                                                       |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------|
| table_name        | Yes       | String | Table name The value contains a maximum of 256 characters.                        |
| col_names         | Yes       | String | Column name The value contains a maximum of 256 characters.                       |
| prim_key_or_index | Yes       | String | Primary key or unique index The value contains a maximum of 256 characters.       |
| indexs            | Yes       | String | Index that requires optimization. The value contains a maximum of 256 characters. |
| values            | Yes       | String | Filtering criteria. The value contains a maximum of 256 characters.               |

## Response Parameters

Status code: 200

**Table 6-208** Response body parameters

| Parameter | Type             | Description                                                                            |
|-----------|------------------|----------------------------------------------------------------------------------------|
| results   | Array of objects | Batch data processing response list.<br>For details, see <a href="#">Table 6-209</a> . |
| count     | integer          | Total number.                                                                          |

**Table 6-209** Data structure description of field **results**

| Parameter  | Type   | Description                                                                                                |
|------------|--------|------------------------------------------------------------------------------------------------------------|
| id         | String | Task ID.                                                                                                   |
| status     | String | Status Values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>failed</b></li> </ul> |
| error_code | String | Error code.                                                                                                |
| error_msg  | String | Error message.                                                                                             |

## Example Request

- Generating configuration rules for MySQL synchronization task data  
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-transformation>

```
{
 "jobs": [{
 "job_id": "e894593d-5e0a-4652-af7e-1b0c239jb201",
 "object_info": [],
 "transformation_info": {
 "transformation_type": "configConditionalFilter",
 "value": "config"
 },
 "config_transformation": {
 "col_names": "id,name",
 "db_name": "lxl_test1",
 "db_table_name": "lxl_test1.test_1",
 "indexs": "name",
 "prim_key_or_index": "id",
 "table_name": "test_1",
 "values": "name like '%a%'"
 }
 }
]
```

- Generating processing rules for MySQL synchronization task data, in which the table name is **lxl\_test1.test\_1**, and the filtering condition is **id>5**.  
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-transformation>

```
{
 "jobs": [{
 "job_id": "e894593d-5e0a-4652-af7e-1b0c239jb201",
 "object_info": [{
 "id": "lxl_test1-*-*test_1",
 "select": "true"
 }],
 "transformation_info": {
 "transformation_type": "contentConditionalFilter",
 "value": "id>5"
 }
 }
]
```

## Example Response

Status code: 200

OK

```
{
 "count": 1,
 "results": [{
 "id": "e894593d-5e0a-4652-af7e-1b0c239jb201",
 "status": "success"
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 6.3.2 Configuring Synchronization Policies in Batches

### Function

- This API is used to configure synchronization policies in batches, including conflict policies, DROP DATASE filtering, and object synchronization scope.
- This API is used to configure Kafka synchronization policies.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### Constraints

- This API can be called only after a task is created, the task status is **CONFIGURATION**, the test of connections to the source and destination databases is successful, and the API for modifying the task is successfully called.
- Kafka synchronization policies can be configured for the following data flow scenarios: synchronization from PostgreSQL to Kafka, from Oracle to Kafka, from GaussDB to Kafka, from GaussDB(for MySQL) to Kafka, and from MySQL to Kafka.
- GaussDB(for MySQL)-to-Kafka synchronization and MySQL-to-Kafka synchronization allow you to modify the Kafka policy configuration when the task is in the **INCRE\_TRANSFER\_STARTED** state. After the configuration is modified, you can edit the synchronization objects only when the task status changes to **INCRE\_TRANSFER\_STARTED**.

### URI

POST /v3/{project\_id}/jobs/batch-sync-policy

**Table 6-210** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 6-211** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                              |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                      |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                            |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 6-212** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                                         |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------|
| jobs      | Yes       | Array of objects | List of requests for setting synchronization policies in batches.<br>For details, see <a href="#">Table 6-213</a> . |

**Table 6-213** Data structure description of field **jobs**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                      |
|-------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_id            | Yes       | String | Task ID.                                                                                                                                                                                                                                         |
| conflict_policy   | No        | String | Conflict policy.<br>Values: <ul style="list-style-type: none"> <li>• <b>ignore</b>: Ignore the conflict.</li> <li>• <b>overwrite</b>: Overwrite the existing data with the conflicting data.</li> <li>• <b>stop</b>: Report an error.</li> </ul> |
| filter_ddl_policy | No        | String | DDL filtering policy.<br>Value: <b>drop_database</b>                                                                                                                                                                                             |



| Parameter   | Mandatory | Type    | Description                                                        |
|-------------|-----------|---------|--------------------------------------------------------------------|
| ddl_trans   | No        | Boolean | Whether to synchronize DDL during incremental synchronization.     |
| index_trans | No        | Boolean | Whether to synchronize indexes during incremental synchronization. |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| topic_policy | No        | String | <p>Topic synchronization policy. This parameter is mandatory when destination database is Kafka.</p> <p>Values for synchronization from GaussDB Distributed to Kafka:</p> <ul style="list-style-type: none"> <li>● <b>0</b>: A specified topic</li> <li>● <b>1</b>: Automatically generated using the <i>database_name-schema_name-table_name</i> format</li> <li>● <b>2</b>: Automatically generated based on the database name</li> <li>● <b>3</b>: Automatically generated using the <i>database_name-schema_name</i> format</li> <li>● <b>4</b>: Automatically generated using the <i>database_name-DN_sequence_number</i> format</li> </ul> <p>Values for synchronization from GaussDB Primary/Standby to Kafka and from PostgreSQL to Kafka:</p> <ul style="list-style-type: none"> <li>● <b>0</b>: A specified topic</li> <li>● <b>1</b>: Automatically generated using the <i>database_name-schema_name-table_name</i> format</li> <li>● <b>2</b>: Automatically generated based on the database name</li> <li>● <b>3</b>: Automatically generated using the <i>database_name-schema_name</i> format</li> </ul> <p>Values for synchronization from Oracle to Kafka:</p> <ul style="list-style-type: none"> <li>● <b>0</b>: A specified topic</li> <li>● <b>1</b>: Automatically generated using the <i>schema_name-table_name</i> format</li> <li>● <b>3</b>: Automatically generated based on the schema name</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |        | <p>Values for synchronization from MySQL to Kafka:</p> <ul style="list-style-type: none"> <li>● <b>0</b>: A specified topic</li> <li>● <b>1</b>: Auto-generated topics</li> </ul> <p>Values for synchronization from GaussDB(for MySQL) to Kafka:</p> <ul style="list-style-type: none"> <li>● <b>0</b>: A specified topic</li> <li>● <b>1</b>: Auto-generated topics</li> </ul> |
| topic     | No        | String | Topic name. This parameter is mandatory when <b>topic_policy</b> is set to <b>0</b> . Ensure that the topic exists.                                                                                                                                                                                                                                                              |

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| partition_policy | No        | String | <p>The policy for synchronizing topics to the Kafka partitions. This parameter is mandatory when the destination database is Kafka..</p> <ul style="list-style-type: none"> <li>● <b>0</b>: Partitions are differentiated by the hash values of <i>database_name.schema_name.table_name</i></li> <li>● <b>1</b>: Topics are synchronized to partition 0</li> <li>● <b>2</b>: Partitions are identified by the hash values of the primary key</li> <li>● <b>3</b>: Partitions are differentiated by the hash values of <i>database_name.schema_name</i></li> <li>● <b>4</b>: Partitions are differentiated by the hash values of <i>database_name.DN_sequence_number</i> (This value is available only for synchronization from GaussDB Distributed to Kafka.)</li> <li>● <b>5</b>: Partitions are differentiated by the hash values of non-primary-key columns</li> </ul> <p>When <b>topic_policy</b> is set to <b>0</b>, the value can be <b>0, 1, 2, 3, 4</b>, or <b>5</b>. When <b>topic_policy</b> is set to <b>1</b>, the value can be <b>1, 2</b>, or <b>5</b>. When <b>topic_policy</b> is set to <b>2</b>, the value can be <b>0, 1, 3</b>, or <b>4</b>. When <b>topic_policy</b> is set to <b>3</b>, the value can be <b>0</b> or <b>1</b>. When <b>topic_policy</b> is set to <b>4</b>, the value can be <b>0, 1</b>, or <b>3</b>.</p> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| kafka_data_format | No        | String | <p>Data format delivered to Kafka. Available options:</p> <ul style="list-style-type: none"> <li>• json</li> <li>• avro</li> <li>• json_c</li> </ul> <p>If this parameter is left blank, the default value is <b>json</b>.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• The value can be <b>json</b> and <b>json_c</b> for synchronization from MySQL to Kafka and from GaussDB(for MySQL) to Kafka.</li> <li>• The value can be <b>json</b> and <b>avro</b> for other synchronization scenarios.</li> </ul> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| topic_name_format | No        | String | <p>The topic name format. This parameter is required if <b>topic_policy</b> is set to <b>1</b>, <b>2</b>, or <b>3</b>.</p> <p>Values for synchronization from PostgreSQL to Kafka and synchronization from GaussDB primary/standby to Kafka:</p> <ul style="list-style-type: none"> <li>• If <b>topic_policy</b> is set to <b>1</b>, the topic name supports the database and schema names as variables. Other characters are considered as constants. <b>\$database\$</b> indicates the database name, and <b>\$schema\$</b> indicates the schema name. The default value is <i>\$database\$-\$schema\$</i>.</li> <li>• If <b>topic_policy</b> is set to <b>2</b>, the topic name supports the database name as a variable. Other characters are regarded as constants. If this parameter is left blank, the default value is <b>\$database\$</b>.</li> <li>• If <b>topic_policy</b> is set to <b>3</b>, the topic name supports the names of database, schema, and table as variables. Other characters are considered as constants. <b>\$database\$</b> indicates the database name, <b>\$schema\$</b> indicates the schema name, and <b>\$tablename\$</b> indicates the table name. The default value is <i>\$database\$-\$schema\$-\$tablename\$</i>.</li> </ul> <p>Values for synchronization from Oracle to Kafka:</p> <ul style="list-style-type: none"> <li>• If <b>topic_policy</b> is set to <b>1</b>, the topic name supports the schema and table names as variables. Other characters are considered</li> </ul> |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |           |        | <p>as constants. Replace <code>\$schema\$</code> with the schema name and <code>\$tablename\$</code> with the table name. If this parameter is left blank, the default value is <code>\$schema\$-\$tablename\$</code>.</p> <ul style="list-style-type: none"> <li>If <b>topic_policy</b> is set to <b>3</b>, the topic name supports the schema name as variables. Other characters are considered as constants. Replace <code>\$schema\$</code> with the schema name. If this parameter is left blank, the default value is <code>\$schema\$</code>.</li> </ul> <p>Values for synchronization from MySQL to Kafka and from GaussDB(for MySQL) to Kafka:</p> <ul style="list-style-type: none"> <li>If <b>topic_policy</b> is set to <b>1</b>, the topic name supports the database and table names as variables. Other characters are considered as constants. Replace <b>\$database\$</b> with the database name and <b>\$tablename\$</b> with the table name. If this parameter is left blank, the default value is <code>\$database \$-\$tablename\$</code>.</li> </ul> |
| partitions_num     | No        | String | Number of partitions. The value ranges from 1 to 2147483647. This parameter is mandatory if <b>topic_policy</b> is set to <b>1</b> , <b>2</b> , or <b>3</b> . If this parameter is left blank, the default value is <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| replication_factor | No        | String | Number of replicas. The value ranges from 1 to 32767. This parameter is mandatory if <b>topic_policy</b> is set to <b>1</b> , <b>2</b> , or <b>3</b> . If this parameter is left blank, the default value is <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter                 | Mandatory | Type    | Description                                                                                                                                                             |
|---------------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_fill_materialized_view | No        | Boolean | Whether to fill the materialized view in the PostgreSQL full migration/synchronization phase. If this parameter is not specified, the default value is <b>false</b> .   |
| export_snapshot           | No        | Boolean | Whether to export data in snapshot mode in the PostgreSQL full migration/synchronization phase. If this parameter is not specified, the default value is <b>false</b> . |
| slot_name                 | No        | String  | Replication slot name. This parameter is mandatory for tasks from GaussDB Primary/Standby to Kafka.                                                                     |



| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_and_position | No        | String | <ul style="list-style-type: none"> <li>When MySQL serves as the source database, run <b>show master status</b> to obtain the start point of the source database and set <b>File</b> and <b>Position</b> as prompted. For example, <b>mysql-bin.000277:805</b>, in which the file name can contain only 1 to 60 characters and cannot contain the following special character <code>&lt;&gt;&amp;:'"/\</code>, the file number can contain only 3 to 20 digits, the binlog event position can contain only 1 to 20 digits, and the total length cannot exceed 100 characters. The value is in the format of <b>File_name.file_number:Event_position</b>.</li> <li>When MongoDB serves as the source database, the source database logs are obtained from within the time range of the oplog, starting with the current start position. To check whether the start position is within the oplog time range, run <b>db.getReplicationInfo()</b> for a non-cluster instance, and for a cluster instance, run <b>db.watch([], {startAtOperationTime: Timestamp(xx, xx)})</b>, where <i>xx</i> is the start position you specified. The value is in the format of <b>timestamp:incr</b>. The values of <b>timestamp</b> and <b>incr</b> are integers ranging from 1 to 2,147,483,647.</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| gtid_set  | No        | String | <ul style="list-style-type: none"> <li>This parameter is mandatory for tasks whose source database is MySQL. Run <b>show master status</b> to obtain the start point of the source database and set <b>Executed_Gtid_Set</b> as prompted. (If the source database is MySQL 5.5, synchronization tasks are not supported.)</li> <li>Enter a maximum of 2048 characters. Chinese characters and the following special characters are not allowed: &lt; &gt; &amp; " ' / \\<br/>\\</li> </ul> |
| ddl_topic | No        | String | <p>Topic for storing DDLs. This parameter is mandatory when Kafka is the destination database and <b>ddl_trans</b> is set to <b>true</b>.</p> <p>Value: name of an existing topic in the destination database.</p>                                                                                                                                                                                                                                                                         |

## Response Parameters

Status code: 200

**Table 6-214** Response body parameters

| Parameter | Type             | Description                                                                                                                 |
|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------|
| count     | Integer          | Total number.                                                                                                               |
| results   | Array of objects | List of returned synchronization policies that are configured in batches.<br>For details, see <a href="#">Table 6-215</a> . |

**Table 6-215** Data structure description of field **results**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | Task ID.    |

| Parameter  | Type   | Description                                                                                                                                          |
|------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| status     | String | Status Values: <ul style="list-style-type: none"> <li>● <b>success</b>: The task is successful.</li> <li>● <b>failed</b>: The task fails.</li> </ul> |
| error_code | String | Error code.                                                                                                                                          |
| error_msg  | String | Error message.                                                                                                                                       |

## Example Request

- Configuring synchronization task policies in batches, in which **conflict\_policy** is set to **ignore**, **ddl\_trans** is set to **true**, and **filter\_ddl\_policy** is set to **drop\_database**

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-sync-policy>

```
{
 "jobs": [{
 "conflict_policy": "ignore",
 "ddl_trans": true,
 "filter_ddl_policy": "drop_database",
 "index_trans": true,
 "job_id": "19557d51-1ee6-4507-97a6-8f69164jb201"
 }]
}
```

- Configuring MySQL incremental synchronization task policies in batches:

<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-sync-policy>

```
{
 "jobs": [
 {
 "conflict_policy": "ignore",
 "ddl_trans": true,
 "filter_ddl_policy": "drop_database",
 "index_trans": true,
 "job_id": "19557d51-1ee6-4507-97a6-8f69164jb201",
 "file_and_position": "mysql-bin.000019:197",
 "gtid_set": "e4979f26-4bc3-11ee-b279-fa163ef21d64:1-23"
 }
]
}
```

## Example Response

Status code: 200

OK

```
{
 "results": [{
 "id": "19557d51-1ee6-4507-97a6-8f69164jb201",
 "status": "success"
 }],
 "count": 1
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 6.3.3 Advanced Settings

### Function

This API is used to change the values of tuning parameters.

### URI

PUT /v3/{project\_id}/job/{job\_id}/tuning-params/modify-params

**Table 6-216** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                   |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                           |
| job_id     | Yes       | String | Task ID of a tenant in a region. If the task is a primary/standby task, the parent task ID is used.<br>For details about how to obtain the task ID, see <a href="#">Obtaining a Task ID</a> . |

### Request Parameters

**Table 6-217** Request header parameters

| Parameter    | Mandatory | Type   | Description                                              |
|--------------|-----------|--------|----------------------------------------------------------|
| Content-Type | Yes       | String | The content type. The value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                          |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                                        |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 6-218** Request body parameters

| Parameter     | Mandatory | Type               | Description                                                                                                                                                                |
|---------------|-----------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| full_sync     | No        | Map<String,String> | Names and values of full migration parameters.                                                                                                                             |
| incre_capture | No        | Map<String,String> | Names and values of incremental capture parameters.                                                                                                                        |
| incre_apply   | No        | Map<String,String> | Names and values of incremental replay parameters.                                                                                                                         |
| incre_relay   | No        | Map<String,String> | Names and values of incremental log extraction parameters.<br><b>slotAdvanceInterval</b> : the interval for advancing the logical replication slot of the source database. |
| recovery      | No        | Boolean            | Initialization parameter. The value must be set to <b>true</b> for the first invoking. In other cases, this parameter is not specified.                                    |

## Response Parameters

Status code: 200

**Table 6-219** Response body parameters

| Parameter     | Type             | Description                                                                                     |
|---------------|------------------|-------------------------------------------------------------------------------------------------|
| full_sync     | Array of objects | Full migration tuning parameters.<br>For details, see <a href="#">Table 6-220</a> .             |
| incre_capture | Array of objects | Incremental capture tuning parameters.<br>For details, see <a href="#">Table 6-220</a> .        |
| incre_apply   | Array of objects | Incremental replay tuning parameters.<br>For details, see <a href="#">Table 6-220</a> .         |
| incre_relay   | Array of objects | Incremental log extraction tuning parameters.<br>For details, see <a href="#">Table 6-220</a> . |
| modify_result | String           | Whether the parameter modification is successful.                                               |

**Table 6-220** Data structure description of fields **full\_sync**, **incre\_capture**, **incre\_apply**, and **incre\_relay**

| Parameter    | Type   | Description       |
|--------------|--------|-------------------|
| param_name   | String | Parameter name.   |
| param_value  | String | Parameter value.  |
| availability | String | Available or not. |

## Example Request

- Setting the interval for advancing the logical replication slot of the specified source database for the task from GaussDB primary/standby to Kafka  
<https://{endpoint}/v3/054c06d8aa00d39e2f6cc00176952b8b/job/1e3f710f-4df3-4fc9-8a29-0ec72c5jb2b3/tuning-params/modify-params>

```
{
 "incre_relay" : {
 "slotAdvanceInterval" : "5"
 }
}
```

- Example of initializing advanced parameters  
<https://{endpoint}/v3/054c06d8aa00d39e2f6cc00176952b8b/job/1e3f710f-4df3-4fc9-8a29-0ec72c5jb2b3/tuning-params/modify-params>

```
{
 "recovery" : true
}
```

## Example Response

Status code: 200

OK

```
{
 "full_sync" : [],
 "incr_capture" : [],
 "incr_apply" : [],
 "incr_relay" : [{
 "param_name" : "slotAdvanceInterval",
 "param_value" : "5"
 }],
 "modify_result" : "success"
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

# 6.4 Real-Time Disaster Recovery Management

## 6.4.1 Performing Primary/Standby Switchovers in Batches

### Function

This API is used to perform primary/standby switchovers in batches.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### Constraints

This API only applies to tasks in the **Disaster recovery in progress** or **Disaster recovery failed** status. A switchover can be performed when the DR database can be properly connected. Dual-active DR does not support the switchover.

### URI

POST /v3/{project\_id}/jobs/batch-switchover

**Table 6-221** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 6-222** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                   |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                         |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

**Table 6-223** Request body parameters

| Parameter | Mandatory | Type             | Description                                    |
|-----------|-----------|------------------|------------------------------------------------|
| jobs      | Yes       | Array of strings | IDs of batch primary/standby switchover tasks. |

## Response Parameters

Status code: 202



**Table 6-224** Response body parameters

| Parameter | Type             | Description                                                                                           |
|-----------|------------------|-------------------------------------------------------------------------------------------------------|
| results   | Array of objects | Returned of batch primary/standby switchover tasks.<br>For details, see <a href="#">Table 6-225</a> . |
| count     | Integer          | Total number.                                                                                         |

**Table 6-225** Data structure description of field **results**

| Parameter           | Type    | Description                                                                                                                                                                                                                                                                                                          |
|---------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_id              | String  | Task ID.                                                                                                                                                                                                                                                                                                             |
| updated_at          | String  | Update time, in the format yyyy-MM-dd'T'HH:mm:ss'Z'.                                                                                                                                                                                                                                                                 |
| source_db           | Object  | Source database.<br>For details, see <a href="#">Table 6-226</a> .                                                                                                                                                                                                                                                   |
| target_db           | Object  | Destination database.<br>For details, see <a href="#">Table 6-226</a> .                                                                                                                                                                                                                                              |
| job_direction       | String  | Task direction. Values: <ul style="list-style-type: none"><li>● <b>up</b>: The current cloud is the standby cloud in the DR and to-the-cloud scenarios.</li><li>● <b>down</b>: The current cloud is the active cloud in the DR and out-of-cloud scenarios.</li><li>● <b>non-dbs</b>: self-built databases.</li></ul> |
| is_target_read_only | Boolean | Whether the destination database is read-only.                                                                                                                                                                                                                                                                       |
| error_msg           | String  | Error message                                                                                                                                                                                                                                                                                                        |
| error_code          | String  | Error code                                                                                                                                                                                                                                                                                                           |

**Table 6-226** Data structure description of fields **source\_db** and **target\_db**

| Parameter     | Type   | Description                  |
|---------------|--------|------------------------------|
| id            | String | Database ID.                 |
| obj_id        | String | Object ID                    |
| instance_name | String | Name of the RDS DB instance. |

| Parameter                | Type    | Description                                                                                                    |
|--------------------------|---------|----------------------------------------------------------------------------------------------------------------|
| db_type                  | String  | Database type. Values: <ul style="list-style-type: none"><li>• <b>mysql</b></li><li>• <b>mongodb</b></li></ul> |
| db_user                  | String  | Database user.                                                                                                 |
| db_password              | String  | Database password.                                                                                             |
| manage_ip                | String  | Management IP address.                                                                                         |
| traffic_ip               | String  | Traffic IP address.                                                                                            |
| db_port                  | Integer | Database port.                                                                                                 |
| region                   | String  | Region where the RDS DB instance is located.                                                                   |
| created_at               | String  | Creation date, in the format yyyy-MM-dd'T'HH:mm:ss'Z'.                                                         |
| updated_at               | String  | Modification date, in the format yyyy-MM-dd'T'HH:mm:ss'Z'.                                                     |
| ip                       | String  | Private IP address of the replication instance.                                                                |
| public_ip                | String  | EIP of the replication instance.                                                                               |
| az_code                  | String  | AZ code.                                                                                                       |
| security_group_id        | String  | ID of the security group to which the source database belongs.                                                 |
| subnet_id                | String  | ID of the subnet where the source database is located.                                                         |
| vpc_id                   | String  | ID of the VPC where the source database is located.                                                            |
| volume_size              | Long    | Storage space of a replication instance.                                                                       |
| full_trans_user_pwd      | String  | Ciphertext password of the user for full migration.                                                            |
| increment_trans_user_pwd | String  | Ciphertext password of the incremental migration user.                                                         |
| ssl_link                 | Boolean | Whether SSL is enabled.                                                                                        |
| ssl_cert_key             | String  | SSL certificate content.                                                                                       |
| ssl_cert_name            | String  | SSL certificate name.                                                                                          |
| ssl_cert_checksum        | String  | Checksum value of the SSL certificate content.                                                                 |
| ssl_cert_password        | String  | SSL certificate password, in ciphertext.                                                                       |

| Parameter         | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_version        | String  | Database version.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| mongo_ha_mode     | String  | Mongo HA mode. Values: <ul style="list-style-type: none"><li>● <b>Sharding</b>: cluster.</li><li>● <b>ReplicaSet</b>: replica set.</li><li>● <b>ReplicaSingle</b>: single node.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| project_id        | String  | Project ID of an RDS DB instance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| cluster_mode      | String  | Cluster mode. Values: <ul style="list-style-type: none"><li>● <b>Single</b>: single-node RDS.</li><li>● <b>Ha</b>: primary and standby RDS.</li><li>● <b>GR</b>: RDS Finance Edition.</li><li>● <b>Sharding</b>: MongoDB cluster or DDM mode. The default value is <b>Sharding</b>.</li><li>● <b>ReplicaSet</b>: MongoDB replica set.</li><li>● <b>Replica</b>: RDS read replica.</li><li>● <b>ReplicaSingle</b>: MongoDB single node.</li><li>● <b>Cluster</b>: cluster.</li><li>● <b>Independent</b>: GaussDB independent mode.</li><li>● <b>Combined</b>: GaussDB combined mode.</li><li>● <b>Distributed</b>: GaussDB(for MySQL) distributed.</li></ul> |
| instance_id       | String  | RDS DB instance ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| db_name           | String  | Oracle service name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| topic             | String  | Name of the mrskafka topic.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| safe_mode         | Integer | Whether to enable Kerberos authentication for MRSKafka. Values: <ul style="list-style-type: none"><li>● <b>0</b>: non-security authentication.</li><li>● <b>1</b>: security authentication.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| kerberos_vo       | Object  | Information required for Kerberos authentication.<br>For details, see <a href="#">Table 6-227</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| multi_write_db_id | String  | ID of the multi-write database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**Table 6-227** Data structure description of field **kerberos\_vo**

| Parameter      | Type   | Description              |
|----------------|--------|--------------------------|
| krb5_conf_file | String | krb5 configuration file. |
| key_tab_file   | String | Key file.                |
| domain_name    | String | Domain name.             |
| user_principal | String | Kerberos user object.    |

## Example Request

Performing primary/standby switchovers in batches

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-switchover

{
 "jobs": ["8d0e8e36-a618-490d-8a46-8c61ac9jb502"]
}
```

## Example Response

**Status code: 202**

Accepted

```
{
 "count": 1,
 "results": [{
 "job_id": "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
 "updated_at": "2020-12-18T06:38:37Z",
 "source_db": {
 "id": "2706a49b-6dd0-4b70-b2a8-36cf0034703d",
 "region": "cn-xianhz-1",
 "ip": "192.168.1.144",
 "topic": null,
 "obj_id": "0b51710fd4e54d6bb90ab91bf68f86efno01",
 "instance_name": "rds-zw-source",
 "db_type": "mysql",
 "db_user": "root",
 "db_password": "*****",
 "manage_ip": null,
 "traffic_ip": "192.168.1.144",
 "db_port": 3306,
 "created_at": "2020-12-16T12:09:54Z",
 "updated_at": "2020-12-18T06:33:09Z",
 "public_ip": null,
 "az_code": "az3xahz",
 "security_group_id": "652cbe2d-d487-407e-b666-d01948b33879",
 "subnet_id": "c6f66ccb-be7a-499e-aa8a-1389355e67a8",
 "vpc_id": "7c73a425-885b-4e54-a0e6-ef9ee271a1db",
 "volume_size": null,
 "full_trans_user_pwd": "*****",
 "increment_trans_user_pwd": "*****",
 "ssl_link": false,
 "ssl_cert_key": null,
 "ssl_cert_name": null,
 "ssl_cert_check_sum": null,
 "ssl_cert_password": null,
 "db_version": "5.7.31",
 "mongo_ha_mode": null,
 "project_id": "054ba152d480d55b2f5dc0069e7ddef0",
 }
 }
}
```

```

"cluster_mode" : "Single",
"instance_id" : "3efbb0f1241f429e8e1d8f99ab094c7ain01",
"db_name" : null,
"safe_mode" : null,
"kerberos_vo" : null,
"multi_write_db_id" : null
},
"target_db" : {
"id" : "81ca3c57-029b-4a37-8f2d-2ee5f128ef9d",
"region" : "cn-xianhz-1",
"ip" : "192.168.1.60",
"topic" : null,
"obj_id" : "b46e908dbbb44bb3b17f0a75c908d1d7no01",
"instance_name" : "rds-zw-target",
"db_type" : "mysql",
"db_user" : "root",
"db_password" : "*****",
"manage_ip" : null,
"traffic_ip" : "192.168.1.60",
"db_port" : 3306,
"created_at" : "2020-12-16T12:09:55Z",
"updated_at" : "2020-12-18T06:33:08Z",
"public_ip" : null,
"az_code" : "az3xahz",
"security_group_id" : "652cbe2d-d487-407e-b666-d01948b33879",
"subnet_id" : "c6f66ccb-be7a-499e-aa8a-1389355e67a8",
"vpc_id" : "7c73a425-885b-4e54-a0e6-ef9ee271a1db",
"volume_size" : 40,
"full_trans_user_pwd" : "*****",
"increment_trans_user_pwd" : "*****",
"ssl_link" : false,
"ssl_cert_key" : null,
"ssl_cert_name" : null,
"ssl_cert_check_sum" : null,
"ssl_cert_password" : null,
"db_version" : "5.7.31",
"mongo_ha_mode" : null,
"project_id" : "054ba152d480d55b2f5dc0069e7ddef0",
"cluster_mode" : "Single",
"instance_id" : "a3ab61173b1b4533b8c3dfc2bb3ec828in01",
"db_name" : null,
"safe_mode" : null,
"kerberos_vo" : null,
"multi_write_db_id" : null
},
"job_direction" : "down",
"is_target_readonly" : false
}]
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | Accepted    |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 6.4.2 Querying DR Monitoring Data

### Function

This API is used to query DR monitoring data based on the task ID.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### Constraints

You can call a maximum of 10 APIs in batches.

### URI

POST /v3/{project\_id}/jobs/disaster-recovery-monitoring-data

**Table 6-228** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

### Request Parameters

**Table 6-229** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                   |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                         |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

**Table 6-230** Request body parameters

| Parameter | Mandatory | Type             | Description              |
|-----------|-----------|------------------|--------------------------|
| jobs      | Yes       | Array of strings | Task query request body. |

## Response Parameters

Status code: 200

**Table 6-231** Response body parameters

| Parameter | Type             | Description                                                                             |
|-----------|------------------|-----------------------------------------------------------------------------------------|
| results   | Array of objects | DR monitoring data response body set.<br>For details, see <a href="#">Table 6-232</a> . |
| count     | Integer          | Total number of queries.                                                                |

**Table 6-232** Data structure description of field **results**

| Parameter          | Type   | Description                                                                |
|--------------------|--------|----------------------------------------------------------------------------|
| id                 | String | Task ID.                                                                   |
| data_guard_minitor | object | DR task monitoring data.<br>For details, see <a href="#">Table 6-233</a> . |

**Table 6-233** Data structure description of field **data\_guard\_minitor**

| Parameter       | Type    | Description                                    |
|-----------------|---------|------------------------------------------------|
| bandwidth       | String  | Bandwidth.                                     |
| cpuUsed_percent | String  | CPU usage.                                     |
| dst_delay       | Long    | Delay of the destination database.             |
| dst_io          | String  | Destination database I/O.                      |
| dst_normal      | Boolean | Connection status of the destination database. |
| dst_offset      | String  | Offset of the destination database.            |
| dst_rps         | String  | destination database RPS.                      |
| mem_used_in_MB  | string  | Memory usage                                   |

| Parameter                  | Type    | Description                               |
|----------------------------|---------|-------------------------------------------|
| node_mem_inMB              | Long    | Total memory size of a node.              |
| node_offset                | String  | OffSet of the replication instance.       |
| node_volume_inGB           | Long    | Total disk size of a node.                |
| sr_delay                   | Long    | Delay of the source database.             |
| sr_offset                  | String  | OffSet of the source database.            |
| src_io                     | String  | Source database I/O.                      |
| src_normal                 | Boolean | Connection status of the source database. |
| src_rps                    | String  | Source database RPS.                      |
| trans_inMB                 | String  | Amount of migrated data                   |
| trans_lines                | String  | Number of rows to be migrated.            |
| volume_used_inGB           | String  | Disk usage.                               |
| migration_bytes_per_second | Long    | Number of bytes migrated per second.      |

## Example Request

Example of querying DR monitoring data:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/disaster-recovery-monitoring-data
{
 "jobs": ["9a470239-2308-4bb5-a6bc-1040402fjb21"]
}
```

## Example Response

**Status code: 200**

OK

```
{
 "results": [{
 "id": "b683ea69-a29c-456f-952f-2b682180jb52",
 "data_guard_minitor": {
 "src_normal": true,
 "dst_normal": true,
 "sr_offset": "mysql-bin.000445:191",
 "node_offset": "mysql-bin.000445:191",
 "dst_offset": "N/A",
 "sr_delay": 0,
 "dst_delay": 81046806,
 "src_rps": "0",
 "src_io": "0.0",
 "bandwidth": "37",
```



```

"dst_rps" : "0",
"dst_io" : "0.0",
"trans_inMB" : "0",
"trans_lines" : "0",
"volume_used_inGB" : "5",
"mem_used_inMB" : "2166",
"cpuUsed_percent" : "1.4",
"node_volume_inGB" : 100,
"node_mem_inMB" : 8192,
"migration_bytes_per_second": 789456
}
}],
"count" : 1
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 6.4.3 Querying the DR Initialization Progress in Batches

### Function

This API is used to query the DR initialization progress in batches based on the task ID. Virtual IDs cannot be queried.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### URI

POST /v3/{project\_id}/jobs/batch-struct-process

**Table 6-234** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 6-235** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                   |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                         |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

**Table 6-236** Request body parameters

| Parameter | Mandatory | Type             | Description                                 |
|-----------|-----------|------------------|---------------------------------------------|
| jobs      | Yes       | Array of strings | Request body for querying tasks in batches. |

## Response Parameters

Status code: 200

**Table 6-237** Response body parameters

| Parameter | Type             | Description                                                                                        |
|-----------|------------------|----------------------------------------------------------------------------------------------------|
| results   | Array of objects | DR initialization progresses queried in batches.<br>For details, see <a href="#">Table 6-238</a> . |
| count     | Integer          | Total number.                                                                                      |

**Table 6-238** Data structure description of field **results**

| Parameter  | Type   | Description |
|------------|--------|-------------|
| job_id     | String | Task ID.    |
| error_code | String | Error code. |

| Parameter      | Type   | Description                                                                                         |
|----------------|--------|-----------------------------------------------------------------------------------------------------|
| error_message  | String | Error message.                                                                                      |
| struct_process | Object | Information about the DR initialization progress.<br>For details, see <a href="#">Table 6-239</a> . |

**Table 6-239** Data structure description of field **struct\_process**

| Parameter   | Type             | Description                                                          |
|-------------|------------------|----------------------------------------------------------------------|
| create_time | String           | Data generation time.                                                |
| result      | Array of objects | Comparison result.<br>For details, see <a href="#">Table 6-240</a> . |

**Table 6-240** Data structure description of field **result**

| Parameter  | Type    | Description                    |
|------------|---------|--------------------------------|
| type       | String  | Object type.                   |
| status     | Integer | Status                         |
| src_count  | Integer | Number of source objects.      |
| dst_count  | Integer | Number of destination objects. |
| start_time | Long    | Start time.                    |
| end_time   | Long    | End time.                      |

## Example Request

Example of querying details about DR initialization objects in batches:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-struct-process
{
 "jobs" : ["0ea5c5a0-e1b5-4421-80a9-7c9ff27jb502"]
}
```

## Example Response

**Status code: 200**

OK

```
{
 "count" : 1,
```

```
"results": [{
 "job_id": "8ee21a0b-fff5-46b4-a6dd-6c54d5djb201",
 "struct_process": {
 "result": [{
 "type": "table",
 "status": 2,
 "src_count": 0,
 "dst_count": 0,
 "start_time": 1608097599000,
 "end_time": 1608097600000
 }, {
 "type": "view",
 "status": 2,
 "src_count": 0,
 "dst_count": 0,
 "start_time": 1608097599000,
 "end_time": 1608097600000
 }, {
 "type": "table_structure",
 "status": 2,
 "src_count": 0,
 "dst_count": 0,
 "start_time": 1608097599000,
 "end_time": 1608097600000
 }, {
 "type": "database",
 "status": 2,
 "src_count": 1,
 "dst_count": 1,
 "start_time": 1608097599000,
 "end_time": 1608097600000
 }, {
 "type": "function",
 "status": 2,
 "src_count": 0,
 "dst_count": 0,
 "start_time": 1608097599000,
 "end_time": 1608097600000
 }, {
 "type": "procedure",
 "status": 2,
 "src_count": 0,
 "dst_count": 0,
 "start_time": 1608097599000,
 "end_time": 1608097600000
 }, {
 "type": "table_indexes",
 "status": 2,
 "src_count": 0,
 "dst_count": 0,
 "start_time": 1608097599000,
 "end_time": 1608097600000
 }
],
 "create_time": "1608429670521"
}
}]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 6.4.4 Querying DR Initialization Object Details in Batches

### Function

This API is used to query details about DR initialization objects in batches by task ID.

### Debugging

You can debug the API in [API Explorer](#) to support automatic authentication. API Explorer can automatically generate and debug example SDK code.

### URI

POST /v3/{project\_id}/jobs/{type}/batch-struct-detail

**Table 6-241** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                         |
| type       | Yes       | String | Supported migration object types. Values: <ul style="list-style-type: none"><li>• <b>database</b></li><li>• <b>schema</b></li><li>• <b>table</b></li><li>• <b>view</b></li><li>• <b>procedure</b></li><li>• <b>trigger</b></li><li>• <b>index</b></li><li>• <b>table_indexs</b></li><li>• <b>table_structure</b></li></ul> |

## Request Parameters

**Table 6-242** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                              |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | The content type.<br>The default value is <b>application/json</b> .                                                                                      |
| X-Auth-Token | Yes       | String | User token obtained from IAM.                                                                                                                            |
| X-Language   | No        | String | Request language type<br>Default value: <b>en-us</b><br>Values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 6-243** Request body parameters

| Parameter | Mandatory | Type             | Description                                                               |
|-----------|-----------|------------------|---------------------------------------------------------------------------|
| jobs      | Yes       | Array of strings | Querying task details in batches                                          |
| page_req  | No        | Object           | Pagination information.<br>For details, see <a href="#">Table 6-244</a> . |

**Table 6-244** Data structure description of field **page\_req**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                      |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cur_page  | No        | Integer | Current page number, which cannot exceed the maximum number of pages. (Number of pages = Number of items/ Number of tasks on each page) The default value is <b>1</b> .                                                                          |
| per_page  | No        | Integer | Number of items on each page. If this parameter is set to <b>0</b> , all items are obtained. <ul style="list-style-type: none"> <li>• Minimum value: <b>0</b></li> <li>• Maximum value: <b>100</b></li> <li>• Default value: <b>5</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 6-245** Response body parameters

| Parameter | Type             | Description                                                                                                     |
|-----------|------------------|-----------------------------------------------------------------------------------------------------------------|
| count     | Integer          | Total number.                                                                                                   |
| results   | Array of objects | DR initialization object details that are queried in batches.<br>For details, see <a href="#">Table 6-246</a> . |

**Table 6-246** Data structure description of field **results**

| Parameter     | Type   | Description                                                                                    |
|---------------|--------|------------------------------------------------------------------------------------------------|
| job_id        | String | Task ID.                                                                                       |
| error_code    | String | Error code.                                                                                    |
| error_message | String | Error message.                                                                                 |
| struct_detail | Object | Details about the DR initialization objects.<br>For details, see <a href="#">Table 6-247</a> . |

**Table 6-247** Data structure description of field **struct\_detail**

| Parameter    | Type             | Description                                                          |
|--------------|------------------|----------------------------------------------------------------------|
| total_record | Long             | Total number of tasks                                                |
| create_time  | String           | Data generation time                                                 |
| list         | Array of objects | Comparison result.<br>For details, see <a href="#">Table 6-248</a> . |

**Table 6-248** Data structure description of field **list**

| Parameter | Type    | Description                |
|-----------|---------|----------------------------|
| progress  | Integer | Progress.                  |
| src_DB    | String  | Source database name.      |
| src_TB    | String  | Source object name.        |
| dst_DB    | String  | Destination database name. |

| Parameter | Type   | Description              |
|-----------|--------|--------------------------|
| dst_TB    | String | Destination object name. |

## Example Request

Example of querying details about DR initialization objects in batches:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/database/batch-struct-detail
```

```
{
 "jobs" : ["0ea5c5a0-e1b5-4421-80a9-7c9ff27jb502"],
 "page_req" : {
 "cur_page" : 1,
 "per_page" : 10
 }
}
```

## Example Response

**Status code: 200**

OK

```
{
 "count" : 1,
 "results" : [{
 "job_id" : "8d0e8e36-a618-490d-8a46-8c61ac9jb502",
 "struct_detail" : {
 "list" : [{
 "progress" : 100,
 "src_DB" : "test1",
 "src_TB" : "test1",
 "dst_DB" : "test1",
 "dst_TB" : "test1"
 }],
 "total_record" : 1,
 "create_time" : "1608429484785"
 }
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).



# 7 APIs V5.0 (in OBT)

---

## 7.1 Resource Management

### 7.1.1 Querying Information about Available Links

#### Function

This API is used to query information about available links.

#### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

#### URI

GET /v5/{project\_id}/links

**Table 7-1** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

**Table 7-2** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type  | Yes       | String  | Task scenario. Values: <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul> |
| offset    | No        | Integer | Offset. The records after this offset will be queried.                                                                                                                                                                                                                                                                                                                              |
| limit     | No        | Integer | Maximum number of records that can be returned.                                                                                                                                                                                                                                                                                                                                     |

## Request Parameters

**Table 7-3** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

## Response Parameters

Status code: 200

Table 7-4 Response body parameters

| Parameter   | Type             | Description                                                                        |
|-------------|------------------|------------------------------------------------------------------------------------|
| job_links   | Array of objects | Information about available links.<br>For details, see <a href="#">Table 7-5</a> . |
| total_count | Integer          | Total number of available links.                                                   |

Table 7-5 Data structure description of field **job\_links**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type  | String | Task scenario. Values: <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul> |

| Parameter            | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type          | String | <p>Engine type. Values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>● <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>● <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b></li> <li>● <b>redis-to-gaussredis</b></li> <li>● <b>rediscluster-to-gaussredis</b></li> </ul> |
| source_endpoint_type | String | <p>Source DB instance type. Values:</p> <ul style="list-style-type: none"> <li>● <b>offline</b>: indicates an on-premises database.</li> <li>● <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>● <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>offline</b></li> <li>● <b>ecs</b></li> <li>● <b>cloud</b></li> </ul>                                                                                                            |
| target_endpoint_type | String | <p>Destination DB instance type. Values:</p> <ul style="list-style-type: none"> <li>● <b>offline</b>: indicates an on-premises database.</li> <li>● <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>● <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>offline</b></li> <li>● <b>ecs</b></li> <li>● <b>cloud</b></li> </ul>                                                                                                       |

| Parameter     | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_direction | String           | <p>Migration direction. Values:</p> <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>● <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>up</b></li> <li>● <b>down</b></li> <li>● <b>non-dbs</b></li> </ul> |
| net_type      | String           | <p>Network type. Values:</p> <ul style="list-style-type: none"> <li>● <b>eip</b>: public network.</li> <li>● <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>● <b>vpn</b>: VPN or Direct Connect.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>eip</b></li> <li>● <b>vpc</b></li> <li>● <b>vpn</b></li> </ul>                                                                                             |
| task_types    | Array of strings | <p>Migration type. Values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b>: full migration.</li> <li>● <b>FULL_INCR_TRANS</b>: full+incremental migration.</li> <li>● <b>INCR_TRANS</b>: incremental migration.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b></li> <li>● <b>FULL_INCR_TRANS</b></li> <li>● <b>INCR_TRANS</b></li> </ul>                                                                            |

| Parameter     | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_modes | Array of strings | <p>Engine instance mode. Values:</p> <ul style="list-style-type: none"> <li>● <b>Single</b>: single node.</li> <li>● <b>Ha</b>: primary/standby.</li> <li>● <b>Cluster</b>: cluster.</li> <li>● <b>Sharding</b>: sharding.</li> <li>● <b>Independent</b>: independent GaussDB deployment.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>Single</b></li> <li>● <b>Ha</b></li> <li>● <b>Cluster</b></li> <li>● <b>Sharding</b></li> <li>● <b>Independent</b></li> </ul> |
| description   | String           | Description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**Status code: 400**

**Table 7-6** Response body parameters

| Parameter  | Type   | Description                                                                             |
|------------|--------|-----------------------------------------------------------------------------------------|
| error_code | String | <p>Error code.</p> <p>Minimum length: <b>12</b></p> <p>Maximum length: <b>12</b></p>    |
| error_msg  | String | <p>Error message.</p> <p>Minimum length: <b>1</b></p> <p>Maximum length: <b>512</b></p> |

## Example Request

- Querying information about available links for real-time migration  
[https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/links?job\\_type=migration](https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/links?job_type=migration)
- Querying information about available links for real-time synchronization  
[https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/links?job\\_type=sync](https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/links?job_type=sync)
- Querying information about available links for real-time disaster recovery  
[https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/links?job\\_type=cloudDataGuard](https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/links?job_type=cloudDataGuard)

## Example Response

**Status code: 200**

OK

```
{
 "job_links" : [{
 "job_type" : "sync",
 "engine_type" : "oracle-to-gaussdbv5",
 "net_type" : "eip",
 "task_types" : ["FULL_INCR_TRANS", "FULL_TRANS", "INCR_TRANS"],
 "job_direction" : "up",
 "cluster_modes" : ["Independent", "Combined"],
 "source_endpoint_type" : "offline",
 "target_endpoint_type" : "cloud"
 }, {
 "job_type" : "sync",
 "engine_type" : "oracle-to-gaussdbv5",
 "net_type" : "vpn",
 "task_types" : ["FULL_INCR_TRANS", "FULL_TRANS", "INCR_TRANS"],
 "job_direction" : "up",
 "cluster_modes" : ["Independent", "Combined"],
 "source_endpoint_type" : "offline",
 "target_endpoint_type" : "cloud"
 }],
 "total_count" : 2
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000009",
 "error_msg" : "Parameter error."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

# 7.2 Task Management

## 7.2.1 Creating a Task

### Function

This API is used to create a single task. You can create a real-time migration, synchronization, or DR task based on different request parameters.

## Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

## URI

POST /v5/{project\_id}/jobs

**Table 7-7** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-8** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |



| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 7-9** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------|
| job       | Yes       | Object | Request body for creating a task.<br>For details, see <a href="#">Table 7-10</a> . |

**Table 7-10** Data structure description of field **job**

| Parameter       | Mandatory | Type             | Description                                                                                     |
|-----------------|-----------|------------------|-------------------------------------------------------------------------------------------------|
| base_info       | Yes       | Object           | Basic information body for creating a task.<br>For details, see <a href="#">Table 7-11</a> .    |
| source_endpoint | Yes       | Array of objects | Database information body for creating a task.<br>For details, see <a href="#">Table 7-13</a> . |
| target_endpoint | Yes       | Array of objects | Database information body for creating a task.<br>For details, see <a href="#">Table 7-13</a> . |
| period_order    | No        | Object           | Yearly/Monthly information body.<br>For details, see <a href="#">Table 7-20</a> .               |
| node_info       | Yes       | Object           | Information body of the DRS instance.<br>For details, see <a href="#">Table 7-21</a> .          |
| public_ip_list  | No        | Array of objects | Information about a specified EIP.<br>For details, see <a href="#">Table 7-25</a> .             |

**Table 7-11** Data structure description of field **base\_info**

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name        | No        | String  | <p>Task name. The task name can be 4 to 50 characters in length. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_).</p> <ul style="list-style-type: none"> <li>• Minimum length: <b>4</b></li> <li>• Maximum length: <b>50</b></li> </ul>                                                                                                             |
| job_type    | No        | String  | <p>Task scenario. Values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul> |
| multi_write | No        | Boolean | <p>Whether the DR type is dual-active. Note:</p> <ul style="list-style-type: none"> <li>• This parameter is mandatory when <b>job_type</b> is set to <b>cloudDataGuard</b>. If the DR type is dual-active, the value of <b>multi_write</b> is <b>true</b>. Otherwise, the value is <b>false</b>.</li> <li>• If <b>job_type</b> is set to other values, <b>multi_write</b> is optional.</li> </ul> |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type   | No        | String | <p>Engine type. Values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>● <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>● <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b></li> <li>● <b>redis-to-gaussredis</b></li> <li>● <b>rediscluster-to-gaussredis</b></li> </ul> |
| job_direction | No        | String | <p>Migration direction. Values:</p> <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>● <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>up</b></li> <li>● <b>down</b></li> <li>● <b>non-dbs</b></li> </ul>                                                      |
| task_type     | No        | String | <p>Migration type. Values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b>: full migration.</li> <li>● <b>FULL_INCR_TRANS</b>: full +incremental migration.</li> <li>● <b>INCR_TRANS</b>: incremental migration.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b></li> <li>● <b>FULL_INCR_TRANS</b></li> <li>● <b>INCR_TRANS</b></li> </ul>                                                                                                                                |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| net_type              | No        | String | Network type. Values: <ul style="list-style-type: none"> <li>• <b>eip</b>: public network.</li> <li>• <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>• <b>vpn</b>: VPN or Direct Connect.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>eip</b></li> <li>• <b>vpc</b></li> <li>• <b>vpn</b></li> </ul> |
| charging_mode         | No        | String | Billing mode. The pay-per-use billing is used by default. Values: <ul style="list-style-type: none"> <li>• <b>period</b>: indicates the yearly/monthly billing.</li> <li>• <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>period</b></li> <li>• <b>on_demand</b></li> </ul>               |
| enterprise_project_id | No        | String | Enterprise project ID. The default value is <b>0</b> , indicating the default enterprise project. Default value: <b>0</b>                                                                                                                                                                                                                                                 |
| description           | No        | String | Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: ! <>'&"\ <p>Minimum length: <b>0</b></p> <p>Maximum length: <b>256</b></p>                                                                                                                                                            |
| start_time            | No        | String | Scheduled start time of a task.                                                                                                                                                                                                                                                                                                                                           |
| expired_days          | No        | String | Number of days after which an abnormal task automatically stops. The unit is day. The value ranges from 14 to 100. If this parameter is not specified, the default value is <b>14</b> . Default value: <b>14</b>                                                                                                                                                          |

| Parameter | Mandatory | Type             | Description                                                                                   |
|-----------|-----------|------------------|-----------------------------------------------------------------------------------------------|
| tags      | No        | Array of objects | Tag information. Up to 20 tags can be added.<br>For details, see <a href="#">Table 7-12</a> . |

**Table 7-12** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | No        | String | Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>36</b>   |
| value     | No        | String | Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>43</b> |

**Table 7-13** Data structure description of fields **source\_endpoint** and **target\_endpoint**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type       | Yes       | String | <p>Database type. Values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: Oracle.</li> <li>• <b>gaussdbv5</b>: GaussDB distributed.</li> <li>• <b>redis</b>: Redis.</li> <li>• <b>rediscluster</b>: Cluster Redis.</li> <li>• <b>gaussredis</b>: GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>gaussdbv5</b></li> <li>• <b>redis</b></li> <li>• <b>rediscluster</b></li> <li>• <b>gaussredis</b></li> </ul> |
| endpoint_type | Yes       | String | <p>DB instance type. Values:</p> <ul style="list-style-type: none"> <li>• <b>offline</b>: indicates an on-premises database.</li> <li>• <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>• <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>offline</b></li> <li>• <b>ecs</b></li> <li>• <b>cloud</b></li> </ul>                                                                              |
| endpoint_role | Yes       | String | <p>DB instance role. Values:</p> <ul style="list-style-type: none"> <li>• <b>so</b>: indicates the source database.</li> <li>• <b>ta</b>: indicates the destination database.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>so</b></li> <li>• <b>ta</b></li> </ul>                                                                                                                                                                                               |
| endpoint      | Yes       | Object | <p>Basic information body of the database.</p> <p>For details, see <a href="#">Table 7-14</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                  |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                               |
|----------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cloud          | No        | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-15</a> .                                                                                                       |
| vpc            | No        | Object | Information about the VPC, subnet, and security group where a DB instance resides. This parameter is mandatory when the DB instance type is <b>ECS</b> .<br>For details, see <a href="#">Table 7-16</a> . |
| config         | No        | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-17</a> .                                                                                                             |
| ssl            | No        | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-18</a> .                                                                                                        |
| customized_dns | No        | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-19</a> .                                                                                                                                       |

**Table 7-14** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Mandatory | Type   | Description              |
|-----------|-----------|--------|--------------------------|
| id        | No        | String | Database information ID. |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | Yes       | String | <p>Database scenario type.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>• <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>• <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>• <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>• <b>redis</b>: On-premises Redis database.</li> <li>• <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>• <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>• <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>ecs_oracle</b></li> <li>• <b>cloud_gaussdbv5</b></li> <li>• <b>mysql</b></li> <li>• <b>ecs_mysql</b></li> <li>• <b>cloud_mysql</b></li> <li>• <b>redis</b></li> <li>• <b>ecs_redis</b></li> <li>• <b>rediscluster</b></li> </ul> |



| Parameter | Mandatory | Type | Description                                                                                                                |
|-----------|-----------|------|----------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <code>ecs_rediscluster</code></li><li>• <code>cloud_gaussdb_redis</code></li></ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip        | No        | String | <p>Database IP address. Note:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |

| Parameter       | Mandatory | Type             | Description                                                                                         |
|-----------------|-----------|------------------|-----------------------------------------------------------------------------------------------------|
| db_port         | No        | String           | Database port.<br>The value is an integer ranging from 1 to 65535.                                  |
| db_user         | Yes       | String           | Database username.                                                                                  |
| db_password     | Yes       | String           | Database password.                                                                                  |
| instance_id     | No        | String           | ID of a Huawei Cloud DB instance.                                                                   |
| instance_name   | No        | String           | Name of a Huawei Cloud DB instance.                                                                 |
| db_name         | No        | String           | Database name. Example: <ul style="list-style-type: none"> <li>oracle: serviceName.orcl.</li> </ul> |
| source_sharding | No        | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-14</a> .    |

**Table 7-15** Data structure description of field **cloud**

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | Yes       | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is a combination of the regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                   |
| az_code    | No        | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-16** Data structure description of field **vpc**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | Yes       | String | <p>ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps:</p> <p>Method 1: Log in to the VPC console and view the VPC ID on the VPC details page.</p> <p>Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a>.</p>                                                                                                                                                                                              |
| subnet_id         | Yes       | String | <p>ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps:</p> <p>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page.</p> <p>Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a>.</p>                                                                                                                             |
| security_group_id | No        | String | <p>ID of the security group where a DB instance is located. To obtain the ID, perform the following steps:</p> <p>Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page.</p> <p>Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a>.</p> |

**Table 7-17** Data structure description of field **config**

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | No        | Boolean | Whether the destination DB instance is set to read-only.<br>This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                  |
| node_num            | No        | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-18** Data structure description of field **ssl**

| Parameter     | Mandatory | Type    | Description                                                                             |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | No        | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | No        | String  | SSL certificate name.                                                                   |
| ssl_cert_key  | No        | String  | SSL certificate content, which is encrypted using Base64.                               |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                  |
|--------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_check_sum | No        | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | No        | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-19** Data structure description of field **customized\_dns**

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Yes       | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | Yes       | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>• <b>add</b>: Add a customized DNS server IP address.</li> <li>• <b>keep</b>: Retain the DNS server IP address.</li> <li>• <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>• <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>add</b></li> <li>• <b>keep</b></li> <li>• <b>update</b></li> <li>• <b>recover</b></li> </ul> |
| dns_ip         | Yes       | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-20** Data structure description of field **period\_order**

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type   | Yes       | Integer | Subscription period type.<br>Values: <ul style="list-style-type: none"> <li>• <b>2</b>: indicates that the service is subscribed by month.</li> <li>• <b>3</b>: indicates that the service is subscribed by year.</li> </ul> Default value: <b>3</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>2</b></li> <li>• <b>3</b></li> </ul>                                      |
| period_num    | Yes       | Integer | Number of subscription periods. This parameter depends on the value of <b>period_type</b> . For example: <ul style="list-style-type: none"> <li>• When <b>period_type</b> is set to <b>2</b>, the value <b>1</b> indicates one month.</li> <li>• When <b>period_type</b> is set to <b>3</b>, the value <b>1</b> indicates one year.</li> </ul>                                                   |
| is_auto_renew | No        | Integer | Whether auto renewal is enabled. Values: <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that auto renewal is disabled. This is the default value. You need to pay manually.</li> <li>• <b>1</b>: indicates that auto renewal is enabled.</li> </ul> Default value: <b>0</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>0</b></li> <li>• <b>1</b></li> </ul> |

**Table 7-21** Data structure description of field **node\_info**

| Parameter | Mandatory | Type   | Description                                                                                       |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------|
| spec      | Yes       | Object | Information body of DRS instance specifications.<br>For details, see <a href="#">Table 7-22</a> . |

| Parameter | Mandatory | Type   | Description                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------|
| vpc       | No        | Object | Information body of DRS instance VPC. This parameter is mandatory for self-built databases.<br>For details, see <a href="#">Table 7-23</a> . |
| base_info | No        | Object | Information body of DRS instance VPC. This parameter is mandatory for self-built databases.<br>For details, see <a href="#">Table 7-24</a> . |

**Table 7-22** Data structure description of field **spec**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| node_type | Yes       | String | Specification code. Values: <ul style="list-style-type: none"> <li>• <b>micro</b>: minimum specifications.</li> <li>• <b>small</b>: small specifications.</li> <li>• <b>medium</b>: medium specifications.</li> <li>• <b>high</b>: large specifications.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>micro</b></li> <li>• <b>small</b></li> <li>• <b>medium</b></li> <li>• <b>high</b></li> </ul> |

**Table 7-23** Data structure description of field **vpc**

| Parameter | Mandatory | Type   | Description                                         |
|-----------|-----------|--------|-----------------------------------------------------|
| vpc_id    | Yes       | String | ID of the VPC where the DRS instance is located.    |
| subnet_id | Yes       | String | ID of the subnet where the DRS instance is located. |



| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| custom_node_ip    | No        | String | <p>IP address of the DRS instance to be created. Use commas (,) to separate multiple values. Only IPv4 addresses are supported. To obtain the IP address, perform the following steps:</p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li> <li>Method 2: Call the API for querying private IP addresses. For details, see "Querying Private IP Addresses". Select a private IP address whose <b>device_owner</b> is left blank. Example: 192.168.0.10,192.168.0.11</li> </ul> |
| security_group_id | No        | String | ID of the security group where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Table 7-24** Data structure description of field **base\_info**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                             |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_type | Yes       | String | <p>DB instance type. The value can be:</p> <ul style="list-style-type: none"> <li><b>single</b>: single instance.</li> <li><b>ha</b>: primary/standby instance.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li><b>single</b></li> <li><b>ha</b></li> </ul> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                        |
|-------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| arch              | Yes       | String | CPU architecture. The value can be: <ul style="list-style-type: none"> <li>• x86</li> <li>• arm</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>x86</b></li> <li>• <b>arm</b></li> </ul> |
| availability_zone | Yes       | String | AZ ID. If the task instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (,).                                                                |
| status            | No        | String | Status.                                                                                                                                                                                                            |
| role              | No        | String | Primary/Standby role of a task.                                                                                                                                                                                    |

**Table 7-25** Data structure description of field **public\_ip\_list**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | Yes       | String | ID of a specified EIP.                                                                                                                                                                                                                                                                                                                                                               |
| public_ip | Yes       | String | EIP.                                                                                                                                                                                                                                                                                                                                                                                 |
| type      | Yes       | String | Type of a task with an EIP bound. <ul style="list-style-type: none"> <li>• In a primary/standby task, <b>master</b> indicates the primary task, and <b>slave</b> indicates the standby task.</li> <li>• In other cases, the value is fixed to <b>master</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>master</b></li> <li>• <b>slave</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 7-26** Response body parameters

| Parameter | Type   | Description                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------|
| job       | Object | Response body for creating a task.<br>For details, see <a href="#">Table 7-27</a> . |

**Table 7-27** Data structure description of field **job**

| Parameter    | Type   | Description                               |
|--------------|--------|-------------------------------------------|
| id           | String | Task ID.                                  |
| name         | String | Task name.                                |
| status       | String | Task status.                              |
| create_time  | String | Task creation time.                       |
| is_clone_job | String | Indicates whether a task is a clone task. |

**Status code: 400**

**Table 7-28** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

- Creating a pay-per-use synchronization task from Oracle to GaussDB distributed, in which **task\_type** is set to **FULL\_INCR\_TRANS** and **net\_type** is set to **eip**

`https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs`

```
{
 "job": {
 "base_info": {
 "name": "DRS-1234",
 "job_type": "sync",
 "engine_type": "oracle-to-gaussdbv5",
 "job_direction": "up",
 "task_type": "FULL_INCR_TRANS",
 "net_type": "eip",
 "charging_mode": "on_demand",
```

```
"enterprise_project_id" : "0",
"description" : "",
"expired_days" : "14",
"tags" : [{
 "key" : "test",
 "value" : "test"
}]
},
"source_endpoint" : [{
 "db_type" : "oracle",
 "endpoint_type" : "offline",
 "endpoint_role" : "so",
 "endpoint" : {
 "endpoint_name" : "oracle",
 "ip" : "10.154.217.239",
 "db_port" : "1521",
 "db_user" : "ORACLE_USER",
 "db_name" : "serviceName.orcl",
 "db_password" : "*****"
 },
 "ssl" : {
 "ssl_link" : false
 }
}],
"target_endpoint" : [{
 "db_type" : "gaussdbv5",
 "endpoint_type" : "cloud",
 "endpoint_role" : "ta",
 "endpoint" : {
 "endpoint_name" : "cloud_gaussdbv5",
 "instance_id" : "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user" : "root",
 "db_password" : "*****"
 },
 "cloud" : {
 "region" : "cn-north-4",
 "project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code" : "cn-north-4a,cn-north-4c,cn-north-4g"
 },
 "vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 }
}],
"node_info" : {
 "spec" : {
 "node_type" : "medium"
 },
 "vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f"
 }
}
}
```

- Creating a pay-per-use real-time synchronization task from Oracle to GaussDB Distributed and specifying an EIP

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs>

```
{
 "job": {
 "base_info": {
 "name": "DRS-1234",
 "job_type": "sync",
 "engine_type": "oracle-to-gaussdbv5",
 "job_direction": "up",
 "task_type": "FULL_INCR_TRANS",
```

```
"net_type": "eip",
"charging_mode": "on_demand",
"enterprise_project_id": "0",
"description": "",
"expired_days": "14",
"tags": [
 {
 "key": "test",
 "value": "test"
 }
]
},
"source_endpoint": [
 {
 "db_type": "oracle",
 "endpoint_type": "offline",
 "endpoint_role": "so",
 "endpoint": {
 "endpoint_name": "oracle",
 "ip": "*****",
 "db_port": "1521",
 "db_user": "ORACLE_USER",
 "db_name": "serviceName.orcl",
 "db_password": "*****"
 },
 "ssl": {
 "ssl_link": false
 }
 }
],
"target_endpoint": [
 {
 "db_type": "gaussdbv5",
 "endpoint_type": "cloud",
 "endpoint_role": "ta",
 "endpoint": {
 "endpoint_name": "cloud_gaussdbv5",
 "instance_id": "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user": "root",
 "db_password": "*****"
 },
 "cloud": {
 "region": "cn-north-4",
 "project_id": "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code": "cn-north-4a,cn-north-4c,cn-north-4g"
 },
 "vpc": {
 "vpc_id": "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id": "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id": "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 }
 }
],
"node_info": {
 "spec": {
 "node_type": "medium"
 },
 "vpc": {
 "vpc_id": "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id": "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f"
 }
},
"public_ip_list": [
 {
 "id": "018d9e56-26d5-455a-97dc-e6f5f44a2cbd",
 "public_ip": "*****",
 "type": "master"
 }
]
```

```
}
}
```

## Example Response

**Status code: 200**

OK

```
{
 "job": {
 "id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name": "DRS-1234",
 "status": "CREATING",
 "create_time": "2022-11-07T16:15:18Z"
 }
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000001",
 "error_msg": "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.2.2 Querying Tasks

### Function

This API is used to query tenant tasks by enterprise project, engine type, network type, task status, task name, or task ID.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs

**Table 7-29** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

**Table 7-30** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type  | Yes       | String | Task scenario. Values: <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul> |
| name      | No        | String | Task ID or name.                                                                                                                                                                                                                                                                                                                                                                    |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | No        | String | <p>Task status. Values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b>: The task is being created.</li> <li>● <b>CREATE_FAILED</b>: The task fails to be created.</li> <li>● <b>CONFIGURATION</b>: The task is being configured.</li> <li>● <b>STARTJOBING</b>: The task is being started.</li> <li>● <b>WAITING_FOR_START</b>: The task is waiting to be started.</li> <li>● <b>START_JOB_FAILED</b>: The task fails to be started.</li> <li>● <b>FULL_TRANSFER_STARTED</b>: Full migration is in progress, and the initialization is in progress in the DR scenario.</li> <li>● <b>FULL_TRANSFER_FAILED</b>: Full migration fails, and the initialization fails in the DR scenario.</li> <li>● <b>FULL_TRANSFER_COMPLETE</b>: Full migration is complete, and the initialization is complete in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_STARTED</b>: Incremental migration is in progress, and the disaster recovery is in progress in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_FAILED</b>: Incremental migration fails, and a DR exception occurs.</li> <li>● <b>RELEASE_RESOURCE_STARTED</b>: The task is being stopped.</li> <li>● <b>RELEASE_RESOURCE_FAILED</b>: The task fails to be stopped.</li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b>: The task is stopped.</li> <li>● <b>CHANGE_JOB_STARTED</b>: The task is being changed.</li> </ul> |



| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"> <li>● <b>CHANGE_JOB_FAILED</b>: The task fails to be changed.</li> <li>● <b>CHILD_TRANSFER_STARTING</b>: The subtask is being started.</li> <li>● <b>CHILD_TRANSFER_STARTED</b>: The subtask is being migrated.</li> <li>● <b>CHILD_TRANSFER_COMPLETE</b>: The subtask migration is complete.</li> <li>● <b>CHILD_TRANSFER_FAILED</b>: The subtask fails to be migrated.</li> <li>● <b>RELEASE_CHILD_TRANSFER_STARTED</b>: The subtask is being stopped.</li> <li>● <b>RELEASE_CHILD_TRANSFER_COMPLETE</b>: The subtask is stopped. You can query an abnormal task separately or query all abnormal tasks in the following states:<br/><b>CREATE_FAILED, START_JOB_FAILED, FULL_TRANSFER_FAILED, INCRE_TRANSFER_FAILED, RELEASE_RESOURCE_FAILED, CHANGE_JOB_FAILED</b> and <b>CHILD_TRANSFER_FAILED</b>.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>CONFIGURATION</b></li> <li>● <b>STARTJOBING</b></li> <li>● <b>WAITING_FOR_START</b></li> <li>● <b>START_JOB_FAILED</b></li> <li>● <b>FULL_TRANSFER_STARTED</b></li> <li>● <b>FULL_TRANSFER_FAILED</b></li> <li>● <b>FULL_TRANSFER_COMPLETE</b></li> <li>● <b>INCRE_TRANSFER_STARTED</b></li> </ul> |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |           |        | <ul style="list-style-type: none"> <li>• INCRE_TRANSFER_FAILED</li> <li>• RELEASE_RESOURCE_STARTED</li> <li>• RELEASE_RESOURCE_FAILED</li> <li>• RELEASE_RESOURCE_COMPLETE</li> <li>• CHANGE_JOB_STARTED</li> <li>• CHANGE_JOB_FAILED</li> <li>• CHILD_TRANSFER_STARTING</li> <li>• CHILD_TRANSFER_STARTED</li> <li>• CHILD_TRANSFER_COMPLETE</li> <li>• CHILD_TRANSFER_FAILED</li> <li>• RELEASE_CHILD_TRANSFER_STARTED</li> <li>• RELEASE_CHILD_TRANSFER_COMPLETE</li> </ul>                                                                       |
| engine_type | No        | String | <p>Engine type. Values:</p> <ul style="list-style-type: none"> <li>• <b>oracle-to-gaussdbv5:</b><br/>Synchronization from Oracle to GaussDB distributed.</li> <li>• <b>redis-to-gaussredis:</b><br/>Migration from Redis to GeminiDB Redis.</li> <li>• <b>rediscluster-to-gaussredis:</b><br/>Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle-to-gaussdbv5</b></li> <li>• <b>redis-to-gaussredis</b></li> <li>• <b>rediscluster-to-gaussredis</b></li> </ul> |

| Parameter             | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                           |
|-----------------------|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| net_type              | No        | String           | Network type. Values: <ul style="list-style-type: none"> <li>• <b>eip</b>: public network.</li> <li>• <b>vpc</b>: VPC network.</li> <li>• <b>vpn</b>: VPN or Direct Connect.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>eip</b></li> <li>• <b>vpc</b></li> <li>• <b>vpn</b></li> </ul> |
| enterprise_project_id | No        | String           | Enterprise project ID. Default value: "", indicating that tasks in all enterprise projects are queried.                                                                                                                                                                                                               |
| offset                | No        | Integer          | Offset. The records after this offset will be queried.                                                                                                                                                                                                                                                                |
| limit                 | No        | Integer          | Maximum number of records that can be returned.                                                                                                                                                                                                                                                                       |
| sort_key              | No        | String           | The keyword based on which the returned results are sorted. The default value is <b>create_time</b> .                                                                                                                                                                                                                 |
| sort_dir              | No        | String           | Result sorting order. The value can be <b>desc</b> (descending order) or <b>asc</b> (ascending order). The default value is <b>desc</b> .                                                                                                                                                                             |
| instance_ids          | No        | Array of strings | List of database instance IDs. The default value is <b>null</b> , indicating that database instance IDs are not used for task filtering.                                                                                                                                                                              |
| instance_ip           | No        | String           | IP address of the database instance bound to the DRS. The default value is "", indicating that the IP address of the database instance bound to the DRS is not used for task filtering.                                                                                                                               |

## Request Parameters

**Table 7-31** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 200**

**Table 7-32** Response body parameters

| Parameter   | Type             | Description                                                           |
|-------------|------------------|-----------------------------------------------------------------------|
| total_count | Integer          | Total number of tasks in the list, which is irrelevant to pagination. |
| jobs        | Array of objects | Task details.<br>For details, see <a href="#">Table 7-33</a> .        |

**Table 7-33** Data structure description of field **jobs**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | Task ID.    |
| name      | String | Task name.  |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | <p>Task status. Values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b>: The task is being created.</li> <li>● <b>CREATE_FAILED</b>: The task fails to be created.</li> <li>● <b>CONFIGURATION</b>: The task is being configured.</li> <li>● <b>STARTJOBING</b>: The task is being started.</li> <li>● <b>WAITING_FOR_START</b>: The task is waiting to be started.</li> <li>● <b>START_JOB_FAILED</b>: The task fails to be started.</li> <li>● <b>FULL_TRANSFER_STARTED</b>: Full migration is in progress, and the initialization is in progress in the DR scenario.</li> <li>● <b>FULL_TRANSFER_FAILED</b>: Full migration fails, and the initialization fails in the DR scenario.</li> <li>● <b>FULL_TRANSFER_COMPLETE</b>: Full migration is complete, and the initialization is complete in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_STARTED</b>: Incremental migration is in progress, and the disaster recovery is in progress in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_FAILED</b>: Incremental migration fails, and a DR exception occurs.</li> <li>● <b>RELEASE_RESOURCE_STARTED</b>: The task is being stopped.</li> <li>● <b>RELEASE_RESOURCE_FAILED</b>: The task fails to be stopped.</li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b>: The task is stopped.</li> <li>● <b>CHANGE_JOB_STARTED</b>: The task is being changed.</li> <li>● <b>CHANGE_JOB_FAILED</b>: The task fails to be changed.</li> <li>● <b>CHILD_TRANSFER_STARTING</b>: The subtask is being started.</li> <li>● <b>CHILD_TRANSFER_STARTED</b>: The subtask is being migrated.</li> <li>● <b>CHILD_TRANSFER_COMPLETE</b>: The subtask migration is complete.</li> <li>● <b>CHILD_TRANSFER_FAILED</b>: The subtask fails to be migrated.</li> </ul> |

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |        | <ul style="list-style-type: none"> <li>● <b>RELEASE_CHILD_TRANSFER_STARTED:</b> The subtask is being stopped.</li> <li>● <b>RELEASE_CHILD_TRANSFER_COMPLETE:</b> The subtask is stopped.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>CONFIGURATION</b></li> <li>● <b>STARTJOBING</b></li> <li>● <b>WAITING_FOR_START</b></li> <li>● <b>START_JOB_FAILED</b></li> <li>● <b>FULL_TRANSFER_STARTED</b></li> <li>● <b>FULL_TRANSFER_FAILED</b></li> <li>● <b>FULL_TRANSFER_COMPLETE</b></li> <li>● <b>INCRE_TRANSFER_STARTED</b></li> <li>● <b>INCRE_TRANSFER_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_STARTED</b></li> <li>● <b>RELEASE_RESOURCE_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b></li> <li>● <b>CHANGE_JOB_STARTED</b></li> <li>● <b>CHANGE_JOB_FAILED</b></li> <li>● <b>CHILD_TRANSFER_STARTING</b></li> <li>● <b>CHILD_TRANSFER_STARTED</b></li> <li>● <b>CHILD_TRANSFER_COMPLETE</b></li> <li>● <b>CHILD_TRANSFER_FAILED</b></li> <li>● <b>RELEASE_CHILD_TRANSFER_STARTED</b></li> <li>● <b>RELEASE_CHILD_TRANSFER_COMPLETE</b></li> </ul> |
| description | String | Task description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| create_time | String | Task creation time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type   | String  | <p>Engine type. The value can be:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>● <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>● <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b></li> <li>● <b>redis-to-gaussredis</b></li> <li>● <b>rediscluster-to-gaussredis</b></li> </ul> |
| net_type      | String  | <p>Network type. Values:</p> <ul style="list-style-type: none"> <li>● <b>eip</b>: public network.</li> <li>● <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>● <b>vpn</b>: VPN or Direct Connect.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>eip</b></li> <li>● <b>vpc</b></li> <li>● <b>vpn</b></li> </ul>                                                                                                                                                            |
| charging_mode | String  | <p>Billing mode. Values:</p> <ul style="list-style-type: none"> <li>● <b>period</b>: indicates the yearly/monthly billing.</li> <li>● <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>period</b></li> <li>● <b>on_demand</b></li> </ul>                                                                                                                                                                                                                      |
| billing_tag   | Boolean | Whether to support billing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| job_direction | String  | <p>Task direction. Values:</p> <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>● <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>up</b></li> <li>● <b>down</b></li> <li>● <b>non-dbs</b></li> </ul>                                                                     |



| Parameter             | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type              | String | <p>Task scenario. Values:</p> <ul style="list-style-type: none"> <li>● <b>migration</b>: real-time migration.</li> <li>● <b>sync</b>: real-time synchronization.</li> <li>● <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>migration</b></li> <li>● <b>sync</b></li> <li>● <b>cloudDataGuard</b></li> </ul>                       |
| task_type             | String | <p>Migration type. Values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b>: full migration.</li> <li>● <b>FULL_INCR_TRANS</b>: full+incremental migration.</li> <li>● <b>INCR_TRANS</b>: incremental migration.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b></li> <li>● <b>FULL_INCR_TRANS</b></li> <li>● <b>INCR_TRANS</b></li> </ul>                |
| enterprise_project_id | String | Enterprise project ID.                                                                                                                                                                                                                                                                                                                                                                                                  |
| job_mode              | String | <p>Task mode. Values:</p> <ul style="list-style-type: none"> <li>● <b>single</b>: indicates a single task.</li> <li>● <b>sync_child</b>: indicates a subtask to be synchronized.</li> <li>● <b>multi_to_single</b>: indicates a many-to-one task.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>single</b></li> <li>● <b>sync_child</b></li> <li>● <b>multi_to_single</b></li> </ul> |

| Parameter          | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_mode_role      | String           | Task role. Values: <ul style="list-style-type: none"> <li>● <b>parent</b>: indicates a parent task.</li> <li>● <b>child</b>: indicates a subtask.</li> <li>● <b>master</b>: indicates a primary task.</li> <li>● <b>slave</b>: indicates a standby task.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>parent</b></li> <li>● <b>child</b></li> <li>● <b>master</b></li> <li>● <b>slave</b></li> </ul> |
| is_multi_az        | Boolean          | Whether the task is a primary/standby task.                                                                                                                                                                                                                                                                                                                                                                                       |
| node_role          | String           | Node role.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| node_new_framework | Boolean          | Whether the framework is a new framework.                                                                                                                                                                                                                                                                                                                                                                                         |
| job_action         | Object           | The set of task operation commands.<br>For details, see <a href="#">Table 7-35</a> .                                                                                                                                                                                                                                                                                                                                              |
| children           | Array of objects | Information body of a subtask list.<br>For details, see <a href="#">Table 7-34</a> .                                                                                                                                                                                                                                                                                                                                              |

**Table 7-34** Data structure description of field **children**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | Task ID.    |
| name      | String | Task name.  |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | <p>Task status. Values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b>: The task is being created.</li> <li>● <b>CREATE_FAILED</b>: The task fails to be created.</li> <li>● <b>CONFIGURATION</b>: The task is being configured.</li> <li>● <b>STARTJOBING</b>: The task is being started.</li> <li>● <b>WAITING_FOR_START</b>: The task is waiting to be started.</li> <li>● <b>START_JOB_FAILED</b>: The task fails to be started.</li> <li>● <b>FULL_TRANSFER_STARTED</b>: Full migration is in progress, and the initialization is in progress in the DR scenario.</li> <li>● <b>FULL_TRANSFER_FAILED</b>: Full migration fails, and the initialization fails in the DR scenario.</li> <li>● <b>FULL_TRANSFER_COMPLETE</b>: Full migration is complete, and the initialization is complete in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_STARTED</b>: Incremental migration is in progress, and the disaster recovery is in progress in the DR scenario.</li> <li>● <b>INCRE_TRANSFER_FAILED</b>: Incremental migration fails, and a DR exception occurs.</li> <li>● <b>RELEASE_RESOURCE_STARTED</b>: The task is being stopped.</li> <li>● <b>RELEASE_RESOURCE_FAILED</b>: The task fails to be stopped.</li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b>: The task is stopped.</li> <li>● <b>CHANGE_JOB_STARTED</b>: The task is being changed.</li> <li>● <b>CHANGE_JOB_FAILED</b>: The task fails to be changed.</li> <li>● <b>CHILD_TRANSFER_STARTING</b>: The subtask is being started.</li> <li>● <b>CHILD_TRANSFER_STARTED</b>: The subtask is being migrated.</li> <li>● <b>CHILD_TRANSFER_COMPLETE</b>: The subtask migration is complete.</li> <li>● <b>CHILD_TRANSFER_FAILED</b>: The subtask fails to be migrated.</li> </ul> |

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |        | <ul style="list-style-type: none"> <li>● <b>RELEASE_CHILD_TRANSFER_STARTED:</b> The subtask is being stopped.</li> <li>● <b>RELEASE_CHILD_TRANSFER_COMPLETE:</b> The subtask is stopped.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATING</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>CONFIGURATION</b></li> <li>● <b>STARTJOBING</b></li> <li>● <b>WAITING_FOR_START</b></li> <li>● <b>START_JOB_FAILED</b></li> <li>● <b>FULL_TRANSFER_STARTED</b></li> <li>● <b>FULL_TRANSFER_FAILED</b></li> <li>● <b>FULL_TRANSFER_COMPLETE</b></li> <li>● <b>INCRE_TRANSFER_STARTED</b></li> <li>● <b>INCRE_TRANSFER_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_STARTED</b></li> <li>● <b>RELEASE_RESOURCE_FAILED</b></li> <li>● <b>RELEASE_RESOURCE_COMPLETE</b></li> <li>● <b>CHANGE_JOB_STARTED</b></li> <li>● <b>CHANGE_JOB_FAILED</b></li> <li>● <b>CHILD_TRANSFER_STARTING</b></li> <li>● <b>CHILD_TRANSFER_STARTED</b></li> <li>● <b>CHILD_TRANSFER_COMPLETE</b></li> <li>● <b>CHILD_TRANSFER_FAILED</b></li> <li>● <b>RELEASE_CHILD_TRANSFER_STARTED</b></li> <li>● <b>RELEASE_CHILD_TRANSFER_COMPLETE</b></li> </ul> |
| description | String | Task description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| create_time | String | Task creation time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type   | String  | <p>Engine type. The value can be:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>● <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>● <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b></li> <li>● <b>redis-to-gaussredis</b></li> <li>● <b>rediscluster-to-gaussredis</b></li> </ul> |
| net_type      | String  | <p>Network type. Values:</p> <ul style="list-style-type: none"> <li>● <b>eip</b>: public network.</li> <li>● <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>● <b>vpn</b>: VPN or Direct Connect.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>eip</b></li> <li>● <b>vpc</b></li> <li>● <b>vpn</b></li> </ul>                                                                                                                                                            |
| charging_mode | String  | <p>Billing mode. Values:</p> <ul style="list-style-type: none"> <li>● <b>period</b>: indicates the yearly/monthly billing.</li> <li>● <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>period</b></li> <li>● <b>on_demand</b></li> </ul>                                                                                                                                                                                                                      |
| billing_tag   | Boolean | Whether to support billing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| job_direction | String  | <p>Task direction. Values:</p> <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>● <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>up</b></li> <li>● <b>down</b></li> <li>● <b>non-dbs</b></li> </ul>                                                                     |

| Parameter             | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type              | String | <p>Task scenario. Values:</p> <ul style="list-style-type: none"> <li>● <b>migration</b>: real-time migration.</li> <li>● <b>sync</b>: real-time synchronization.</li> <li>● <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>migration</b></li> <li>● <b>sync</b></li> <li>● <b>cloudDataGuard</b></li> </ul>                       |
| task_type             | String | <p>Task mode. Values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b>: full migration.</li> <li>● <b>FULL_INCR_TRANS</b>: full+incremental migration.</li> <li>● <b>INCR_TRANS</b>: incremental migration.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b></li> <li>● <b>FULL_INCR_TRANS</b></li> <li>● <b>INCR_TRANS</b></li> </ul>                     |
| enterprise_project_id | String | Enterprise project ID.                                                                                                                                                                                                                                                                                                                                                                                                  |
| job_mode              | String | <p>Task mode. Values:</p> <ul style="list-style-type: none"> <li>● <b>single</b>: indicates a single task.</li> <li>● <b>sync_child</b>: indicates a subtask to be synchronized.</li> <li>● <b>multi_to_single</b>: indicates a many-to-one task.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>single</b></li> <li>● <b>sync_child</b></li> <li>● <b>multi_to_single</b></li> </ul> |

| Parameter          | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_mode_role      | String  | Task role. Values: <ul style="list-style-type: none"> <li>● <b>parent</b>: indicates a parent task.</li> <li>● <b>child</b>: indicates a subtask.</li> <li>● <b>master</b>: indicates a primary task.</li> <li>● <b>slave</b>: indicates a standby task.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>parent</b></li> <li>● <b>child</b></li> <li>● <b>master</b></li> <li>● <b>slave</b></li> </ul> |
| is_multi_az        | Boolean | Whether the task is a primary/standby task.                                                                                                                                                                                                                                                                                                                                                                                       |
| node_role          | String  | Node role.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| node_new_framework | Boolean | Whether the framework is a new framework.                                                                                                                                                                                                                                                                                                                                                                                         |
| job_action         | Object  | The set of task operation commands.<br>For details, see <a href="#">Table 7-35</a> .                                                                                                                                                                                                                                                                                                                                              |

**Table 7-35** Data structure description of field **job\_action**

| Parameter           | Type             | Description                                                       |
|---------------------|------------------|-------------------------------------------------------------------|
| available_actions   | Array of strings | The set of operation commands that can be executed for a task.    |
| unavailable_actions | Array of strings | The set of operation commands that cannot be executed for a task. |

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| current_action | String | <p>Current operation command of a task. Values:</p> <ul style="list-style-type: none"> <li>● <b>API_CONFIGURATION_ACTION</b>: indicates the operation command for calling a configuration API of a task.</li> <li>● <b>CHANGE</b>: indicates the operation command for modifying a task.</li> <li>● <b>CHANGE_MODE</b>: indicates the operation command for changing the task mode.</li> <li>● <b>CHOOSE_OBJECT</b>: indicates the operation command for selecting an object.</li> <li>● <b>CLONE</b>: indicates the operation command for cloning a task.</li> <li>● <b>CONTINUE_APPLY</b>: indicates the operation command for starting data replay. This parameter is available for synchronization from Oracle to GaussDB distributed.</li> <li>● <b>CONTINUE_APPLY</b>: indicates the operation command for starting data capture. This parameter is available for synchronization from Oracle to GaussDB distributed.</li> <li>● <b>CONTINUE_JOB</b>: indicates the operation command for resuming a failed or stopped task. This parameter is available for synchronization from Oracle to GaussDB distributed.</li> <li>● <b>CREATE</b>: indicates the operation command for creating a task.</li> <li>● <b>DELETE</b>: indicates the operation command for deleting a task.</li> <li>● <b>FREE_RESOURCE</b>: indicates the operation command for releasing resources.</li> <li>● <b>JUMP_RETRY</b>: indicates the operation command for skipping a resumable task.</li> <li>● <b>MODIFY_CONFIGURATION</b>: indicates the operation command for modifying task configurations.</li> <li>● <b>MODIFY_DB_CONFIG</b>: indicates the operation command for modifying database configurations.</li> <li>● <b>MODIFY_TASK_NUMBER</b>: indicates the operation command for modifying the number of threads.</li> <li>● <b>NODE_FLAVOR_MODIFY</b>: indicates the operation command for changing node specifications.</li> </ul> |



| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"> <li>● <b>ORDER_INFO</b>: indicates the operation command for querying order details.</li> <li>● <b>PAUSE</b>: indicates the operation command for pausing a task.</li> <li>● <b>PAY_ORDER</b>: indicates the operation command for paying the yearly/monthly order.</li> <li>● <b>PRE_CHECK</b>: indicates the operation command for pre-check.</li> <li>● <b>QUERY_PRE_CHECK</b>: indicates the operation command for querying the precheck result.</li> <li>● <b>RESET</b>: indicates the operation command for resetting a task.</li> <li>● <b>RESET_DB_PWD</b>: indicates the operation command for resetting the password of the source or destination database.</li> <li>● <b>RETRY</b>: indicates the operation command for retrying a task.</li> <li>● <b>START</b>: indicates the operation command for starting a task.</li> <li>● <b>START_INCR</b>: indicates the operation command for starting an incremental task.</li> <li>● <b>STOP_APPLY</b>: indicates the operation command for stopping data replay. This parameter is available for synchronization from Oracle to GaussDB distributed.</li> <li>● <b>STOP_CAPTURE</b>: indicates the operation command for stopping data capture. This parameter is available for synchronization from Oracle to GaussDB distributed.</li> <li>● <b>STOP_JOB</b>: indicates the operation command for stopping a task. This parameter is available for synchronization from Oracle to GaussDB distributed.</li> <li>● <b>SWITCH_OVER</b>: indicates the operation command for performing a DR switchover.</li> <li>● <b>TO_PERIOD</b>: indicates the operation command for changing the billing mode to yearly/monthly.</li> <li>● <b>TO_RENEW</b>: indicates the operation command for renewing a yearly/monthly task.</li> <li>● <b>UNSUBSCRIBE</b>: indicates the operation command for unsubscribing from a yearly/monthly task.</li> </ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | Enumerated values: <ul style="list-style-type: none"> <li>• API_CONFIGURATION_ACTION</li> <li>• CHANGE</li> <li>• CHANGE_MODE</li> <li>• CHOOSE_OBJECT</li> <li>• CLONE</li> <li>• CONTINUE_APPLY</li> <li>• CONTINUE_CAPTURE</li> <li>• CONTINUE_JOB</li> <li>• CREATE</li> <li>• DELETE</li> <li>• FREE_RESOURCE</li> <li>• JUMP_RETRY</li> <li>• MODIFY_CONFIGURATION</li> <li>• MODIFY_DB_CONFIG</li> <li>• MODIFY_TASK_NUMBER</li> <li>• NODE_FLAVOR_MODIFY</li> <li>• ORDER_INFO</li> <li>• PAUSE</li> <li>• PAY_ORDER</li> <li>• PRE_CHECK</li> <li>• QUERY_PRE_CHECK</li> <li>• RESET</li> <li>• RESET_DB_PWD</li> <li>• RETRY</li> <li>• START</li> <li>• START_INCR</li> <li>• STOP_APPLY</li> <li>• STOP_CAPTURE</li> <li>• STOP_JOB</li> <li>• SWITCH_OVER</li> <li>• TO_PERIOD</li> <li>• TO_RENEW</li> <li>• UNSUBSCRIBE</li> </ul> |

**Status code: 400**

**Table 7-36** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

- Querying the real-time DR task list

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs?
job_type=cloudDataGuard&name=&status=&engine_type=&net_type=&enterprise_project_id=&offset=0
&limit=10&sort_key=create_time&sort_dir=desc
```
- Querying the real-time migration task list

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs?
job_type=migration&name=&status=&engine_type=&net_type=&enterprise_project_id=&offset=0&limit
=10&sort_key=create_time&sort_dir=desc
```
- Querying the real-time synchronization task list

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs?
job_type=sync&name=&status=&engine_type=&net_type=&enterprise_project_id=&offset=0&limit=10&s
ort_key=create_time&sort_dir=desc
```
- Querying the real-time DR task list based on the database IP address

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs?
job_type=cloudDataGuard&name=&status=&engine_type=&net_type=&enterprise_project_id=&offset=0
&limit=10&sort_key=create_time&sort_dir=desc&instance_ip=127.0.0.1
```
- Querying the real-time DR task list based on the database ID

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs?
job_type=cloudDataGuard&name=&status=&engine_type=&net_type=&enterprise_project_id=&offset=0
&limit=10&sort_key=create_time&sort_dir=desc&instance_ids=id1&instance_ids=id2
```

## Example Response

**Status code: 200**

OK

```
{
 "jobs" : [{
 "id" : "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name" : "DRS-1234",
 "status" : "CONFIGURATION",
 "create_time" : "2022-11-07T16:15:18Z",
 "engine_type" : "oracle-to-gaussdbv5",
 "job_direction" : "up",
 "task_type" : "FULL_INCR_TRANS",
 "job_action" : {
 "available_actions" : ["FREE_RESOURCE", "PRE_CHECK", "MODIFY_CONFIGURATION", "CHANGE"],
 "unavailable_actions" : ["CREATE", "START", "CHOOSE_OBJECT", "RETRY", "RESET", "DELETE",
"QUERY_PRE_CHECK", "CHANGE_MODE", "MODIFY_DB_CONFIG", "SWITCH_OVER", "RESET_DB_PWD",
"PAUSE", "JUMP_RETRY", "START_INCR", "MODIFY_TASK_NUMBER", "CONTINUE_JOB", "STOP_JOB",
"CONTINUE_CAPTURE", "STOP_CAPTURE", "CONTINUE_APPLY", "API_CONFIGURATION_ACTION",
"STOP_APPLY", "PAY_ORDER", "UNSUBSCRIBE", "TO_PERIOD", "TO_RENEW", "ORDER_INFO", "CLONE"],
 "current_action" : null
 }
 }]
}
```

```
}
 },
 "total_count" : 1
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000001",
 "error_msg" : "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.2.3 Updating Details About a Task with a Specified ID

### Function

This API is used to update details about a task with a specified ID.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, synchronization from Oracle to GaussDB Distributed, and synchronization from GaussDB Primary/Standby to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

PUT /v5/{project\_id}/jobs/{job\_id}

**Table 7-37** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

## Request Parameters

**Table 7-38** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                              |

**Table 7-39** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                                            |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------|
| job       | Yes       | Object | Request body for updating a task with a specified ID.<br>For details, see <a href="#">Table 7-40</a> . |

**Table 7-40** Data structure description of field **job**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | Type of the task details to be updated with a specified ID.<br>If you update details about a single task, the values can be: <ul style="list-style-type: none"> <li>• <b>name</b>: Update the task name.</li> <li>• <b>description</b>: Update the task description.</li> <li>• <b>endpoint</b>: Update the source or destination database information if the connection test fails.</li> <li>• <b>policy</b>: Update the task configuration.</li> <li>• <b>re_create</b>: Recreate a task if VM resources of the task are deleted three days after it is in the <b>Configuration</b> state.</li> <li>• <b>expired_days</b>: Update the number of days after which an abnormal task is automatically stopped.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>name</b></li> <li>• <b>description</b></li> <li>• <b>endpoint</b></li> <li>• <b>re_create</b></li> <li>• <b>expired_days</b></li> <li>• <b>policy</b></li> </ul> |
| params    | Yes       | Object | Parameters of the task details to be updated with a specified ID.<br>For details, see <a href="#">Table 7-41</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Table 7-41** Data structure description of field **params**

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                   |
|-----------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_id          | No        | String           | ID of the task to be updated.                                                                                                                                                 |
| base_info       | No        | Object           | Basic information body of a task. This parameter is mandatory when <b>type</b> is set to <b>name</b> or <b>description</b> .<br>For details, see <a href="#">Table 7-42</a> . |
| source_endpoint | No        | Array of objects | Source database information body of a task. This parameter is mandatory when <b>type</b> is set to <b>endpoint</b> .<br>For details, see <a href="#">Table 7-44</a> .         |
| target_endpoint | No        | Array of objects | Destination database information body of a task. This parameter is mandatory when <b>type</b> is set to <b>endpoint</b> .<br>For details, see <a href="#">Table 7-44</a> .    |
| alarm_notify    | No        | Object           | Information body for setting task exception notification.<br>For details, see <a href="#">Table 7-51</a> .                                                                    |

| Parameter      | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speed_limit    | No        | Array of objects | <p>Flow control information body. This parameter is mandatory when <b>type</b> is set to <b>speed_limit</b>.</p> <ul style="list-style-type: none"> <li>• If you enable flow control, you can customize the maximum migration speed.</li> <li>• If you disable flow control, the migration speed is not limited and the outbound bandwidth of the source database is maximally used, which causes read consumption on the source database accordingly. For example, if the outbound bandwidth of the source database is 100 MB/s and 80% bandwidth is used, the I/O consumption on the source database is 80 MB/s. For details, see <a href="#">Table 7-52</a>.</li> </ul> |
| user_migration | No        | Object           | <p>User migration information body. For details, see <a href="#">Table 7-53</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| policy_config  | No        | Object           | <p>Policy information body. This parameter is used to configure migration and synchronization policies, including the conflict policy, DROP DATASE filtering, and object synchronization scope. This parameter is mandatory when <b>type</b> is set to <b>policy</b>. For details, see <a href="#">Table 7-56</a>.</p>                                                                                                                                                                                                                                                                                                                                                     |
| db_object      | No        | Object           | <p>Database object information body. This parameter is used to select databases or tables to be migrated for migration and synchronization tasks. This parameter is mandatory when <b>type</b> is set to <b>db_object</b>. For details, see <a href="#">Table 7-57</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                |



| Parameter         | Mandatory | Type   | Description                                                                                                                                                      |
|-------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_param          | No        | Object | Database parameter information body.<br>For details, see <a href="#">Table 7-63</a> .                                                                            |
| tuning_parameters | No        | Object | Advanced setting information body. This parameter is mandatory when <b>type</b> is set to <b>tuning_param</b> .<br>For details, see <a href="#">Table 7-65</a> . |
| period_order      | No        | Object | Yearly/Monthly information body.<br>For details, see <a href="#">Table 7-66</a> .                                                                                |
| node_info         | No        | Object | Information body of the DRS instance.<br>For details, see <a href="#">Table 7-67</a> .                                                                           |

**Table 7-42** Data structure description of field **base\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | No        | String | Task name. The task name can be 4 to 50 characters in length. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_).<br><ul style="list-style-type: none"> <li>• Minimum length: <b>4</b></li> <li>• Maximum length: <b>50</b></li> </ul> Minimum length: <b>4</b><br>Maximum length: <b>50</b>                                             |
| job_type  | No        | String | Task scenario. Values: <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul> |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| multi_write   | No        | Boolean | <p>Whether the DR type is dual-active. Note:</p> <ul style="list-style-type: none"> <li>This parameter is mandatory when <b>job_type</b> is set to <b>cloudDataGuard</b>. If the DR type is dual-active, the value of <b>multi_write</b> is <b>true</b>. Otherwise, the value is <b>false</b>.</li> <li>If <b>job_type</b> is set to other values, <b>multi_write</b> is optional.</li> </ul>                                                                                                                                          |
| engine_type   | No        | String  | <p>Engine type. The value can be:</p> <ul style="list-style-type: none"> <li><b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li><b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li><b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li><b>oracle-to-gaussdbv5</b></li> <li><b>redis-to-gaussredis</b></li> <li><b>rediscluster-to-gaussredis</b></li> </ul> |
| job_direction | No        | String  | <p>Migration direction. Values:</p> <ul style="list-style-type: none"> <li><b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li><b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li><b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li><b>up</b></li> <li><b>down</b></li> <li><b>non-dbs</b></li> </ul>                                                                |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_type             | No        | String | Migration type. Values: <ul style="list-style-type: none"> <li>• <b>FULL_TRANS</b>: full migration.</li> <li>• <b>FULL_INCR_TRANS</b>: full +incremental migration.</li> <li>• <b>INCR_TRANS</b>: incremental migration.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>FULL_TRANS</b></li> <li>• <b>FULL_INCR_TRANS</b></li> <li>• <b>INCR_TRANS</b></li> </ul> |
| net_type              | No        | String | Network type. Values: <ul style="list-style-type: none"> <li>• <b>eip</b>: public network.</li> <li>• <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>• <b>vpn</b>: VPN or Direct Connect.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>eip</b></li> <li>• <b>vpc</b></li> <li>• <b>vpn</b></li> </ul>                   |
| charging_mode         | No        | String | Billing mode. The pay-per-use billing is used by default. Values: <ul style="list-style-type: none"> <li>• <b>period</b>: indicates the yearly/monthly billing.</li> <li>• <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>period</b></li> <li>• <b>on_demand</b></li> </ul>                                 |
| enterprise_project_id | No        | String | Enterprise project ID. The default value is <b>0</b> , indicating the default enterprise project. Default value: <b>0</b>                                                                                                                                                                                                                                                                   |

| Parameter    | Mandatory | Type             | Description                                                                                                                                                                                                         |
|--------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description  | No        | String           | Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: ! <>'&"\<br>Minimum length: <b>0</b><br>Maximum length: <b>256</b>              |
| start_time   | No        | String           | Scheduled start time of a task.                                                                                                                                                                                     |
| expired_days | No        | String           | Number of days after which an abnormal task automatically stops. The unit is day. The value ranges from 14 to 100. If this parameter is not specified, the default value is <b>14</b> .<br>Default value: <b>14</b> |
| tags         | No        | Array of objects | Tag information. Up to 20 tags can be added.<br>For details, see <a href="#">Table 7-43</a> .                                                                                                                       |

**Table 7-43** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | No        | String | Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>36</b>   |
| value     | No        | String | Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>43</b> |

**Table 7-44** Data structure description of fields **source\_endpoint** and **target\_endpoint**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type       | Yes       | String | Database type. Values: <ul style="list-style-type: none"> <li>• <b>oracle</b>: Oracle.</li> <li>• <b>gaussdbv5</b>: GaussDB distributed.</li> <li>• <b>redis</b>: Redis.</li> <li>• <b>rediscluster</b>: Cluster Redis.</li> <li>• <b>gaussredis</b>: GeminiDB Redis.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>gaussdbv5</b></li> <li>• <b>redis</b></li> <li>• <b>rediscluster</b></li> <li>• <b>gaussredis</b></li> </ul> |
| endpoint_type | Yes       | String | DB instance type. Values: <ul style="list-style-type: none"> <li>• <b>offline</b>: indicates an on-premises database.</li> <li>• <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>• <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>offline</b></li> <li>• <b>ecs</b></li> <li>• <b>cloud</b></li> </ul>                                                                              |
| endpoint_role | Yes       | String | DB instance role. Values: <ul style="list-style-type: none"> <li>• <b>so</b>: indicates the source database.</li> <li>• <b>ta</b>: indicates the destination database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>so</b></li> <li>• <b>ta</b></li> </ul>                                                                                                                                                                                               |
| endpoint      | Yes       | Object | Basic information body of the database.<br>For details, see <a href="#">Table 7-45</a> .                                                                                                                                                                                                                                                                                                                                                                                              |

| Parameter      | Mandatory | Type   | Description                                                                                                                         |
|----------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| cloud          | No        | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-46</a> .                                 |
| vpc            | No        | Object | Information about the VPC, subnet, and security group where a DB instance resides.<br>For details, see <a href="#">Table 7-47</a> . |
| config         | No        | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-48</a> .                                       |
| ssl            | No        | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-49</a> .                                  |
| customized_dns | No        | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-50</a> .                                                                 |

**Table 7-45** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Mandatory | Type   | Description              |
|-----------|-----------|--------|--------------------------|
| id        | No        | String | Database information ID. |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | Yes       | String | <p>Database scenario type.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>• <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>• <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>• <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>• <b>redis</b>: On-premises Redis database.</li> <li>• <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>• <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>• <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>ecs_oracle</b></li> <li>• <b>cloud_gaussdbv5</b></li> <li>• <b>mysql</b></li> <li>• <b>ecs_mysql</b></li> <li>• <b>cloud_mysql</b></li> <li>• <b>redis</b></li> <li>• <b>ecs_redis</b></li> <li>• <b>rediscluster</b></li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                                                |
|-----------|-----------|------|----------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <code>ecs_rediscluster</code></li><li>• <code>cloud_gaussdb_redis</code></li></ul> |



| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip        | No        | String | <p>Database IP address. Note:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |

| Parameter       | Mandatory | Type             | Description                                                                                       |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------|
| db_port         | No        | String           | Database port.<br>The value is an integer ranging from 1 to 65535.                                |
| db_user         | Yes       | String           | Database username.                                                                                |
| db_password     | Yes       | String           | Database password.                                                                                |
| instance_id     | No        | String           | ID of a Huawei Cloud DB instance.                                                                 |
| instance_name   | No        | String           | Name of a Huawei Cloud DB instance.                                                               |
| db_name         | No        | String           | Database name. Example: <ul style="list-style-type: none"><li>oracle: serviceName.orcl.</li></ul> |
| source_sharding | No        | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-45</a> .  |

**Table 7-46** Data structure description of field **cloud**

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | Yes       | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is a combination of the regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                   |
| az_code    | No        | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-47** Data structure description of field **vpc**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | Yes       | String | ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a> .                                                                                                                                                                                              |
| subnet_id         | Yes       | String | ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page. Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a> .                                                                                                                             |
| security_group_id | No        | String | ID of the security group where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a> . |

**Table 7-48** Data structure description of field **config**

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | No        | Boolean | Whether the destination DB instance is set to read-only. This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                     |
| node_num            | No        | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-49** Data structure description of field **ssl**

| Parameter     | Mandatory | Type    | Description                                                                             |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | No        | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | No        | String  | SSL certificate name.                                                                   |
| ssl_cert_key  | No        | String  | SSL certificate content, which is encrypted using Base64.                               |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                  |
|--------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_check_sum | No        | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | No        | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-50** Data structure description of field **customized\_dns**

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Yes       | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | Yes       | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>• <b>add</b>: Add a customized DNS server IP address.</li> <li>• <b>keep</b>: Retain the DNS server IP address.</li> <li>• <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>• <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>add</b></li> <li>• <b>keep</b></li> <li>• <b>update</b></li> <li>• <b>recover</b></li> </ul> |
| dns_ip         | Yes       | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-51** Data structure description of field **alarm\_notify**

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| alarm_to_user | Yes       | Boolean | Whether to notify users of alarms.<br>Default value: <b>false</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| topic_urn     | No        | String  | SMN topic URN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| delay_time    | No        | Long    | Delay threshold, in seconds.<br>Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b> <ul style="list-style-type: none"> <li>• A synchronization delay indicates a time difference (in seconds) of synchronization between the source and destination database.</li> <li>• If the delay exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental migration, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</li> <li>• This option is available only for full+incremental tasks.</li> </ul> |
| rpo_delay     | No        | Long    | RPO delay threshold, in seconds. Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b> <p>If the RPO delay between the service database and the DRS instance exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental DR, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</p>                                                                                                                                                                                                               |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rto_delay | No        | Long | RTO delay threshold, in seconds. Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b><br>If the RTO delay between the DRS instance and the DR database exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. |

**Table 7-52** Data structure description of field **speed\_limit**

| Parameter | Mandatory | Type   | Description                                                                                                                                                       |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin     | Yes       | String | Start time (UTC) of flow control. The start time is an integer in hh:mm format and the minutes part is ignored. <b>hh</b> indicates the hour, for example, 01:00. |
| end       | Yes       | String | End time (UTC) in the format of hh:mm, for example, 15:59. The value must end with 59.                                                                            |
| speed     | Yes       | String | Speed. The value ranges from 1 to 9,999, in MB/s.                                                                                                                 |

**Table 7-53** Data structure description of field **user\_migration**

| Parameter       | Mandatory | Type    | Description               |
|-----------------|-----------|---------|---------------------------|
| is_migrate_user | Yes       | Boolean | Whether to migrate users. |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                         |
|-----------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_password | Yes       | Boolean          | Whether to reset a unified password. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: Reset a unified password.</li> <li>• <b>false</b>: Do not reset a unified password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL migration.</li> </ul> </li> </ul> |
| password        | No        | String           | Unified password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty.                                                                                                                                                                                                     |
| user_list       | No        | Array of objects | User list in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL-to-MySQL migration and MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-54</a> .                                                                            |
| role_list       | No        | Array of objects | User role in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-55</a> .                                                                                                         |

**Table 7-54** Data structure description of field **user\_list**

| Parameter       | Mandatory | Type    | Description                                                                                                                                                          |
|-----------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | Yes       | String  | User ID.                                                                                                                                                             |
| account         | Yes       | String  | User.                                                                                                                                                                |
| is_set_password | No        | Boolean | Whether to reset the user password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL migration.</li> </ul> |



| Parameter | Mandatory | Type   | Description                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------|
| password  | No        | String | New password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty. |

**Table 7-55** Data structure description of field **role\_list**

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| role      | Yes       | String | Role.       |

**Table 7-56** Data structure description of field **policy\_config**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filter_ddl_policy | No        | String | DDL filtering policy. Values: <ul style="list-style-type: none"> <li>drop_database</li> </ul> Scenarios: <ul style="list-style-type: none"> <li>Real-time migration: For MySQL migration, this parameter can be set to "", indicating that DROP DATABASE is not filtered.</li> <li>Real-time synchronization: For MySQL synchronization, this parameter can only be set to <b>drop_database</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>drop_database</b></li> </ul> |

| Parameter       | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conflict_policy | No        | String | <p>Incremental conflict policy. The conflict policy refers to the conflict handling policy during incremental synchronization. By default, conflicts in the full synchronization phase are ignored. Values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b>: Ignore the conflict. The system will ignore the conflicting data and continue the subsequent synchronization process.</li> <li>● <b>stop</b>: Report an error. The synchronization task will be stopped and fail. You can view the details in synchronization logs.</li> <li>● <b>overwrite</b>: Overwrite the existing data with the synchronized data. Conflicting data will be overwritten.</li> </ul> <p>Scenarios:</p> <ul style="list-style-type: none"> <li>● Real-time migration: Not supported.</li> <li>● Real-time synchronization: Supported.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b></li> <li>● <b>stop</b></li> <li>● <b>overwrite</b></li> </ul> |

| Parameter               | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| index_trans             | No        | Boolean | Object synchronization scope: indicates whether to synchronize normal indexes. By default, DRS synchronizes the primary key or unique index. A normal index refers to an index other than the primary key or unique index. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: All indexes will be synchronized.</li> <li>• <b>false</b>: Only primary key or unique indexes are synchronized.</li> </ul> Default value: <b>true</b>                                                                                      |
| ddl_trans               | No        | Boolean | Object synchronization scope: indicates whether to synchronize DDLs in the incremental phase. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: DDLs are synchronized in the incremental phase.</li> <li>• <b>false</b>: DDLs are not synchronized in the incremental phase.</li> </ul> Default value: <b>true</b>                                                                                                                                                                                                      |
| data_sync_topology_type | No        | String  | Data synchronization topology. Data synchronization supports multiple synchronization topologies. You can plan your synchronization instances based on service requirements. Values: <ul style="list-style-type: none"> <li>• <b>one2one</b>: one-to-one.</li> <li>• <b>one2many</b>: one-to-many.</li> <li>• <b>many2one</b>: many-to-one.</li> </ul> Default value: <b>one2one</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>one2one</b></li> <li>• <b>one2many</b></li> <li>• <b>many2one</b></li> </ul> |

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| support_ddl_info | No        | String | <p>DDLs to be synchronized.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• <b>CREATE_TABLE</b>: Create a table.</li> <li>• <b>ADD_COLUMN</b>: Add a column.</li> <li>• <b>MODIFY_COLUMN</b>: Modify column attribute.</li> <li>• <b>CHANGE_COLUMN</b>: Change column attribute.</li> <li>• <b>DROP_INDEX</b>: Delete an index.</li> <li>• <b>ADD_INDEX</b>: Add an index.</li> <li>• <b>CREATE_INDEX</b>: Create an index.</li> <li>• <b>RENAME_INDEX</b>: Rename an index.</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>• In one-to-one and one-to-many scenarios, if the DDL usage of the source and destination databases must be consistent, high-risk DDLs must be synchronized.</li> <li>• In one-to-one and one-to-many scenarios, if you do not want a high-risk DDL to be performed in the destination, deselect the high-risk DDL to protect destination data. However, filtering DDL may cause synchronization to fail, for example, column deletion.</li> <li>• In many-to-one data synchronization tasks, it is recommended that only the ADD COLUMN operation is synchronized, or tasks may fail or data may be inconsistent due to changes in destination tables. Typical failure scenarios are as follows:</li> </ul> |

| Parameter           | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |           |        | <ul style="list-style-type: none"> <li>- Synchronizing the TRUNCATE operation clears all destination data.</li> <li>- Synchronizing the CREATE INDEX operation locks the destination table.</li> <li>- Synchronizing the RENAME operation causes other task failure because the destination table cannot be found.</li> <li>- Synchronizing the MODIFY COLUMN operation causes other task failure due to incompatible data types.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATE_TABLE</b></li> <li>● <b>ADD_COLUMN</b></li> <li>● <b>MODIFY_COLUMN</b></li> <li>● <b>CHANGE_COLUMN</b></li> <li>● <b>DROP_INDEX</b></li> <li>● <b>ADD_INDEX</b></li> <li>● <b>CREATE_INDEX</b></li> <li>● <b>RENAME_INDEX</b></li> </ul> |
| sync_type_policy    | No        | String | <p>Synchronization object type.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>● <b>supportAllType</b>: All types.</li> <li>● <b>tableData</b>: Data.</li> <li>● <b>tableStructure</b>: Table structure.</li> <li>● <b>constraintData</b>: Index.</li> </ul> <p><b>NOTE</b><br/>Except <b>supportAllType</b>, other types can be specified together, for example, <b>tableData,tableStructure</b>.</p>                                                                                                                                                                                                                                                                                                                                                  |
| increment_read_mode | No        | String | <p>Incremental log reading mode for synchronization from Oracle to GaussDB: <b>logminer</b> or <b>xstream</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter | Mandatory | Type   | Description                                                                                                                                                              |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dml_types | No        | String | DML synchronization type. The value can be: <ul style="list-style-type: none"> <li>• <b>i</b>: INSERT</li> <li>• <b>u</b>: UPDATE</li> <li>• <b>d</b>: DELETE</li> </ul> |

**Table 7-57** Data structure description of field **db\_object**

| Parameter      | Mandatory | Type                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | Yes       | String                      | Migration or synchronization object scope. Values: <ul style="list-style-type: none"> <li>• <b>all</b>: Migrate or synchronize all objects.</li> <li>• <b>database</b>: database-level migration or synchronization.</li> <li>• <b>table</b>: table-level migration or synchronization.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>all</b></li> <li>• <b>database</b></li> <li>• <b>table</b></li> </ul> |
| target_root_db | No        | Object                      | Destination database for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3. For details, see <a href="#">Table 7-58</a> .                                                                                                                                                                                                                                  |
| object_info    | No        | Map<String, DatabaseObject> | Object information for migration or synchronization. If <b>object_scope</b> is set to <b>all</b> , leave this parameter blank. If <b>object_scope</b> is set to <b>database</b> or <b>table</b> , this parameter is mandatory. For details, see <a href="#">Table 7-59</a> .                                                                                                                                                            |

**Table 7-58** Data structure description of field **target\_root\_db**

| Parameter   | Mandatory | Type   | Description                                          |
|-------------|-----------|--------|------------------------------------------------------|
| db_name     | No        | String | Database name.                                       |
| db_encoding | No        | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-59** Data structure description of field **object\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the database in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values:<br><ul style="list-style-type: none"> <li>• <b>config</b></li> </ul> |
| name      | No        | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Parameter          | Mandatory | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | No        | Boolean                                    | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>• If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>• If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | No        | Map<String, <a href="#">SchemaObject</a> > | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-60</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| tables             | No        | Map<String, <a href="#">TableObject</a> >  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-61</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| total_table_number | No        | Integer                                    | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| is_synchronized    | No        | Boolean                                    | <p>Whether synchronization has been performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



**Table 7-60** Data structure description of field **schemas**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String  | Type of the schema in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                             |
| name      | No        | String  | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | No        | Boolean | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |

| Parameter | Mandatory | Type                                      | Description                                                                                                                                                 |
|-----------|-----------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tables    | No        | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-61</a> . |

**Table 7-61** Data structure description of field **tables**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the table in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object. |
| type      | No        | String | Object type. Values:<br><ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                   |
| name      | No        | String | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all               | No        | Boolean          | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | No        | String           | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| schema_alias_name | No        | String           | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| filtered          | No        | Boolean          | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| filter_conditions | No        | Array of strings | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter         | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                |
|-------------------|-----------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_conditions | No        | Array of strings         | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                 |
| is_synchronized   | No        | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                |
| columns           | No        | Map<String,ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-62</a> . |

**Table 7-62** Data structure description of field columns

| Parameter                      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type                      | No        | String | Type of the column in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |
| primary_key_for_data_filtering | No        | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                        |
| index_for_data_filtering       | No        | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                              |

| Parameter                              | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                                   | No        | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| type                                   | No        | String | Data type of the column.<br>Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int, long, varchar(256), datetime, or timestamp.</b></li> <li>• <b>create_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>update_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>Expression:</b> The value can be <b>varchar (256)</b>, and the column value must be <b>concat(_current_database, '@', _current_table).</b></li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256).</b></li> </ul> |
| primary_key_filter_or_column_filtering | No        | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | No        | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | No        | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | No        | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default</b>:<br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression</b>:<br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table</b>:<br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Value of the additional column. Note: <ul style="list-style-type: none"> <li>This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul> |

**Table 7-63** Data structure description of field **db\_param**

| Parameter   | Mandatory | Type             | Description                                                                                                                                                                          |
|-------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| common      | No        | Array of objects | Common parameter. Only the values of destination database parameters whose comparison results are inconsistent can be changed.<br>For details, see <a href="#">Table 7-64</a> .      |
| performance | No        | Array of objects | Performance parameter. If the comparison results are consistent, you can also change the values of destination database parameters.<br>For details, see <a href="#">Table 7-64</a> . |

**Table 7-64** Data structure description of fields **common** and **performance**

| Parameter    | Mandatory | Type   | Description                                  |
|--------------|-----------|--------|----------------------------------------------|
| key          | Yes       | String | Database parameter name.                     |
| target_value | Yes       | String | Parameter value of the destination database. |



**Table 7-65** Data structure description of field **tuning\_params**

| Parameter     | Mandatory | Type               | Description                                                |
|---------------|-----------|--------------------|------------------------------------------------------------|
| full_sync     | No        | Map<String,String> | Names and values of full migration parameters.             |
| incre_capture | Yes       | Map<String,String> | Names and values of incremental capture parameters.        |
| incre_apply   | Yes       | Map<String,String> | Names and values of incremental replay parameters.         |
| incre_relay   | No        | Map<String,String> | Names and values of incremental log extraction parameters. |
| recovery      | No        | Boolean            | Whether to restore to the default value.                   |

**Table 7-66** Data structure description of field **period\_order**

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type | Yes       | Integer | Subscription period type.<br>Values: <ul style="list-style-type: none"><li>• <b>2</b>: indicates that the service is subscribed by month.</li><li>• <b>3</b>: indicates that the service is subscribed by year.</li></ul> Default value: <b>3</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>2</b></li><li>• <b>3</b></li></ul> |
| period_num  | Yes       | Integer | Number of subscription periods. This parameter depends on the value of <b>period_type</b> . For example: <ul style="list-style-type: none"><li>• When <b>period_type</b> is set to <b>2</b>, the value <b>1</b> indicates one month.</li><li>• When <b>period_type</b> is set to <b>3</b>, the value <b>1</b> indicates one year.</li></ul>           |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_renew | No        | Integer | <p>Whether auto renewal is enabled. Values:</p> <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that auto renewal is disabled. This is the default value. You need to pay manually.</li> <li>• <b>1</b>: indicates that auto renewal is enabled.</li> </ul> <p>Default value: <b>0</b></p> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>0</b></li> <li>• <b>1</b></li> </ul> |

**Table 7-67** Data structure description of field **node\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                            |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| spec      | Yes       | Object | <p>Information body of DRS instance specifications.</p> <p>For details, see <a href="#">Table 7-68</a>.</p>                                            |
| vpc       | No        | Object | <p>Information body of DRS instance VPC. This parameter is mandatory for self-built databases.</p> <p>For details, see <a href="#">Table 7-69</a>.</p> |
| base_info | No        | Object | <p>Information body of DRS instance VPC. This parameter is mandatory for self-built databases.</p> <p>For details, see <a href="#">Table 7-70</a>.</p> |

**Table 7-68** Data structure description of field **spec**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| node_type | Yes       | String | Specification code. Values: <ul style="list-style-type: none"> <li>• <b>micro</b>: minimum specifications.</li> <li>• <b>small</b>: small specifications.</li> <li>• <b>medium</b>: medium specifications.</li> <li>• <b>high</b>: large specifications.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>micro</b></li> <li>• <b>small</b></li> <li>• <b>medium</b></li> <li>• <b>high</b></li> </ul> |

**Table 7-69** Data structure description of field **vpc**

| Parameter | Mandatory | Type   | Description                                         |
|-----------|-----------|--------|-----------------------------------------------------|
| vpc_id    | Yes       | String | ID of the VPC where the DRS instance is located.    |
| subnet_id | Yes       | String | ID of the subnet where the DRS instance is located. |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| custom_node_ip    | No        | String | <p>IP address of the DRS instance to be created. Use commas (,) to separate multiple values. Only IPv4 addresses are supported. To obtain the IP address, perform the following steps:</p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li> <li>Method 2: Call the API for querying private IP addresses. For details, see <a href="#">Querying Private IP Addresses</a>. Select a private IP address whose <b>device_owner</b> is left blank. Example: 192.168.0.10,192.168.0.11</li> </ul> |
| security_group_id | No        | String | ID of the security group where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-70** Data structure description of field **base\_info**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                             |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_type | Yes       | String | <p>DB instance type. The value can be:</p> <ul style="list-style-type: none"> <li><b>single</b>: single instance.</li> <li><b>ha</b>: primary/standby instance.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li><b>single</b></li> <li><b>ha</b></li> </ul> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| arch              | Yes       | String | CPU architecture. The value can be: <ul style="list-style-type: none"><li>• x86</li><li>• arm</li></ul> Enumerated values: <ul style="list-style-type: none"><li>• <b>x86</b></li><li>• <b>arm</b></li></ul>                                                                                                                                                                                         |
| availability_zone | Yes       | String | AZ ID. If the task instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (,). Example: <ul style="list-style-type: none"><li>• If <b>instance_type</b> is set to <b>single</b>, the value is <b>cn-north-4a</b>.</li><li>• If <b>instance_type</b> is set to <b>ha</b>, the value is <b>cn-north-4a,cn-north-4b</b>.</li></ul> |
| status            | No        | String | Status.                                                                                                                                                                                                                                                                                                                                                                                              |
| role              | No        | String | Primary/Standby role of a task.                                                                                                                                                                                                                                                                                                                                                                      |

## Response Parameters

Status code: 200

Table 7-71 Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |
| id         | String | Task ID.                                                                 |
| name       | String | Task name.                                                               |
| status     | String | Operation result.                                                        |

**Status code: 400**

**Table 7-72** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

**Example Request**

- Updating object details about a task with a specified ID  
<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r>

```
{
 "job" : {
 "type" : "db_object",
 "params" : {
 "db_object" : {
 "object_scope" : "table",
 "target_root_db" : {
 "db_name" : "mytest",
 "db_encoding" : "utf8"
 }
 },
 "object_info" : {
 "TEST1" : {
 "name" : "TEST1",
 "tables" : {
 "TBL_1" : {
 "name" : "TBL_1",
 "type" : "table",
 "all" : true,
 "is_synchronized" : false
 },
 "TBL_2" : {
 "name" : "TBL_2",
 "type" : "table",
 "all" : true,
 "is_synchronized" : false
 }
 }
 }
 },
 "TEST2" : {
 "name" : "TEST2",
 "all" : true,
 "tables" : {
 "WT_1" : {
 "name" : "WT_1",
 "type" : "table",
 "all" : true,
 "is_synchronized" : false
 },
 "WT_2" : {
 "name" : "WT_2",
 "type" : "table",
 "all" : true,

```



```
}
 }]
}
}
```

- Updating the number of days after which an abnormal task automatically stops

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r>

```
{
 "job": {
 "type": "expired_days",
 "params": {
 "base_info": {
 "expired_days": "14"
 }
 }
 }
}
```

- Updating the task description

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r>

```
{
 "job": {
 "type": "description",
 "params": {
 "base_info": {
 "description": "drs-test"
 }
 }
 }
}
```

- Setting the MySQL task synchronization policy

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r>

```
{
 "job": {
 "type": "policy",
 "params": {
 "policy_config": {
 "conflict_policy": "overwrite",
 "filter_ddl_policy": "drop_database",
 "index_trans": true,
 "ddl_trans": true,
 "dml_types": "i,u,d",
 "data_sync_topology_type": "one2one",
 "support_ddl_info": "CREATE_TABLE"
 }
 }
 }
}
```

## Example Response

**Status code: 200**

OK

```
{}
```

**Status code: 400**

Bad Request



```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.2.4 Deleting a Task with a Specified ID

### Function

This API is used to delete a task with a specified ID.

### Constraints

- This API supports only the synchronization scenarios from Oracle-> GaussDB distributed, from MySQL to Kafka, and from GaussDB(for MySQL) to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

DELETE /v5/{project\_id}/jobs/{job\_id}

**Table 7-73** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

## Request Parameters

**Table 7-74** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 400**

**Table 7-75** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Deleting a task with a specified ID

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r
```

## Example Response

**Status code: 200**

OK

```
{}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.2.5 Deleting Tasks in Batches

### Function

This API is used to delete tasks with specified IDs in batches.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

```
DELETE /v5/{project_id}/jobs
```

**Table 7-76** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-77** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                              |

**Table 7-78** Request body parameters

| Parameter | Mandatory | Type             | Description                                 |
|-----------|-----------|------------------|---------------------------------------------|
| jobs      | Yes       | Array of strings | Request body for deleting tasks in batches. |

## Response Parameters

**Status code: 200**

**Table 7-79** Response body parameters

| Parameter | Type             | Description                                                                                   |
|-----------|------------------|-----------------------------------------------------------------------------------------------|
| jobs      | Array of objects | Response body for deleting tasks in batches.<br>For details, see <a href="#">Table 7-80</a> . |

**Table 7-80** Data structure description of field **jobs**

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |
| id         | String | Task ID.                                                                 |
| name       | String | Task name.                                                               |
| status     | String | Deletion result.                                                         |

**Status code: 400**

**Table 7-81** Response body parameters

| Parameter  | Type   | Description                                                           |
|------------|--------|-----------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b> |

| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| error_msg | String | Error message.<br>Minimum length: 1<br>Maximum length: 512 |

## Example Request

Deleting tasks with specified IDs in batches

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs
```

```
{
 "jobs": ["c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r", "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r"]
}
```

## Example Response

**Status code: 200**

OK

```
{
 "jobs": [{
 "id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name": "DRS-1234",
 "status": "Success"
 }, {
 "id": "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "name": "DRS-2345",
 "status": "Failed",
 "error_code": "DRS.10000010",
 "error_msg": "Job does not exist, please check job ID"
 }]
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000010",
 "error_msg": "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.2.6 Cloning a Task

### Function

DRS allows you to clone the configuration of existing synchronization tasks.

### Constraints

- Tasks in the **Creating**, **Creation failed**, **Configuring**, **Waiting to start**, **Starting**, or **Deleted** state cannot be cloned.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

POST /v5/{project\_id}/jobs/clone

**Table 7-82** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

### Request Parameters

**Table 7-83** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

**Table 7-84** Request body parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                         |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name         | Yes       | String | Name of a clone task. The name must start with a letter and can include 4 to 50 characters. It can contain only letters, digits, hyphens (-), and underscores (_). The task name must be unique.                                    |
| job_id       | Yes       | String | ID of the task to be cloned.                                                                                                                                                                                                        |
| task_version | No        | String | Task version number. The value is <b>2.0</b> for new UX tasks. By default, this parameter is left empty, indicating that an old task is cloned.<br>Enumerated value: <ul style="list-style-type: none"> <li>• <b>2.0</b></li> </ul> |

## Response Parameters

Status code: 202



**Table 7-85** Response body parameters

| Parameter    | Type   | Description                               |
|--------------|--------|-------------------------------------------|
| id           | String | Task ID.                                  |
| name         | String | Task name.                                |
| status       | String | Task status.                              |
| is_clone_job | String | Indicates whether a task is a clone task. |
| create_time  | String | Task creation time.                       |

**Status code: 400**

**Table 7-86** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Cloning a MySQL synchronization task

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/clone
{
 "job_id": "23fcec7a-899f-40d0-8cd3-7fad453jb201",
 "name": "DRS-8733-copy",
 "task_version": "2.0"
}
```

## Example Response

**Status code: 202**

Accepted

```
{
 "id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name": "DRS-1234",
 "status": "CREATING",
 "is_clone_job": true,
 "create_time": "2022-11-07T16:15:18Z"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000001",
 "error_msg" : "Failed."
}
```

## Error Code

For details, see [Error Code](#).

# 7.3 Management of Tasks Created Asynchronously in Batches

## 7.3.1 Asynchronously Creating Tasks in Batches

### Function

This API is used to asynchronously create real-time migration, synchronization, or DR tasks in batches based on different request parameters.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

POST /v5/{project\_id}/jobs/batch-async-create

**Table 7-87** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-88** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                                          |

**Table 7-89** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                      |
|-----------|-----------|------------------|--------------------------------------------------------------------------------------------------|
| jobs      | Yes       | Array of objects | Request body for asynchronously creating tasks.<br>For details, see <a href="#">Table 7-90</a> . |

**Table 7-90** Data structure description of field **jobs**

| Parameter | Mandatory | Type   | Description                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------|
| base_info | Yes       | Object | Basic information body for creating a task.<br>For details, see <a href="#">Table 7-91</a> . |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source_endpoint | Yes       | Array of objects | Database information body for creating a task.<br>For details, see <a href="#">Table 7-93</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| target_endpoint | Yes       | Array of objects | Database information body for creating a task.<br>For details, see <a href="#">Table 7-93</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| alarm_notify    | No        | Object           | Information body for setting task exception notification. If this parameter is enabled, the system sends a notification to a specified SMN topic when the task is abnormal.<br>For details, see <a href="#">Table 7-100</a> .                                                                                                                                                                                                                                                                                                                                                              |
| speed_limit     | No        | Array of objects | Flow control information body. <ul style="list-style-type: none"><li>• If you enable flow control, you can customize the maximum migration speed.</li><li>• If you disable flow control, the migration speed is not limited and the outbound bandwidth of the source database is maximally used,</li></ul> which causes read consumption on the source database accordingly. For example, if the outbound bandwidth of the source database is 100 MB/s and 80% bandwidth is used, the I/O consumption on the source database is 80 MB/s.<br>For details, see <a href="#">Table 7-101</a> . |
| user_migration  | No        | Object           | User migration information body.<br>For details, see <a href="#">Table 7-102</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| policy_config   | Yes       | Object           | Policy information body. This parameter is used to configure migration and synchronization policies, including the conflict policy, DROP DATASE filtering, and object synchronization scope.<br>For details, see <a href="#">Table 7-105</a> .                                                                                                                                                                                                                                                                                                                                             |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                      |
|-------------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_object         | Yes       | Object           | Database object information body. This parameter is used to select databases or tables to be migrated for migration and synchronization tasks.<br>For details, see <a href="#">Table 7-106</a> . |
| db_param          | No        | Object           | Database parameter information body.<br>For details, see <a href="#">Table 7-112</a> .                                                                                                           |
| tuning_parameters | No        | Object           | Advanced setting information body.<br>For details, see <a href="#">Table 7-114</a> .                                                                                                             |
| period_order      | No        | Object           | Yearly/Monthly information body.<br>For details, see <a href="#">Table 7-116</a> .                                                                                                               |
| node_info         | Yes       | Object           | Information body of the DRS instance.<br>For details, see <a href="#">Table 7-117</a> .                                                                                                          |
| public_ip_list    | No        | Array of objects | Information about a specified EIP.<br>For details, see <a href="#">Table 7-121</a> .                                                                                                             |

**Table 7-91** Data structure description of field **base\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | No        | String | Task name. The task name can be 4 to 50 characters in length. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_).<br><ul style="list-style-type: none"> <li>• Minimum length: <b>4</b></li> <li>• Maximum length: <b>50</b></li> </ul> Minimum length: <b>4</b><br>Maximum length: <b>50</b> |

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type    | No        | String  | <p>Task scenario. Values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul>                                                                                                                                                  |
| multi_write | No        | Boolean | <p>Whether the DR type is dual-active. Note:</p> <ul style="list-style-type: none"> <li>• This parameter is mandatory when <b>job_type</b> is set to <b>cloudDataGuard</b>. If the DR type is dual-active, the value of <b>multi_write</b> is <b>true</b>. Otherwise, the value is <b>false</b>.</li> <li>• If <b>job_type</b> is set to other values, <b>multi_write</b> is optional.</li> </ul>                                                                                                                                                  |
| engine_type | No        | String  | <p>Engine type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>• <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>• <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle-to-gaussdbv5</b></li> <li>• <b>redis-to-gaussredis</b></li> <li>• <b>rediscluster-to-gaussredis</b></li> </ul> |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_direction | No        | String | <p>Migration direction. Values:</p> <ul style="list-style-type: none"> <li>• <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>• <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>• <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>up</b></li> <li>• <b>down</b></li> <li>• <b>non-dbs</b></li> </ul> |
| task_type     | No        | String | <p>Migration type. Values:</p> <ul style="list-style-type: none"> <li>• <b>FULL_TRANS</b>: full migration.</li> <li>• <b>FULL_INCR_TRANS</b>: full +incremental migration.</li> <li>• <b>INCR_TRANS</b>: incremental migration.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>FULL_TRANS</b></li> <li>• <b>FULL_INCR_TRANS</b></li> <li>• <b>INCR_TRANS</b></li> </ul>                                                                           |
| net_type      | No        | String | <p>Network type. Values:</p> <ul style="list-style-type: none"> <li>• <b>eip</b>: public network.</li> <li>• <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>• <b>vpn</b>: VPN or Direct Connect.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>eip</b></li> <li>• <b>vpc</b></li> <li>• <b>vpn</b></li> </ul>                                                                                             |

| Parameter             | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charging_mode         | No        | String           | Billing mode. The pay-per-use billing is used by default.<br>Values: <ul style="list-style-type: none"> <li>• <b>period</b>: indicates the yearly/monthly billing.</li> <li>• <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>period</b></li> <li>• <b>on_demand</b></li> </ul> |
| enterprise_project_id | No        | String           | Enterprise project ID. The default value is <b>0</b> , indicating the default enterprise project.<br>Default value: <b>0</b>                                                                                                                                                                                                                                   |
| description           | No        | String           | Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: ! <>'&"\<br>Minimum length: <b>0</b><br>Maximum length: <b>256</b>                                                                                                                                                         |
| start_time            | No        | String           | Scheduled start time of a task.                                                                                                                                                                                                                                                                                                                                |
| expired_days          | No        | String           | Number of days after which an abnormal task automatically stops. The unit is day. The value ranges from 14 to 100. If this parameter is not specified, the default value is <b>14</b> .<br>Default value: <b>14</b>                                                                                                                                            |
| tags                  | No        | Array of objects | Tag information. Up to 20 tags can be added.<br>For details, see <a href="#">Table 7-92</a> .                                                                                                                                                                                                                                                                  |



**Table 7-92** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | No        | String | Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>36</b>   |
| value     | No        | String | Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>43</b> |

**Table 7-93** Data structure description of fields **source\_endpoint** and **target\_endpoint**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type   | Yes       | String | Database type. The value can be: <ul style="list-style-type: none"> <li>• <b>oracle</b>: Oracle.</li> <li>• <b>gaussdbv5</b>: GaussDB distributed.</li> <li>• <b>redis</b>: Redis.</li> <li>• <b>rediscluster</b>: Cluster Redis.</li> <li>• <b>gaussredis</b>: GeminiDB Redis.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>gaussdbv5</b></li> <li>• <b>redis</b></li> <li>• <b>rediscluster</b></li> <li>• <b>gaussredis</b></li> </ul> |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_type  | Yes       | String | DB instance type. Values: <ul style="list-style-type: none"> <li>• <b>offline</b>: indicates an on-premises database.</li> <li>• <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>• <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>offline</b></li> <li>• <b>ecs</b></li> <li>• <b>cloud</b></li> </ul> |
| endpoint_role  | Yes       | String | DB instance role. Values: <ul style="list-style-type: none"> <li>• <b>so</b>: indicates the source database.</li> <li>• <b>ta</b>: indicates the destination database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>so</b></li> <li>• <b>ta</b></li> </ul>                                                                                                                  |
| endpoint       | Yes       | Object | Basic information body of the database.<br>For details, see <a href="#">Table 7-94</a> .                                                                                                                                                                                                                                                                                                                 |
| cloud          | No        | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-95</a> .                                                                                                                                                                                                                                                                                                      |
| vpc            | No        | Object | Information about the VPC, subnet, and security group where a DB instance resides.<br>For details, see <a href="#">Table 7-96</a> .                                                                                                                                                                                                                                                                      |
| config         | No        | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-97</a> .                                                                                                                                                                                                                                                                                                            |
| ssl            | No        | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-98</a> .                                                                                                                                                                                                                                                                                                       |
| customized_dns | No        | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-99</a> .                                                                                                                                                                                                                                                                                                                                      |

**Table 7-94** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Mandatory | Type   | Description              |
|-----------|-----------|--------|--------------------------|
| id        | No        | String | Database information ID. |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | Yes       | String | <p>Database scenario type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>• <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>• <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>• <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>• <b>redis</b>: On-premises Redis database.</li> <li>• <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>• <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>• <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>ecs_oracle</b></li> <li>• <b>cloud_gaussdbv5</b></li> <li>• <b>mysql</b></li> <li>• <b>ecs_mysql</b></li> <li>• <b>cloud_mysql</b></li> <li>• <b>redis</b></li> <li>• <b>ecs_redis</b></li> <li>• <b>rediscluster</b></li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                  |
|-----------|-----------|------|----------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>ecs_rediscluster</li><li>cloud_gaussdb_redis</li></ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip        | No        | String | <p>Database IP address.<br/>Constraints:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |

| Parameter       | Mandatory | Type             | Description                                                                                         |
|-----------------|-----------|------------------|-----------------------------------------------------------------------------------------------------|
| db_port         | No        | String           | Database port.<br>The value is an integer ranging from 1 to 65535.                                  |
| db_user         | Yes       | String           | Database username.                                                                                  |
| db_password     | Yes       | String           | Database password.                                                                                  |
| instance_id     | No        | String           | ID of a Huawei Cloud DB instance.                                                                   |
| instance_name   | No        | String           | Name of a Huawei Cloud DB instance.                                                                 |
| db_name         | No        | String           | Database name. Example: <ul style="list-style-type: none"> <li>oracle: serviceName.orcl.</li> </ul> |
| source_sharding | No        | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-94</a> .    |

**Table 7-95** Data structure description of field **cloud**

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | Yes       | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is a combination of the regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                   |
| az_code    | No        | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-96** Data structure description of field **vpc**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | Yes       | String | ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps:<br><br>Method 1: Log in to the VPC console and view the VPC ID on the VPC details page.<br><br>Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a> .                                                                                                                                                                                              |
| subnet_id         | Yes       | String | ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps:<br><br>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page.<br><br>Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a> .                                                                                                                             |
| security_group_id | No        | String | ID of the security group where a DB instance is located. To obtain the ID, perform the following steps:<br><br>Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page.<br><br>Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a> . |



**Table 7-97** Data structure description of field **config**

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | No        | Boolean | Whether the destination DB instance is set to read-only. This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                     |
| node_num            | No        | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-98** Data structure description of field **ssl**

| Parameter     | Mandatory | Type    | Description                                                                             |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | No        | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | No        | String  | SSL certificate name.                                                                   |
| ssl_cert_key  | No        | String  | SSL certificate content, which is encrypted using Base64.                               |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                  |
|--------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_check_sum | No        | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | No        | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-99** Data structure description of field **customized\_dns**

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Yes       | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | Yes       | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>• <b>add</b>: Add a customized DNS server IP address.</li> <li>• <b>keep</b>: Retain the DNS server IP address.</li> <li>• <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>• <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>add</b></li> <li>• <b>keep</b></li> <li>• <b>update</b></li> <li>• <b>recover</b></li> </ul> |
| dns_ip         | Yes       | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-100** Data structure description of field **alarm\_notify**

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| alarm_to_user | Yes       | Boolean | Whether to notify users of alarms.<br>Default value: <b>false</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| topic_urn     | No        | String  | SMN topic URN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| delay_time    | No        | Long    | Delay threshold, in seconds.<br>Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b> <ol style="list-style-type: none"> <li>1. A synchronization delay indicates a time difference (in seconds) of synchronization between the source and destination database.</li> <li>2. If the delay exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental migration, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</li> <li>3. This option is available only for full+incremental tasks.</li> </ol> |
| rpo_delay     | No        | Long    | RPO delay threshold, in seconds. Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b> <p>If the RPO delay between the service database and the DRS instance exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental DR, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</p>                                                                                                                                                                                                                  |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rto_delay | No        | Long | RTO delay threshold, in seconds. Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b><br>If the RTO delay between the DRS instance and the DR database exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. |

**Table 7-101** Data structure description of field **speed\_limit**

| Parameter | Mandatory | Type   | Description                                                                                                                                                       |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin     | Yes       | String | Start time (UTC) of flow control. The start time is an integer in hh:mm format and the minutes part is ignored. <b>hh</b> indicates the hour, for example, 01:00. |
| end       | Yes       | String | End time (UTC) in the format of hh:mm, for example, 15:59. The value must end with 59.                                                                            |
| speed     | Yes       | String | Speed. The value ranges from 1 to 9,999, in MB/s.                                                                                                                 |

**Table 7-102** Data structure description of field **user\_migration**

| Parameter       | Mandatory | Type    | Description               |
|-----------------|-----------|---------|---------------------------|
| is_migrate_user | Yes       | Boolean | Whether to migrate users. |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                         |
|-----------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_password | Yes       | Boolean          | Whether to reset a unified password. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: Reset a unified password.</li> <li>• <b>false</b>: Do not reset a unified password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL migration.</li> </ul> </li> </ul> |
| password        | No        | String           | Unified password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty.                                                                                                                                                                                                     |
| user_list       | No        | Array of objects | User list in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL-to-MySQL migration and MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-103</a> .                                                                           |
| role_list       | No        | Array of objects | User role in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-104</a> .                                                                                                        |

**Table 7-103** Data structure description of field **user\_list**

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                   |
|-----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | Yes       | String  | User ID.                                                                                                                                                                      |
| account         | Yes       | String  | User.                                                                                                                                                                         |
| is_set_password | No        | Boolean | Whether to reset the user password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL-to-MySQL migration.</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------|
| password  | No        | String | New password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty. |

**Table 7-104** Data structure description of field **role\_list**

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| role      | Yes       | String | Role.       |

**Table 7-105** Data structure description of field **policy\_config**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filter_ddl_policy | No        | String | DDL filtering policy. Values: <ul style="list-style-type: none"> <li>drop_database</li> </ul> Scenarios: <ul style="list-style-type: none"> <li>Real-time migration: For MySQL migration, this parameter can be set to "", indicating that DROP DATABASE is not filtered.</li> <li>Real-time synchronization: For MySQL synchronization, this parameter can only be set to <b>drop_database</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>drop_database</b></li> </ul> |

| Parameter       | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conflict_policy | No        | String | <p>Incremental conflict policy. The conflict policy refers to the conflict handling policy during incremental synchronization. By default, conflicts in the full synchronization phase are ignored. Values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b>: Ignore the conflict. The system will ignore the conflicting data and continue the subsequent synchronization process.</li> <li>● <b>stop</b>: Report an error. The synchronization task will be stopped and fail. You can view the details in synchronization logs.</li> <li>● <b>overwrite</b>: Overwrite the existing data with the synchronized data. Conflicting data will be overwritten.</li> </ul> <p>Scenarios:</p> <ul style="list-style-type: none"> <li>● Real-time migration: Not supported.</li> <li>● Real-time synchronization: Supported.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b></li> <li>● <b>stop</b></li> <li>● <b>overwrite</b></li> </ul> |

| Parameter               | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| index_trans             | No        | Boolean | Object synchronization scope: indicates whether to synchronize normal indexes. By default, DRS synchronizes the primary key or unique index. A normal index refers to an index other than the primary key or unique index. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: All indexes will be synchronized.</li> <li>• <b>false</b>: Only primary key or unique indexes are synchronized.</li> </ul> Default value: <b>true</b>                                                                                      |
| ddl_trans               | No        | Boolean | Object synchronization scope: indicates whether to synchronize DDLs in the incremental phase. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: DDLs are synchronized in the incremental phase.</li> <li>• <b>false</b>: DDLs are not synchronized in the incremental phase.</li> </ul> Default value: <b>true</b>                                                                                                                                                                                                      |
| data_sync_topology_type | No        | String  | Data synchronization topology. Data synchronization supports multiple synchronization topologies. You can plan your synchronization instances based on service requirements. Values: <ul style="list-style-type: none"> <li>• <b>one2one</b>: one-to-one.</li> <li>• <b>one2many</b>: one-to-many.</li> <li>• <b>many2one</b>: many-to-one.</li> </ul> Default value: <b>one2one</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>one2one</b></li> <li>• <b>one2many</b></li> <li>• <b>many2one</b></li> </ul> |



| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| support_ddl_info | No        | String | <p>DDLs to be synchronized.<br/>Values:</p> <ul style="list-style-type: none"> <li>• <b>CREATE_TABLE</b>: Create a table.</li> <li>• <b>ADD_COLUMN</b>: Add a column.</li> <li>• <b>MODIFY_COLUMN</b>: Modify column attribute.</li> <li>• <b>CHANGE_COLUMN</b>: Change column attribute.</li> <li>• <b>DROP_INDEX</b>: Delete an index.</li> <li>• <b>ADD_INDEX</b>: Add an index.</li> <li>• <b>CREATE_INDEX</b>: Create an index.</li> <li>• <b>RENAME_INDEX</b>: Rename an index.</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>• In one-to-one and one-to-many scenarios, if the DDL usage of the source and destination databases must be consistent, high-risk DDLs must be synchronized.</li> <li>• In one-to-one and one-to-many scenarios, if you do not want a high-risk DDL to be performed in the destination, deselect the high-risk DDL to protect destination data. However, filtering DDL may cause synchronization to fail, for example, column deletion.</li> <li>• In many-to-one data synchronization tasks, it is recommended that only the ADD COLUMN operation is synchronized, or tasks may fail or data may be inconsistent due to changes in destination tables. Typical failure scenarios are as follows:</li> </ul> |

| Parameter           | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |           |        | <ul style="list-style-type: none"> <li>- Synchronizing the TRUNCATE operation clears all destination data.</li> <li>- Synchronizing the CREATE INDEX operation locks the destination table.</li> <li>- Synchronizing the RENAME operation causes other task failure because the destination table cannot be found.</li> <li>- Synchronizing the MODIFY COLUMN operation causes other task failure due to incompatible data types.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● CREATE_TABLE</li> <li>● ADD_COLUMN</li> <li>● MODIFY_COLUMN</li> <li>● CHANGE_COLUMN</li> <li>● DROP_INDEX</li> <li>● ADD_INDEX</li> <li>● CREATE_INDEX</li> <li>● RENAME_INDEX</li> </ul> |
| sync_type_policy    | No        | String | <p>Synchronization object type.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>● <b>supportAllType</b>: All types.</li> <li>● <b>tableData</b>: Data.</li> <li>● <b>tableStructure</b>: Table structure.</li> <li>● <b>constraintData</b>: Index.</li> </ul> <p><b>NOTE</b><br/>Except <b>supportAllType</b>, other types can be specified together, for example, <b>tableData,tableStructure</b>.</p>                                                                                                                                                                                                                                                                                          |
| increment_read_mode | No        | String | <p>Incremental log reading mode for synchronization from Oracle to GaussDB: <b>logminer</b> or <b>xstream</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter | Mandatory | Type   | Description                                                                                                                                                              |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dml_types | No        | String | DML synchronization type. The value can be: <ul style="list-style-type: none"> <li>• <b>i</b>: INSERT</li> <li>• <b>u</b>: UPDATE</li> <li>• <b>d</b>: DELETE</li> </ul> |

**Table 7-106** Data structure description of field **db\_object**

| Parameter      | Mandatory | Type                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | Yes       | String                      | Migration or synchronization object scope. Values: <ul style="list-style-type: none"> <li>• <b>all</b>: Migrate or synchronize all objects.</li> <li>• <b>database</b>: database-level migration or synchronization.</li> <li>• <b>table</b>: table-level migration or synchronization.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>all</b></li> <li>• <b>database</b></li> <li>• <b>table</b></li> </ul> |
| target_root_db | No        | Object                      | Destination database for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3. For details, see <a href="#">Table 7-107</a> .                                                                                                                                                                                                                                 |
| object_info    | No        | Map<String, DatabaseObject> | Object information for migration or synchronization. If <b>object_scope</b> is set to <b>all</b> , leave this parameter blank. If <b>object_scope</b> is set to <b>database</b> or <b>table</b> , this parameter is mandatory. For details, see <a href="#">Table 7-108</a> .                                                                                                                                                           |

**Table 7-107** Data structure description of field **target\_root\_db**

| Parameter   | Mandatory | Type   | Description                                          |
|-------------|-----------|--------|------------------------------------------------------|
| db_name     | No        | String | Database name.                                       |
| db_encoding | No        | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-108** Data structure description of field **object\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the database in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values:<br>• <b>config</b> |
| name      | No        | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter       | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all             | No        | Boolean                  | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>• If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>• If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas         | No        | Map<String,SchemaObject> | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-109</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| tables          | No        | Map<String,TableObject>  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-110</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| total_table_num | No        | Integer                  | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| is_synchronized | No        | Boolean                  | <p>Whether synchronization has been performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Table 7-109** Data structure description of field **schemas**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String  | Type of the schema in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                             |
| name      | No        | String  | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | No        | Boolean | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |

| Parameter | Mandatory | Type                                      | Description                                                                                                                                                  |
|-----------|-----------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tables    | No        | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-110</a> . |

**Table 7-110** Data structure description of field **tables**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the table in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object. |
| type      | No        | String | Object type. Values:<br><ul style="list-style-type: none"> <li>• <b>table</b>: indicates a table.</li> <li>• <b>view</b>: indicates a view.</li> <li>• <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>• <b>table</b></li> <li>• <b>view</b></li> <li>• <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                   |
| name      | No        | String | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|-----------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all               | No        | Boolean          | <p>Whether to migrate or synchronize the entire table.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | No        | String           | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| schema_alias_name | No        | String           | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| filtered          | No        | Boolean          | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| filter_conditions | No        | Array of strings | <p>Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.</p> <p>Minimum length: <b>0</b><br/>Maximum length: <b>512</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



| Parameter         | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_conditions | No        | Array of strings         | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | No        | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | No        | Map<String,ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-111</a> . |

**Table 7-111** Data structure description of field columns

| Parameter                      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type                      | No        | String | Type of the column in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |
| primary_key_for_data_filtering | No        | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                        |
| index_for_data_filtering       | No        | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                              |

| Parameter                              | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                                   | No        | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| type                                   | No        | String | Data type of the column.<br>Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int, long, varchar(256), datetime, or timestamp.</b></li> <li>• <b>create_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>update_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>Expression:</b> The value can be <b>varchar (256)</b>, and the column value must be <b>concat(_current_database, '@', _current_table).</b></li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256).</b></li> </ul> |
| primary_key_filter_or_column_filtering | No        | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | No        | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | No        | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | No        | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default</b>:<br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression</b>:<br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table</b>:<br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Value of the additional column. Note: <ul style="list-style-type: none"> <li>This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul> |

**Table 7-112** Data structure description of field **db\_param**

| Parameter   | Mandatory | Type             | Description                                                                                                                                                                           |
|-------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| common      | No        | Array of objects | Common parameter. Only the values of destination database parameters whose comparison results are inconsistent can be changed.<br>For details, see <a href="#">Table 7-113</a> .      |
| performance | No        | Array of objects | Performance parameter. If the comparison results are consistent, you can also change the values of destination database parameters.<br>For details, see <a href="#">Table 7-113</a> . |

**Table 7-113** Data structure description of fields **common** and **performance**

| Parameter    | Mandatory | Type   | Description                                  |
|--------------|-----------|--------|----------------------------------------------|
| key          | Yes       | String | Database parameter name.                     |
| target_value | Yes       | String | Parameter value of the destination database. |

**Table 7-114** Data structure description of field **tuning\_params**

| Parameter    | Mandatory | Type             | Description                                                                                     |
|--------------|-----------|------------------|-------------------------------------------------------------------------------------------------|
| full_sync    | Yes       | Array of objects | Full migration tuning parameters.<br>For details, see <a href="#">Table 7-115</a> .             |
| incr_capture | Yes       | Array of objects | Incremental capture tuning parameters.<br>For details, see <a href="#">Table 7-115</a> .        |
| incr_apply   | Yes       | Array of objects | Incremental replay tuning parameters.<br>For details, see <a href="#">Table 7-115</a> .         |
| incr_relay   | Yes       | Array of objects | Incremental log extraction tuning parameters.<br>For details, see <a href="#">Table 7-115</a> . |

**Table 7-115** Data structure description of fields **full\_sync**, **incr\_capture**, **incr\_apply**, and **incr\_relay**

| Parameter    | Mandatory | Type    | Description       |
|--------------|-----------|---------|-------------------|
| param_name   | Yes       | String  | Parameter name.   |
| param_value  | Yes       | String  | Parameter value.  |
| availability | Yes       | Boolean | Available or not. |

**Table 7-116** Data structure description of field **period\_order**

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type | Yes       | Integer | Subscription period type.<br>Values: <ul style="list-style-type: none"> <li>• <b>2</b>: indicates that the service is subscribed by month.</li> <li>• <b>3</b>: indicates that the service is subscribed by year.</li> </ul> Default value: <b>3</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>2</b></li> <li>• <b>3</b></li> </ul> |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_num    | Yes       | Integer | Number of subscription periods. This parameter depends on the value of <b>period_type</b> . For example: <ul style="list-style-type: none"> <li>• When <b>period_type</b> is set to <b>2</b>, the value <b>1</b> indicates one month.</li> <li>• When <b>period_type</b> is set to <b>3</b>, the value <b>1</b> indicates one year.</li> </ul>                                                   |
| is_auto_renew | No        | Integer | Whether auto renewal is enabled. Values: <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that auto renewal is disabled. This is the default value. You need to pay manually.</li> <li>• <b>1</b>: indicates that auto renewal is enabled.</li> </ul> Default value: <b>0</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>0</b></li> <li>• <b>1</b></li> </ul> |

**Table 7-117** Data structure description of field **node\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| spec      | Yes       | Object | Information body of DRS instance specifications.<br>For details, see <a href="#">Table 7-118</a> .                                            |
| vpc       | No        | Object | Information body of DRS instance VPC. This parameter is mandatory for self-built databases.<br>For details, see <a href="#">Table 7-119</a> . |
| base_info | No        | Object | Information body of DRS instance VPC. This parameter is mandatory for self-built databases.<br>For details, see <a href="#">Table 7-120</a> . |

**Table 7-118** Data structure description of field **spec**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| node_type | Yes       | String | Specification code. Values: <ul style="list-style-type: none"><li>• <b>micro</b>: minimum specifications.</li><li>• <b>small</b>: small specifications.</li><li>• <b>medium</b>: medium specifications.</li><li>• <b>high</b>: large specifications.</li></ul> Enumerated values: <ul style="list-style-type: none"><li>• <b>micro</b></li><li>• <b>small</b></li><li>• <b>medium</b></li><li>• <b>high</b></li></ul> |

**Table 7-119** Data structure description of field **vpc**

| Parameter | Mandatory | Type   | Description                                         |
|-----------|-----------|--------|-----------------------------------------------------|
| vpc_id    | Yes       | String | ID of the VPC where the DRS instance is located.    |
| subnet_id | Yes       | String | ID of the subnet where the DRS instance is located. |



| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| custom_node_ip    | No        | String | <p>IP address of the DRS instance to be created. Use commas (,) to separate multiple values. Only IPv4 addresses are supported. To obtain the IP address, perform the following steps:</p> <ul style="list-style-type: none"> <li>• Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li> <li>• Method 2: Call the API for querying private IP addresses. For details, see "Querying Private IP Addresses". Select a private IP address whose <b>device_owner</b> is left blank. Example:<br/>192.168.0.10,192.168.0.11</li> </ul> |
| security_group_id | No        | String | ID of the security group where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Table 7-120** Data structure description of field **base\_info**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                     |
|---------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_type | Yes       | String | <p>DB instance type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>single</b>: single instance.</li> <li>• <b>ha</b>: primary/standby instance.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>single</b></li> <li>• <b>ha</b></li> </ul> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| arch              | Yes       | String | CPU architecture. The value can be: <ul style="list-style-type: none"> <li>• x86</li> <li>• arm</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>x86</b></li> <li>• <b>arm</b></li> </ul>                                                                                                                                                                                      |
| availability_zone | Yes       | String | AZ ID. If the task instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (.). Example: <ul style="list-style-type: none"> <li>• If <b>instance_type</b> is set to <b>single</b>, the value is <b>cn-north-4a</b>.</li> <li>• If <b>instance_type</b> is set to <b>ha</b>, the value is <b>cn-north-4a,cn-north-4b</b>.</li> </ul> |
| status            | No        | String | Status.                                                                                                                                                                                                                                                                                                                                                                                                 |
| role              | No        | String | Primary/Standby role of a task.                                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-121** Data structure description of field **public\_ip\_list**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | Yes       | String | ID of a specified EIP.                                                                                                                                                                                                                                                                                                                                                               |
| public_ip | Yes       | String | EIP.                                                                                                                                                                                                                                                                                                                                                                                 |
| type      | Yes       | String | Type of a task with an EIP bound. <ul style="list-style-type: none"> <li>• In a primary/standby task, <b>master</b> indicates the primary task, and <b>slave</b> indicates the standby task.</li> <li>• In other cases, the value is fixed to <b>master</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>master</b></li> <li>• <b>slave</b></li> </ul> |

## Response Parameters

**Status code: 202**

**Table 7-122** Response body parameters

| Parameter | Type   | Description                                                                                                   |
|-----------|--------|---------------------------------------------------------------------------------------------------------------|
| job       | Object | Response body for asynchronously creating tasks in batches.<br>For details, see <a href="#">Table 7-123</a> . |

**Table 7-123** Data structure description of field **job**

| Parameter    | Type   | Description                                        |
|--------------|--------|----------------------------------------------------|
| async_job_id | String | ID of the tasks created asynchronously in batches. |

**Status code: 400**

**Table 7-124** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

- Asynchronously creating pay-per-use synchronization tasks from Oracle to GaussDB distributed, in which **task\_type** is set to **FULL\_INCR\_TRANS** and **net\_type** is set to **eip**

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-async-create
```

```
{
 "jobs": [{
 "base_info": {
 "name": "DRS-1234",
 "job_type": "sync",
 "engine_type": "oracle-to-gaussdbv5",
 "job_direction": "up",
 "task_type": "FULL_INCR_TRANS",
 "net_type": "eip",
 "charging_mode": "on_demand",
```

```
"enterprise_project_id" : "0",
"description" : "",
"expired_days" : "14",
"tags" : [{
 "key" : "test",
 "value" : "test"
}]
},
"source_endpoint" : [{
 "db_type" : "oracle",
 "endpoint_type" : "offline",
 "endpoint_role" : "so",
 "endpoint" : {
 "endpoint_name" : "oracle",
 "ip" : "10.154.217.239",
 "db_port" : "1521",
 "db_user" : "ORACLE_USER",
 "db_name" : "serviceName.orcl",
 "db_password" : "*****"
 },
 "ssl" : {
 "ssl_link" : false
 }
}],
"target_endpoint" : [{
 "db_type" : "gaussdbv5",
 "endpoint_type" : "cloud",
 "endpoint_role" : "ta",
 "endpoint" : {
 "endpoint_name" : "cloud_gaussdbv5",
 "instance_id" : "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user" : "root",
 "db_password" : "*****"
 },
 "cloud" : {
 "region" : "cn-north-4",
 "project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code" : "cn-north-4a,cn-north-4g,cn-north-4c"
 },
 "vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 }
}],
"alarm_notify" : {
 "alarm_to_user" : true,
 "topic_urn" : "urn:smn:cn-north-4:f2c2468c3ee7410c862a461ca073d2f2:test",
 "delay_time" : 60
},
"speed_limit" : [{
 "begin" : "16:00",
 "end" : "15:59",
 "speed" : "10"
}],
"policy_config" : {
 "ddl_trans" : false
},
"db_object" : {
 "object_scope" : "table",
 "target_root_db" : {
 "db_name" : "target_db_name",
 "db_encoding" : "utf8"
 },
 "object_info" : {
 "source_db1" : {
 "name" : "source_db1",
 "all" : false,
 "tables" : {
```

```
 "source_tb1" : {
 "type" : "table",
 "name" : "source_tb1",
 "all" : true
 },
 "source_tb2" : {
 "type" : "table",
 "name" : "source_tb2",
 "all" : true
 }
 }
}
}
}
},
"node_info" : {
 "spec" : {
 "node_type" : "medium"
 }
}
}]
}
```

- Asynchronously creating pay-per-use synchronization tasks in batches from Oracle to GaussDB Distributed and specifying EIPs

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-async-create>

```
{
 "jobs" : [{
 "base_info" : {
 "name" : "DRS-1234",
 "job_type" : "sync",
 "engine_type" : "oracle-to-gaussdbv5",
 "job_direction" : "up",
 "task_type" : "FULL_INCR_TRANS",
 "net_type" : "eip",
 "charging_mode" : "on_demand",
 "enterprise_project_id" : "0",
 "description" : "",
 "expired_days" : "14",
 "tags" : [{
 "key" : "test",
 "value" : "test"
 }]
 },
 "source_endpoint" : [{
 "db_type" : "oracle",
 "endpoint_type" : "offline",
 "endpoint_role" : "so",
 "endpoint" : {
 "endpoint_name" : "oracle",
 "ip" : "*****",
 "db_port" : "1521",
 "db_user" : "ORACLE_USER",
 "db_name" : "serviceName.orcl",
 "db_password" : "*****"
 },
 "ssl" : {
 "ssl_link" : false
 }
 },
 "target_endpoint" : [{
 "db_type" : "gaussdbv5",
 "endpoint_type" : "cloud",
 "endpoint_role" : "ta",
 "endpoint" : {
 "endpoint_name" : "cloud_gaussdbv5",
 "instance_id" : "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user" : "root",
 "db_password" : "*****"
 }
 }
]
}
```

```
},
"cloud" : {
 "region" : "cn-north-4",
 "project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code" : "cn-north-4a,cn-north-4g,cn-north-4c"
},
"vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
}
}],
"alarm_notify" : {
 "alarm_to_user" : true,
 "topic_urn" : "urn:smn:cn-north-4:f2c2468c3ee7410c862a461ca073d2f2:test",
 "delay_time" : 60
},
"speed_limit" : [{
 "begin" : "16:00",
 "end" : "15:59",
 "speed" : "10"
}],
"policy_config" : {
 "ddl_trans" : false
},
"db_object" : {
 "object_scope" : "table",
 "target_root_db" : {
 "db_name" : "target_db_name",
 "db_encoding" : "utf8"
 },
 "object_info" : {
 "source_db1" : {
 "name" : "source_db1",
 "all" : false,
 "tables" : {
 "source_tb1" : {
 "type" : "table",
 "name" : "source_tb1",
 "all" : true
 },
 "source_tb2" : {
 "type" : "table",
 "name" : "source_tb2",
 "all" : true
 }
 }
 }
 }
}
}],
"public_ip_list" : [{
 "id" : "018d9e56-26d5-455a-97dc-e6f5f44a2cbd",
 "public_ip" : "*****",
 "type" : "master"
}],
"node_info" : {
 "spec" : {
 "node_type" : "medium"
 }
}
}
}]
}
```

## Example Response

**Status code: 202**

Accepted

```
{
 "job": {
 "async_job_id": "bd4193aa-072d-4ce6-beec-adffc7252341"
 }
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000001",
 "error_msg": "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | Accepted    |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.3.2 Submitting Tasks Created Asynchronously in Batches

### Function

This API is used to submit the tasks created asynchronously in batches. After tasks are asynchronously created in batches or parameters are updated, the system automatically verifies the parameters. After the parameters of all tasks are verified and no error is reported, you can call this API to create DRS instances.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

POST /v5/{project\_id}/batch-async-jobs/{async\_job\_id}/commit

**Table 7-125** Path parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                         |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| async_job_id | Yes       | String | ID of the tasks created asynchronously in batches, which is returned by the API for asynchronously creating tasks in batches.       |

## Request Parameters

**Table 7-126** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> .                                       |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                              |



## Response Parameters

**Status code: 200**

**Table 7-127** Response body parameters

| Parameter | Type   | Description                                                                                                                                     |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| job       | Object | Response body for submitting the tasks created asynchronously in batches with a specified ID.<br>For details, see <a href="#">Table 7-128</a> . |

**Table 7-128** Data structure description of field **job**

| Parameter    | Type   | Description                                                                           |
|--------------|--------|---------------------------------------------------------------------------------------|
| async_job_id | String | ID of the tasks created asynchronously in batches.                                    |
| status       | String | Status of the tasks created asynchronously in batches.                                |
| msg          | String | Result of submitting the tasks created asynchronously in batches with a specified ID. |

**Status code: 400**

**Table 7-129** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Submitting the tasks created asynchronously in batches

`https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/batch-async-jobs/bd4193aa-072d-4ce6-beec-adffc7252341/commit`

## Example Response

**Status code: 200**

OK

```
{
 "job": {
 "async_job_id": "ac64275d-ae2a-4597-9bb5-a021af3f33e9"
 }
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000001",
 "error_msg": "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.3.3 Querying the List of Tasks Created Asynchronously in Batches

### Function

This API is used to query the list of tasks created asynchronously in batches.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/batch-async-jobs

**Table 7-130** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

**Table 7-131** Query parameters

| Parameter    | Mandatory | Type    | Description                                                                                                                               |
|--------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------|
| async_job_id | No        | String  | ID of the tasks created asynchronously in batches.                                                                                        |
| status       | No        | String  | Status of the tasks created asynchronously in batches.                                                                                    |
| domain_name  | No        | String  | Tenant name of the tasks created asynchronously in batches.                                                                               |
| user_name    | No        | String  | Username of the tasks created asynchronously in batches.                                                                                  |
| offset       | No        | Integer | Offset. The records after this offset will be queried.                                                                                    |
| limit        | No        | Integer | Maximum number of records that can be returned.                                                                                           |
| sort_key     | No        | String  | The keyword based on which the returned results are sorted. The default value is <b>create_time</b> .                                     |
| sort_dir     | No        | String  | Result sorting order. The value can be <b>desc</b> (descending order) or <b>asc</b> (ascending order). The default value is <b>desc</b> . |

## Request Parameters

**Table 7-132** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 200**

**Table 7-133** Response body parameters

| Parameter   | Type             | Description                                                                                                     |
|-------------|------------------|-----------------------------------------------------------------------------------------------------------------|
| total_count | Integer          | Total number of tasks in the list, which is irrelevant to pagination.                                           |
| jobs        | Array of objects | Response body of all tasks created asynchronously in batches.<br>For details, see <a href="#">Table 7-134</a> . |

**Table 7-134** Data structure description of field **jobs**

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| async_job_id | String | ID of the tasks created asynchronously in batches.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| status       | String | Status of the tasks created asynchronously in batches. Values: <ul style="list-style-type: none"> <li>● <b>ASYNC_JOB_VALIDATING</b>: The parameters of the tasks created asynchronously in batches are being verified.</li> <li>● <b>ASYNC_JOB_VALIDATE_FAILED</b>: The parameters of the tasks created asynchronously in batches fail to be verified.</li> <li>● <b>AUTO_PARAM_VALIDATE_SUCCESS</b>: The parameters of the tasks created asynchronously in batches are successfully verified.</li> <li>● <b>COMMIT_SUCCESS</b>: The tasks created asynchronously in batches are successfully submitted.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>ASYNC_JOB_VALIDATING</b></li> <li>● <b>ASYNC_JOB_VALIDATE_FAILED</b></li> <li>● <b>AUTO_PARAM_VALIDATE_SUCCESS</b></li> <li>● <b>COMMIT_SUCCESS</b></li> </ul> |
| domain_name  | String | Tenant name of the tasks created asynchronously in batches.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| user_name    | String | Username of the tasks created asynchronously in batches.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| create_time  | String | Time when the tasks are asynchronously created in batches.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**Status code: 400**

**Table 7-135** Response body parameters

| Parameter  | Type   | Description                                                           |
|------------|--------|-----------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b> |

| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| error_msg | String | Error message.<br>Minimum length: 1<br>Maximum length: 512 |

## Example Request

Querying the list of tasks created asynchronously in batches

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/batch-async-jobs?
async_job_id=&status=&domain_name=&user_name=&offset=0&limit=10&sort_key=&sort_dir=
```

## Example Response

**Status code: 200**

OK

```
{
 "jobs": [{
 "async_job_id": "bd4193aa-072d-4ce6-beec-adffc7252341",
 "status": "AUTO_PARAM_VALIDATE_SUCCESS",
 "domain_name": "domain_name1",
 "user_name": "user_name1",
 "create_time": "2022-11-07T06:41:08Z"
 }, {
 "async_job_id": "7b65d750-51e5-4647-a088-663d28152a3d",
 "status": "COMMIT_SUCCESS",
 "domain_name": "domain_name2",
 "user_name": "user_name2",
 "create_time": "2022-11-05T16:03:45Z"
 }],
 "total_count": 2
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.1000001",
 "error_msg": "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.3.4 Querying Details About Tasks Created Asynchronously in Batches with a Specified ID

### Function

This API is used to query details about the tasks created asynchronously in batches with a specified ID. By default, the return results are sorted by **create\_time** in descending order. Pagination query is supported.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/batch-async-jobs/{async\_job\_id}

**Table 7-136** Path parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                         |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| async_job_id | Yes       | String | ID of the tasks created asynchronously in batches, which is returned by the API for asynchronously creating tasks in batches.       |

**Table 7-137** Query parameters

| Parameter | Mandatory | Type    | Description                                            |
|-----------|-----------|---------|--------------------------------------------------------|
| offset    | No        | Integer | Offset. The records after this offset will be queried. |
| limit     | No        | Integer | Maximum number of records that can be returned.        |

## Request Parameters

**Table 7-138** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

**Status code: 200**

**Table 7-139** Response body parameters

| Parameter   | Type             | Description                                                                                                                                                 |
|-------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| total_count | Integer          | Total number of tasks in the list, which is irrelevant to pagination.                                                                                       |
| jobs        | Array of objects | Response body for querying details about the tasks created asynchronously in batches with a specified ID.<br>For details, see <a href="#">Table 7-140</a> . |



**Table 7-140** Data structure description of field **jobs**

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | String           | Task ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| status          | String           | Task status.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| create_time     | String           | Task creation time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| total_count     | Integer          | Total number of tasks in the list, which is irrelevant to pagination.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| master_job_id   | String           | ID of the primary task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| base_info       | Object           | Basic information body of a task.<br>For details, see <a href="#">Table 7-141</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| source_endpoint | Array of objects | Information body of the source database.<br>For details, see <a href="#">Table 7-143</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| target_endpoint | Array of objects | Information body of the destination database.<br>For details, see <a href="#">Table 7-143</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| alarm_notify    | Object           | Information body for setting task exception notification. If this parameter is enabled, the system sends a notification to a specified SMN topic when the task is abnormal.<br>For details, see <a href="#">Table 7-150</a> .                                                                                                                                                                                                                                                                                                                                                           |
| speed_limit     | Array of objects | Flow control information body. <ul style="list-style-type: none"><li>• If you enable flow control, you can customize the maximum migration speed.</li><li>• If you disable flow control, the migration speed is not limited and the outbound bandwidth of the source database is maximally used, which causes read consumption on the source database accordingly. For example, if the outbound bandwidth of the source database is 100 MB/s and 80% bandwidth is used, the I/O consumption on the source database is 80 MB/s.</li></ul> For details, see <a href="#">Table 7-151</a> . |
| user_migration  | Object           | User migration information body.<br>For details, see <a href="#">Table 7-152</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Parameter                      | Type               | Description                                                                                                                                                                                                                                    |
|--------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| policy_config                  | Object             | Policy information body. This parameter is used to configure migration and synchronization policies, including the conflict policy, DROP DATASE filtering, and object synchronization scope.<br>For details, see <a href="#">Table 7-155</a> . |
| db_param                       | Object             | Database parameter information body.<br>For details, see <a href="#">Table 7-156</a> .                                                                                                                                                         |
| tuning_parameters              | Object             | Advanced setting information body.<br>For details, see <a href="#">Table 7-158</a> .                                                                                                                                                           |
| period_order                   | Object             | Yearly/Monthly information body.<br>For details, see <a href="#">Table 7-160</a> .                                                                                                                                                             |
| node_info                      | Object             | Information body of the DRS instance.<br>For details, see <a href="#">Table 7-161</a> .                                                                                                                                                        |
| logs                           | Array of objects   | Information body of a log query result.<br>For details, see <a href="#">Table 7-165</a> .                                                                                                                                                      |
| network_results                | Array of objects   | Information body of a connection testing result.<br>For details, see <a href="#">Table 7-166</a> .                                                                                                                                             |
| precheck_result                | Object             | Pre-check result information body.<br>For details, see <a href="#">Table 7-167</a> .                                                                                                                                                           |
| progress_info                  | Object             | Task progress information body.<br>For details, see <a href="#">Table 7-170</a> .                                                                                                                                                              |
| migration_object_progress_info | Object             | Progress information body of objects being migrated.<br>For details, see <a href="#">Table 7-172</a> .                                                                                                                                         |
| metrics                        | Object             | Node metrics.<br>For details, see <a href="#">Table 7-174</a> .                                                                                                                                                                                |
| compare_result                 | Object             | Task comparison result.<br>For details, see <a href="#">Table 7-175</a> .                                                                                                                                                                      |
| support_import_file_resp       | Object             | Object import information.<br>For details, see <a href="#">Table 7-186</a> .                                                                                                                                                                   |
| instance_features              | Map<String,String> | A list of task-level functions controlled by both the switch and version.                                                                                                                                                                      |
| task_version                   | String             | Task version.                                                                                                                                                                                                                                  |

| Parameter             | Type             | Description                                                                                                                                                     |
|-----------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| connection_management | Object           | Connection management.<br>For details, see <a href="#">Table 7-184</a> .                                                                                        |
| public_ip_list        | Array of objects | Information about a specified EIP.<br>For details, see <a href="#">Table 7-187</a> .                                                                            |
| bind_public_ip_state  | String           | Whether an EIP is successfully bound.                                                                                                                           |
| children              | Array of objects | In the case of multiple tasks, if an EIP fails to be bound to a subtask, the subtask information is returned.<br>For details, see <a href="#">Table 7-188</a> . |

**Table 7-141** Data structure description of field **base\_info**

| Parameter   | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name        | String  | Task name. The task name can be 4 to 50 characters in length. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_).<br><ul style="list-style-type: none"> <li>• Minimum length: <b>4</b></li> <li>• Maximum length: <b>50</b></li> </ul>                                                                                                             |
| job_type    | String  | Task scenario. Values:<br><ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul>     |
| multi_write | Boolean | Whether the DR type is dual-active. Note:<br><ul style="list-style-type: none"> <li>• This parameter is mandatory when <b>job_type</b> is set to <b>cloudDataGuard</b>. If the DR type is dual-active, the value of <b>multi_write</b> is <b>true</b>. Otherwise, the value is <b>false</b>.</li> <li>• If <b>job_type</b> is set to other values, <b>multi_write</b> is optional.</li> </ul> |

| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type   | String | <p>Engine type. The value can be:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>● <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>● <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b></li> <li>● <b>redis-to-gaussredis</b></li> <li>● <b>rediscluster-to-gaussredis</b></li> </ul> |
| job_direction | String | <p>Migration direction. Values:</p> <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>● <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>up</b></li> <li>● <b>down</b></li> <li>● <b>non-dbs</b></li> </ul>                                                                |
| task_type     | String | <p>Migration type. Values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b>: full migration.</li> <li>● <b>FULL_INCR_TRANS</b>: full+incremental migration.</li> <li>● <b>INCR_TRANS</b>: incremental migration.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b></li> <li>● <b>FULL_INCR_TRANS</b></li> <li>● <b>INCR_TRANS</b></li> </ul>                                                                                                                                           |

| Parameter             | Type             | Description                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| net_type              | String           | Network type. Values: <ul style="list-style-type: none"> <li>● <b>eip</b>: public network.</li> <li>● <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>● <b>vpn</b>: VPN or Direct Connect.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>eip</b></li> <li>● <b>vpc</b></li> <li>● <b>vpn</b></li> </ul> |
| charging_mode         | String           | Billing mode. The pay-per-use billing is used by default. Values: <ul style="list-style-type: none"> <li>● <b>period</b>: indicates the yearly/monthly billing.</li> <li>● <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>period</b></li> <li>● <b>on_demand</b></li> </ul>               |
| enterprise_project_id | String           | Enterprise project ID. The default value is <b>0</b> , indicating the default enterprise project.<br>Default value: <b>0</b>                                                                                                                                                                                                                                              |
| description           | String           | Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: !<>'&"\<br>Minimum length: <b>0</b><br>Maximum length: <b>256</b>                                                                                                                                                                     |
| start_time            | String           | Scheduled start time of a task.                                                                                                                                                                                                                                                                                                                                           |
| expired_days          | String           | Number of days after which an abnormal task automatically stops. The unit is day. The value ranges from 14 to 100. If this parameter is not specified, the default value is <b>14</b> .<br>Default value: <b>14</b>                                                                                                                                                       |
| tags                  | Array of objects | Tag information. Up to 20 tags can be added. For details, see <a href="#">Table 7-142</a> .                                                                                                                                                                                                                                                                               |

**Table 7-142** Data structure description of field **tags**

| Parameter | Type   | Description                                                                                                                                                                        |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>36</b>   |
| value     | String | Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>43</b> |

**Table 7-143** Data structure description of fields **source\_endpoint** and **target\_endpoint**

| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type       | String | Database type. The value can be: <ul style="list-style-type: none"> <li>• <b>oracle</b>: Oracle.</li> <li>• <b>gaussdbv5</b>: GaussDB distributed.</li> <li>• <b>redis</b>: Redis.</li> <li>• <b>rediscluster</b>: Cluster Redis.</li> <li>• <b>gaussredis</b>: GeminiDB Redis.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>gaussdbv5</b></li> <li>• <b>redis</b></li> <li>• <b>rediscluster</b></li> <li>• <b>gaussredis</b></li> </ul> |
| endpoint_type | String | DB instance type. Values: <ul style="list-style-type: none"> <li>• <b>offline</b>: indicates an on-premises database.</li> <li>• <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>• <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>offline</b></li> <li>• <b>ecs</b></li> <li>• <b>cloud</b></li> </ul>                                                                                        |

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                             |
|----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_role  | String | DB instance role. Values: <ul style="list-style-type: none"> <li>• <b>so</b>: indicates the source database.</li> <li>• <b>ta</b>: indicates the destination database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>so</b></li> <li>• <b>ta</b></li> </ul> |
| endpoint       | Object | Basic information body of the database.<br>For details, see <a href="#">Table 7-144</a> .                                                                                                                                                                                               |
| cloud          | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-145</a> .                                                                                                                                                                                    |
| vpc            | Object | Information about the VPC, subnet, and security group where a DB instance resides.<br>For details, see <a href="#">Table 7-146</a> .                                                                                                                                                    |
| config         | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-147</a> .                                                                                                                                                                                          |
| ssl            | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-148</a> .                                                                                                                                                                                     |
| customized_dns | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-149</a> .                                                                                                                                                                                                                    |

**Table 7-144** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Type   | Description              |
|-----------|--------|--------------------------|
| id        | String | Database information ID. |

| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | String | <p>Database scenario type. The value can be:</p> <ul style="list-style-type: none"> <li>● <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>● <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>● <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>● <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>● <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>● <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>● <b>redis</b>: On-premises Redis database.</li> <li>● <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>● <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>● <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>● <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle</b></li> <li>● <b>ecs_oracle</b></li> <li>● <b>cloud_gaussdbv5</b></li> <li>● <b>mysql</b></li> <li>● <b>ecs_mysql</b></li> <li>● <b>cloud_mysql</b></li> <li>● <b>redis</b></li> <li>● <b>ecs_redis</b></li> <li>● <b>rediscluster</b></li> <li>● <b>ecs_rediscluster</b></li> <li>● <b>cloud_gaussdb_redis</b></li> </ul> |



| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip            | String | <p>Database IP address. Constraints:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |
| db_port       | String | <p>Database port.</p> <p>The value is an integer ranging from 1 to 65535.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| db_user       | String | Database username.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| db_password   | String | Database password.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| instance_id   | String | ID of a Huawei Cloud DB instance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| instance_name | String | Name of a Huawei Cloud DB instance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| db_name       | String | <p>Database name. Example:</p> <ul style="list-style-type: none"> <li>• oracle: serviceName.orcl.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter       | Type             | Description                                                                                       |
|-----------------|------------------|---------------------------------------------------------------------------------------------------|
| source_sharding | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-144</a> . |

**Table 7-145** Data structure description of field **cloud**

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is a combination of the regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                   |
| az_code    | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-146** Data structure description of field **vpc**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                               |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id    | String | ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a> .                                                                  |
| subnet_id | String | ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page. Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a> . |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| security_group_id | String | ID of the security group where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a> . |

**Table 7-147** Data structure description of field **config**

| Parameter           | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | Boolean | Whether the destination DB instance is set to read-only. This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                     |
| node_num            | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-148** Data structure description of field **ssl**

| Parameter     | Type    | Description                                                                             |
|---------------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | String  | SSL certificate name.                                                                   |

| Parameter          | Type   | Description                                                                                                                                                  |
|--------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_key       | String | SSL certificate content, which is encrypted using Base64.                                                                                                    |
| ssl_cert_check_sum | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-149** Data structure description of field **customized\_dns**

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>● <b>add</b>: Add a customized DNS server IP address.</li> <li>● <b>keep</b>: Retain the DNS server IP address.</li> <li>● <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>● <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>add</b></li> <li>● <b>keep</b></li> <li>● <b>update</b></li> <li>● <b>recover</b></li> </ul> |
| dns_ip         | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-150** Data structure description of field **alarm\_notify**

| Parameter     | Type    | Description                                                       |
|---------------|---------|-------------------------------------------------------------------|
| alarm_to_user | Boolean | Whether to notify users of alarms.<br>Default value: <b>false</b> |

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| topic_urn  | String | SMN topic URN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| delay_time | Long   | <p>Delay threshold, in seconds. Values:</p> <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <p><b>NOTE</b></p> <ol style="list-style-type: none"> <li>1. A synchronization delay indicates a time difference (in seconds) of synchronization between the source and destination database.</li> <li>2. If the delay exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental migration, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</li> <li>3. This option is available only for full+incremental tasks.</li> </ol> |
| rpo_delay  | Long   | <p>RPO delay threshold, in seconds. Values:</p> <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <p><b>NOTE</b></p> <p>If the RPO delay between the service database and the DRS instance exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental DR, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</p>                                                                                                                                                                                                               |
| rto_delay  | Long   | <p>RTO delay threshold, in seconds. Values:</p> <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <p><b>NOTE</b></p> <p>If the RTO delay between the DRS instance and the DR database exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients.</p>                                                                                                                                                                                                                                                                                                                                                                                       |

**Table 7-151** Data structure description of field **speed\_limit**

| Parameter | Type   | Description                                                                                                                                                       |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin     | String | Start time (UTC) of flow control. The start time is an integer in hh:mm format and the minutes part is ignored. <b>hh</b> indicates the hour, for example, 01:00. |
| end       | String | End time (UTC) in the format of hh:mm, for example, 15:59. The value must end with 59.                                                                            |
| speed     | String | Speed. The value ranges from 1 to 9,999, in MB/s.                                                                                                                 |

**Table 7-152** Data structure description of field **user\_migration**

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                         |
|-----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_migrate_user | Boolean          | Whether to migrate users.                                                                                                                                                                                                                                                                                                           |
| is_set_password | Boolean          | Whether to reset a unified password. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: Reset a unified password.</li> <li>• <b>false</b>: Do not reset a unified password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL migration.</li> </ul> </li> </ul> |
| password        | String           | Unified password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty.                                                                                                                                                                                                     |
| user_list       | Array of objects | User list in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL-to-MySQL migration and MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-153</a> .                                                                           |
| role_list       | Array of objects | User role in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-154</a> .                                                                                                        |

**Table 7-153** Data structure description of field **user\_list**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | User ID.    |

| Parameter       | Type    | Description                                                                                                                                                        |
|-----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| account         | String  | User.                                                                                                                                                              |
| is_set_password | Boolean | Whether to reset the user password. The following scenarios are supported: <ul style="list-style-type: none"> <li>Real-time migration: MySQL migration.</li> </ul> |
| password        | String  | New password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty.                                        |

**Table 7-154** Data structure description of field **role\_list**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| role      | String | Role.       |

**Table 7-155** Data structure description of field **policy\_config**

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filter_ddl_policy | String | DDL filtering policy. Values: <ul style="list-style-type: none"> <li>drop_database</li> </ul> Scenarios: <ul style="list-style-type: none"> <li>Real-time migration: For MySQL migration, this parameter can be set to "", indicating that DROP DATABASE is not filtered.</li> <li>Real-time synchronization: For MySQL synchronization, this parameter can only be set to <b>drop_database</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>drop_database</b></li> </ul> |

| Parameter       | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conflict_policy | String  | <p>Incremental conflict policy. The conflict policy refers to the conflict handling policy during incremental synchronization. By default, conflicts in the full synchronization phase are ignored. Values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b>: Ignore the conflict. The system will ignore the conflicting data and continue the subsequent synchronization process.</li> <li>● <b>stop</b>: Report an error. The synchronization task will be stopped and fail. You can view the details in synchronization logs.</li> <li>● <b>overwrite</b>: Overwrite the existing data with the synchronized data. Conflicting data will be overwritten.</li> </ul> <p>Scenarios:</p> <ul style="list-style-type: none"> <li>● Real-time migration: Not supported.</li> <li>● Real-time synchronization: Supported.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b></li> <li>● <b>stop</b></li> <li>● <b>overwrite</b></li> </ul> |
| index_trans     | Boolean | <p>Object synchronization scope: indicates whether to synchronize normal indexes. By default, DRS synchronizes the primary key or unique index. A normal index refers to an index other than the primary key or unique index. Values:</p> <ul style="list-style-type: none"> <li>● <b>true</b>: All indexes will be synchronized.</li> <li>● <b>false</b>: Only primary key or unique indexes are synchronized.</li> </ul> <p>Default value: <b>true</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ddl_trans       | Boolean | <p>Object synchronization scope: indicates whether to synchronize DDLs in the incremental phase. Values:</p> <ul style="list-style-type: none"> <li>● <b>true</b>: DDLs are synchronized in the incremental phase.</li> <li>● <b>false</b>: DDLs are not synchronized in the incremental phase.</li> </ul> <p>Default value: <b>true</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_sync_topology_type | String | <p>Data synchronization topology. Data synchronization supports multiple synchronization topologies. You can plan your synchronization instances based on service requirements. Values:</p> <ul style="list-style-type: none"><li>● <b>one2one</b>: one-to-one.</li><li>● <b>one2many</b>: one-to-many.</li><li>● <b>many2one</b>: many-to-one.</li></ul> <p>Default value: <b>one2one</b></p> <p>Enumerated values:</p> <ul style="list-style-type: none"><li>● <b>one2one</b></li><li>● <b>one2many</b></li><li>● <b>many2one</b></li></ul> |

| Parameter        | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| support_ddl_info | String | <p>DDLs to be synchronized. Values:</p> <ul style="list-style-type: none"> <li>● <b>CREATE_TABLE</b>: Create a table.</li> <li>● <b>ADD_COLUMN</b>: Add a column.</li> <li>● <b>MODIFY_COLUMN</b>: Modify column attribute.</li> <li>● <b>CHANGE_COLUMN</b>: Change column attribute.</li> <li>● <b>DROP_INDEX</b>: Delete an index.</li> <li>● <b>ADD_INDEX</b>: Add an index.</li> <li>● <b>CREATE_INDEX</b>: Create an index.</li> <li>● <b>RENAME_INDEX</b>: Rename an index.</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>● In one-to-one and one-to-many scenarios, if the DDL usage of the source and destination databases must be consistent, high-risk DDLs must be synchronized.</li> <li>● In one-to-one and one-to-many scenarios, if you do not want a high-risk DDL to be performed in the destination, deselect the high-risk DDL to protect destination data. However, filtering DDL may cause synchronization to fail, for example, column deletion.</li> <li>● In many-to-one data synchronization tasks, it is recommended that only the ADD COLUMN operation is synchronized, or tasks may fail or data may be inconsistent due to changes in destination tables. Typical failure scenarios are as follows: <ul style="list-style-type: none"> <li>– Synchronizing the TRUNCATE operation clears all destination data.</li> <li>– Synchronizing the CREATE INDEX operation locks the destination table.</li> <li>– Synchronizing the RENAME operation causes other task failure because the destination table cannot be found.</li> <li>– Synchronizing the MODIFY COLUMN operation causes other task failure due to incompatible data types.</li> </ul> </li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATE_TABLE</b></li> <li>● <b>ADD_COLUMN</b></li> <li>● <b>MODIFY_COLUMN</b></li> <li>● <b>CHANGE_COLUMN</b></li> </ul> |

| Parameter           | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |        | <ul style="list-style-type: none"> <li>• <b>DROP_INDEX</b></li> <li>• <b>ADD_INDEX</b></li> <li>• <b>CREATE_INDEX</b></li> <li>• <b>RENAME_INDEX</b></li> </ul>                                                                                                                                                                                                                               |
| sync_type_policy    | String | Synchronization object type. Values: <ul style="list-style-type: none"> <li>• <b>supportAllType</b>: All types.</li> <li>• <b>tableData</b>: Data.</li> <li>• <b>tableStructure</b>: Table structure.</li> <li>• <b>constraintData</b>: Index.</li> </ul> <b>NOTE</b><br>Except <b>supportAllType</b> , other types can be specified together, for example, <b>tableData,tableStructure</b> . |
| increment_read_mode | String | Incremental log reading mode for synchronization from Oracle to GaussDB: <b>logminer</b> or <b>xstream</b> .                                                                                                                                                                                                                                                                                  |
| dml_types           | String | DML synchronization type.                                                                                                                                                                                                                                                                                                                                                                     |

**Table 7-156** Data structure description of field **db\_param**

| Parameter   | Type             | Description                                                                                                                                                                           |
|-------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| common      | Array of objects | Common parameter. Only the values of destination database parameters whose comparison results are inconsistent can be changed.<br>For details, see <a href="#">Table 7-157</a> .      |
| performance | Array of objects | Performance parameter. If the comparison results are consistent, you can also change the values of destination database parameters.<br>For details, see <a href="#">Table 7-157</a> . |

**Table 7-157** Data structure description of fields **common** and **performance**

| Parameter    | Type   | Description                                  |
|--------------|--------|----------------------------------------------|
| key          | String | Database parameter name.                     |
| target_value | String | Parameter value of the destination database. |

**Table 7-158** Data structure description of field **tuning\_params**

| Parameter     | Type             | Description                                                                                     |
|---------------|------------------|-------------------------------------------------------------------------------------------------|
| full_sync     | Array of objects | Full migration tuning parameters.<br>For details, see <a href="#">Table 7-159</a> .             |
| incre_capture | Array of objects | Incremental capture tuning parameters.<br>For details, see <a href="#">Table 7-159</a> .        |
| incre_apply   | Array of objects | Incremental replay tuning parameters.<br>For details, see <a href="#">Table 7-159</a> .         |
| incre_relay   | Array of objects | Incremental log extraction tuning parameters.<br>For details, see <a href="#">Table 7-159</a> . |

**Table 7-159** Data structure description of fields **full\_sync**, **incre\_capture**, **incre\_apply**, and **incre\_relay**

| Parameter    | Type    | Description       |
|--------------|---------|-------------------|
| param_name   | String  | Parameter name.   |
| param_value  | String  | Parameter value.  |
| availability | Boolean | Available or not. |

**Table 7-160** Data structure description of field **period\_order**

| Parameter   | Type    | Description                                                                                                                                                                                                                                                                                                                                              |
|-------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type | Integer | Subscription period type. Values: <ul style="list-style-type: none"> <li>• <b>2</b>: indicates that the service is subscribed by month.</li> <li>• <b>3</b>: indicates that the service is subscribed by year.</li> </ul> Default value: <b>3</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>2</b></li> <li>• <b>3</b></li> </ul> |
| period_num  | Integer | Number of subscription periods. This parameter depends on the value of <b>period_type</b> . For example: <ul style="list-style-type: none"> <li>• When <b>period_type</b> is set to <b>2</b>, the value <b>1</b> indicates one month.</li> <li>• When <b>period_type</b> is set to <b>3</b>, the value <b>1</b> indicates one year.</li> </ul>           |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_renew | Integer | Whether auto renewal is enabled. Values: <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that auto renewal is disabled. This is the default value. You need to pay manually.</li> <li>• <b>1</b>: indicates that auto renewal is enabled.</li> </ul> Default value: <b>0</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>0</b></li> <li>• <b>1</b></li> </ul> |

**Table 7-161** Data structure description of field **node\_info**

| Parameter | Type   | Description                                                                                                                                   |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| spec      | Object | Information body of DRS instance specifications.<br>For details, see <a href="#">Table 7-162</a> .                                            |
| vpc       | Object | Information body of DRS instance VPC. This parameter is mandatory for self-built databases.<br>For details, see <a href="#">Table 7-163</a> . |
| base_info | Object | Basic information about a task instance.<br>For details, see <a href="#">Table 7-164</a> .                                                    |

**Table 7-162** Data structure description of field **spec**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| node_type | String | Specification code. Values: <ul style="list-style-type: none"> <li>• <b>micro</b>: minimum specifications.</li> <li>• <b>small</b>: small specifications.</li> <li>• <b>medium</b>: medium specifications.</li> <li>• <b>high</b>: large specifications.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>micro</b></li> <li>• <b>small</b></li> <li>• <b>medium</b></li> <li>• <b>high</b></li> </ul> |

**Table 7-163** Data structure description of field **vpc**

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | String | ID of the VPC where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| subnet_id         | String | ID of the subnet where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| custom_node_ip    | String | IP address of the DRS instance to be created. Use commas (,) to separate multiple values. Only IPv4 addresses are supported. To obtain the IP address, perform the following steps: <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li> <li>Method 2: Call the API for querying private IP addresses. For details, see "Querying Private IP Addresses". Select a private IP address whose <b>device_owner</b> is left blank. Example: 192.168.0.10,192.168.0.11</li> </ul> |
| security_group_id | String | ID of the security group where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Table 7-164** Data structure description of field **base\_info**

| Parameter     | Type   | Description                                                                                                                                                                                                                                                            |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_type | String | Instance type. The value can be: <ul style="list-style-type: none"> <li><b>single</b>: single instance.</li> <li><b>ha</b>: primary/standby instance.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>single</b></li> <li><b>ha</b></li> </ul> |
| arch          | String | CPU architecture. The value can be: <ul style="list-style-type: none"> <li>x86</li> <li>arm</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>x86</b></li> <li><b>arm</b></li> </ul>                                                             |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| availability_zone | String | AZ ID. If the task instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (.). Example: <ul style="list-style-type: none"> <li>If <b>instance_type</b> is set to <b>single</b>, the value is <b>cn-north-4a</b>.</li> <li>If <b>instance_type</b> is set to <b>ha</b>, the value is <b>cn-north-4a,cn-north-4b</b>.</li> </ul> |
| status            | String | Status.                                                                                                                                                                                                                                                                                                                                                                                             |
| role              | String | Primary/Standby role of a task.                                                                                                                                                                                                                                                                                                                                                                     |

**Table 7-165** Data structure description of field **logs**

| Parameter   | Type   | Description      |
|-------------|--------|------------------|
| level       | String | Log level.       |
| message     | String | Log information. |
| create_time | String | Log time.        |

**Table 7-166** Data structure description of field **network\_results**

| Parameter  | Type    | Description                                                                                                                                                                                                                                                                                                                    |
|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip         | String  | IP address for connection testing.                                                                                                                                                                                                                                                                                             |
| success    | Boolean | Whether the connection testing is successful.                                                                                                                                                                                                                                                                                  |
| result     | String  | Connection testing result.                                                                                                                                                                                                                                                                                                     |
| status     | String  | Whether the connection testing is successful. Values: <ul style="list-style-type: none"> <li><b>success</b>: The connection testing is successful.</li> <li><b>failed</b>: The connection testing fails.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>success</b></li> <li><b>failed</b></li> </ul> |
| error_code | String  | Error code of the connection testing failure.                                                                                                                                                                                                                                                                                  |
| error_msg  | String  | Error message of the connection testing failure.                                                                                                                                                                                                                                                                               |

**Table 7-167** Data structure description of field **precheck\_result**

| Parameter         | Type             | Description                                                          |
|-------------------|------------------|----------------------------------------------------------------------|
| result            | Boolean          | Whether the pre-check items are passed.                              |
| process           | String           | Pre-check progress, in percentage.                                   |
| total_passed_rate | String           | Percentage of passed pre-checks.                                     |
| rds_instance_id   | String           | DB instance ID.                                                      |
| job_direction     | String           | Migration direction.                                                 |
| precheck_results  | Array of objects | Pre-check results.<br>For details, see <a href="#">Table 7-168</a> . |

**Table 7-168** Data structure description of field **precheck\_results**

| Parameter         | Type             | Description                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| item              | String           | Check item.                                                                                                                                                                                                                                                                                                                                                     |
| result            | String           | Check results. Values: <ul style="list-style-type: none"> <li>● <b>PASSED</b>: The check is passed.</li> <li>● <b>ALARM</b>: There are check items to be confirmed.</li> <li>● <b>FAILED</b>: The check fails.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>PASSED</b></li> <li>● <b>ALARM</b></li> <li>● <b>FAILED</b></li> </ul> |
| failed_reason     | String           | Failure cause.                                                                                                                                                                                                                                                                                                                                                  |
| data              | String           | Failure data.                                                                                                                                                                                                                                                                                                                                                   |
| raw_error_message | String           | Failure details.                                                                                                                                                                                                                                                                                                                                                |
| group             | String           | Check item group.                                                                                                                                                                                                                                                                                                                                               |
| is_support_skip   | Boolean          | Whether to skip the check.                                                                                                                                                                                                                                                                                                                                      |
| is_skipped        | Boolean          | Skipped.                                                                                                                                                                                                                                                                                                                                                        |
| failed_sub_jobs   | Array of objects | Details about a failed subtask.<br>For details, see <a href="#">Table 7-169</a> .                                                                                                                                                                                                                                                                               |



**Table 7-169** Data structure description of field **failed\_sub\_jobs**

| Parameter    | Type   | Description           |
|--------------|--------|-----------------------|
| id           | String | Subtask ID.           |
| name         | String | Subtask name.         |
| check_result | String | Subtask check result. |

**Table 7-170** Data structure description of field **progress\_info**

| Parameter               | Type                                               | Description                                                                        |
|-------------------------|----------------------------------------------------|------------------------------------------------------------------------------------|
| progress                | String                                             | Migration comparison progress in percentage.                                       |
| incr_trans_delay        | String                                             | Incremental migration delay (unit: s).                                             |
| incr_trans_delay_millis | String                                             | Incremental migration delay (unit: ms).                                            |
| task_mode               | String                                             | Migration type.                                                                    |
| transfer_statuses       | String                                             | Migration status.                                                                  |
| process_time            | String                                             | Migration time.                                                                    |
| remaining_time          | String                                             | Estimated remaining time.                                                          |
| progress_map            | Map<String, <a href="#">ProgressCompleteInfo</a> > | Full migration progress details.<br>For details, see <a href="#">Table 7-171</a> . |

**Table 7-171** Data structure description of field **progress\_map**

| Parameter      | Type   | Description               |
|----------------|--------|---------------------------|
| completed      | String | Progress.                 |
| remaining_time | String | Estimated remaining time. |

**Table 7-172** Data structure description of field **migration\_object\_progress\_info**

| Parameter                 | Type             | Description                                                         |
|---------------------------|------------------|---------------------------------------------------------------------|
| migration_object_overview | Array of objects | Overview details.<br>For details, see <a href="#">Table 7-173</a> . |

| Parameter          | Type   | Description                          |
|--------------------|--------|--------------------------------------|
| create_time        | String | Data generation time.                |
| full_start_time    | String | Start time of full migration.        |
| full_complete_time | String | End time of full migration.          |
| incr_start_time    | String | Start time of incremental migration. |
| end_time           | String | End time.                            |

**Table 7-173** Data structure description of field **migration\_object\_overview**

| Parameter  | Type   | Description                    |
|------------|--------|--------------------------------|
| type       | String | Type.                          |
| src_count  | String | Amount of data to be migrated. |
| dst_count  | String | Amount of data migrated.       |
| status     | String | Status.                        |
| start_time | String | Start time.                    |
| end_time   | String | End time.                      |

**Table 7-174** Data structure description of field **metrics**

| Parameter                   | Type   | Description                       |
|-----------------------------|--------|-----------------------------------|
| job_id                      | String | Task ID.                          |
| node_id                     | String | Instance ID.                      |
| time_stamp                  | String | Time when the metric is reported. |
| cpu_util                    | String | CPU usage.                        |
| mem_util                    | String | Memory usage.                     |
| network_incoming_bytes_rate | String | Network input throughput.         |
| network_outgoing_bytes_rate | String | Network output throughput.        |
| disk_read_bytes_rate        | String | Disk read throughput.             |

| Parameter                  | Type   | Description                                        |
|----------------------------|--------|----------------------------------------------------|
| disk_write_bytes_rate      | String | Disk write throughput.                             |
| apply_rows_rate            | String | Rows written into destination database per second. |
| apply_transactions_rate    | String | DML TPS.                                           |
| apply_ddl_rate             | String | DDL TPS.                                           |
| apply_average_execute_time | String | Average transaction execution time.                |
| apply_average_commit_time  | String | Average transaction commit time.                   |
| apply_current_state        | String | Synchronization status.                            |

**Table 7-175** Data structure description of field **compare\_result**

| Parameter                      | Type             | Description                                                                                             |
|--------------------------------|------------------|---------------------------------------------------------------------------------------------------------|
| objects_compare_overview_info  | Object           | Information body of object-level comparison overview.<br>For details, see <a href="#">Table 7-176</a> . |
| objects_compare_detail_infos   | Array of objects | Information body of object-level comparison details.<br>For details, see <a href="#">Table 7-178</a> .  |
| data_compare_task_list         | Array of objects | List of data comparison tasks.<br>For details, see <a href="#">Table 7-179</a> .                        |
| line_compare_overview_infos    | Array of objects | Information body of row comparison overview.<br>For details, see <a href="#">Table 7-180</a> .          |
| line_compare_detail_infos      | Array of objects | Information body of row comparison details.<br>For details, see <a href="#">Table 7-181</a> .           |
| content_compare_overview_infos | Array of objects | Information body of value comparison overview.<br>For details, see <a href="#">Table 7-182</a> .        |
| content_compare_detail_infos   | Array of objects | Information body of value comparison details.<br>For details, see <a href="#">Table 7-183</a> .         |

**Table 7-176** Data structure description of field **objects\_compare\_overview\_info**

| Parameter                | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time              | String           | Time when a comparison task is created.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| compare_results          | Array of objects | Comparison result.<br>For details, see <a href="#">Table 7-177</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| start_time               | String           | Start time of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| status                   | String           | Status of a comparison task. Values: <ul style="list-style-type: none"> <li>● <b>RUNNING</b>: The comparison task is in progress.</li> <li>● <b>WAITING_FOR_RUNNING</b>: The comparison task is waiting to be started.</li> <li>● <b>SUCCESSFUL</b>: The comparison task is complete.</li> <li>● <b>FAILED</b>: The comparison task fails.</li> <li>● <b>CANCELLED</b>: The comparison task is canceled.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>RUNNING</b></li> <li>● <b>WAITING_FOR_RUNNING</b></li> <li>● <b>SUCCESSFUL</b></li> <li>● <b>FAILED</b></li> <li>● <b>CANCELLED</b></li> </ul> |
| export_status            | String           | Status of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| report_remaining_seconds | Long             | Remaining validity period of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| compare_job_id           | String           | ID of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| error_msg                | String           | Failure cause.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Table 7-177** Data structure description of field **compare\_results**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <p>Object type. Values:</p> <ul style="list-style-type: none"> <li>● <b>DB</b>: indicates a database.</li> <li>● <b>TABLE</b>: indicates a table.</li> <li>● <b>VIEW</b>: indicates a view.</li> <li>● <b>EVENT</b>: indicates an event.</li> <li>● <b>ROUTINE</b>: indicates a stored procedure and function.</li> <li>● <b>INDEX</b>: indicates an index.</li> <li>● <b>TRIGGER</b>: indicates a trigger.</li> <li>● <b>SYNONYM</b>: indicates a synonym.</li> <li>● <b>FUNCTION</b>: indicates a function.</li> <li>● <b>PROCEDURE</b>: indicates a stored procedure.</li> <li>● <b>TYPE</b>: indicates a user-defined type.</li> <li>● <b>RULE</b>: indicates a rule.</li> <li>● <b>DEFAULT_TYPE</b>: indicates a default value.</li> <li>● <b>PLAN_GUIDE</b>: indicates an execution plan.</li> <li>● <b>CONSTRAINT</b>: indicates a constraint.</li> <li>● <b>FILE_GROUP</b>: indicates a file group.</li> <li>● <b>PARTITION_FUNCTION</b>: indicates a partition function.</li> <li>● <b>PARTITION_SCHEME</b>: indicates a partition scheme.</li> <li>● <b>TABLE_COLLATION</b>: indicates table sorting rule.</li> <li>● <b>EXTENSIONS</b>: indicates a plug-in.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>DB</b></li> <li>● <b>TABLE</b></li> <li>● <b>VIEW</b></li> <li>● <b>EVENT</b></li> <li>● <b>ROUTINE</b></li> <li>● <b>INDEX</b></li> <li>● <b>TRIGGER</b></li> <li>● <b>SYNONYM</b></li> <li>● <b>FUNCTION</b></li> <li>● <b>PROCEDURE</b></li> <li>● <b>TYPE</b></li> <li>● <b>RULE</b></li> <li>● <b>DEFAULT_TYPE</b></li> </ul> |

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |        | <ul style="list-style-type: none"> <li>• PLAN_GUIDE</li> <li>• CONSTRAINT</li> <li>• FILE_GROUP</li> <li>• PARTITION_FUNCTION</li> <li>• PARTITION_SCHEME</li> <li>• TABLE_COLLATION</li> <li>• EXTENSIONS</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| source_count | Long   | Number of source objects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| target_count | Long   | Number of destination objects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| status       | String | <p>Comparison result. Values: <b>CONSISTENT</b>: consistent. <b>INCONSISTENT</b>: inconsistent. <b>COMPARING</b>: The comparison is in progress. <b>WAITING_FOR_COMPARISON</b>: waiting for comparison. <b>FAILED_TO_COMPARE</b>: The comparison fails. <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist. <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</p> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• CONSISTENT</li> <li>• INCONSISTENT</li> <li>• COMPARING</li> <li>• WAITING_FOR_COMPARISON</li> <li>• FAILED_TO_COMPARE</li> <li>• TARGET_DB_NOT_EXIST</li> <li>• CAN_NOT_COMPARE</li> </ul> |

**Table 7-178** Data structure description of field **objects\_compare\_detail\_infos**

| Parameter       | Type   | Description                                   |
|-----------------|--------|-----------------------------------------------|
| source_db_value | String | Comparison value of the source database.      |
| target_db_value | String | Comparison value of the destination database. |
| source_db_name  | String | Source database name.                         |
| target_db_name  | String | Destination database name.                    |

| Parameter     | Type   | Description    |
|---------------|--------|----------------|
| error_message | String | Failure cause. |

**Table 7-179** Data structure description of field **data\_compare\_task\_list**

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id                       | String | ID of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| type                     | String | Comparison type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| start_time               | String | Start time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| end_time                 | String | End time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| status                   | String | <p>Status of a comparison task. Values:</p> <ul style="list-style-type: none"> <li>● <b>RUNNING</b>: The comparison task is in progress.</li> <li>● <b>WAITING_FOR_RUNNING</b>: The comparison task is waiting to be started.</li> <li>● <b>SUCCESSFUL</b>: The comparison task is complete.</li> <li>● <b>FAILED</b>: The comparison task fails.</li> <li>● <b>CANCELLED</b>: The comparison task is canceled.</li> <li>● <b>TIMEOUT_INTERRUPT</b>: The comparison task times out.</li> <li>● <b>FULL_DOING</b>: Full verification is in progress.</li> <li>● <b>INCRE_DOING</b>: Incremental verification is in progress.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>RUNNING</b></li> <li>● <b>WAITING_FOR_RUNNING</b></li> <li>● <b>SUCCESSFUL</b></li> <li>● <b>FAILED</b></li> <li>● <b>CANCELLED</b></li> <li>● <b>TIMEOUT_INTERRUPT</b></li> <li>● <b>FULL_DOING</b></li> <li>● <b>INCRE_DOING</b></li> </ul> |
| compute_type             | String | Compute resource of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| export_status            | String | Status of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| report_remaining_seconds | String | Remaining validity period of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter       | Type               | Description               |
|-----------------|--------------------|---------------------------|
| compare_job_tag | Map<String,String> | Tag of a comparison task. |
| error_msg       | String             | Failure cause.            |

**Table 7-180** Data structure description of field **line\_compare\_overview\_infos**

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source_db_name | String | Source database name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| target_db_name | String | Destination database name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| status         | String | <p>Row comparison result. Values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b>: consistent.</li> <li>● <b>INCONSISTENT</b>: inconsistent.</li> <li>● <b>COMPARING</b>: The comparison is in progress.</li> <li>● <b>WAITING_FOR_COMPARISON</b>: waiting for comparison.</li> <li>● <b>FAILED_TO_COMPARE</b>: The comparison fails.</li> <li>● <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist.</li> <li>● <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b></li> <li>● <b>INCONSISTENT</b></li> <li>● <b>COMPARING</b></li> <li>● <b>WAITING_FOR_COMPARISON</b></li> <li>● <b>FAILED_TO_COMPARE</b></li> <li>● <b>TARGET_DB_NOT_EXIST</b></li> <li>● <b>CAN_NOT_COMPARE</b></li> </ul> |

**Table 7-181** Data structure description of field **line\_compare\_detail\_infos**

| Parameter         | Type   | Description                        |
|-------------------|--------|------------------------------------|
| source_table_name | String | Table name of the source database. |



| Parameter          | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source_row_num     | String | Number of table rows in the source database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| target_table_name  | String | Table name of the destination database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| target_row_num     | String | Number of table rows in the destination database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| difference_row_num | String | Difference value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| status             | String | <p>Comparison result. Values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b>: consistent.</li> <li>● <b>INCONSISTENT</b>: inconsistent.</li> <li>● <b>COMPARING</b>: The comparison is in progress.</li> <li>● <b>WAITING_FOR_COMPARISON</b>: waiting for comparison.</li> <li>● <b>FAILED_TO_COMPARE</b>: The comparison fails.</li> <li>● <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist.</li> <li>● <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b></li> <li>● <b>INCONSISTENT</b></li> <li>● <b>COMPARING</b></li> <li>● <b>WAITING_FOR_COMPARISON</b></li> <li>● <b>FAILED_TO_COMPARE</b></li> <li>● <b>TARGET_DB_NOT_EXIST</b></li> <li>● <b>CAN_NOT_COMPARE</b></li> </ul> |
| message            | String | Message.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Table 7-182** Data structure description of field **content\_compare\_overview\_infos**

| Parameter | Type   | Description                |
|-----------|--------|----------------------------|
| source_db | String | Source database name.      |
| target_db | String | Destination database name. |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status         | String  | <p>Comparison result. Values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b>: consistent.</li> <li>● <b>INCONSISTENT</b>: inconsistent.</li> <li>● <b>COMPARING</b>: The comparison is in progress.</li> <li>● <b>WAITING_FOR_COMPARISON</b>: waiting for comparison.</li> <li>● <b>FAILED_TO_COMPARE</b>: The comparison fails.</li> <li>● <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist.</li> <li>● <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b></li> <li>● <b>INCONSISTENT</b></li> <li>● <b>COMPARING</b></li> <li>● <b>WAITING_FOR_COMPARISON</b></li> <li>● <b>FAILED_TO_COMPARE</b></li> <li>● <b>TARGET_DB_NOT_EXIST</b></li> <li>● <b>CAN_NOT_COMPARE</b></li> </ul> |
| compare_result | Boolean | Comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**Table 7-183** Data structure description of field **content\_compare\_detail\_infos**

| Parameter         | Type   | Description                                       |
|-------------------|--------|---------------------------------------------------|
| source_db         | String | Source database name.                             |
| target_db         | String | Destination database name.                        |
| source_table_name | String | Table name of the source database.                |
| target_table_name | String | Table name of the destination database.           |
| source_row_number | Long   | Number of table rows in the source database.      |
| target_row_number | Long   | Number of table rows in the destination database. |

| Parameter              | Type    | Description                                                                                                                                          |
|------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| difference_row_num     | Long    | Number of inconsistent rows.                                                                                                                         |
| line_compare_result    | Boolean | Row comparison result. Values: <ul style="list-style-type: none"> <li>● <b>true</b>: consistent.</li> <li>● <b>false</b>: inconsistent.</li> </ul>   |
| content_compare_result | Boolean | Value comparison result. Values: <ul style="list-style-type: none"> <li>● <b>true</b>: consistent.</li> <li>● <b>false</b>: inconsistent.</li> </ul> |
| message                | String  | Failure cause.                                                                                                                                       |

**Table 7-184** Data structure description of field **connection\_management**

| Parameter         | Type   | Description                                                          |
|-------------------|--------|----------------------------------------------------------------------|
| driver_management | Object | Driver management.<br>For details, see <a href="#">Table 7-185</a> . |

**Table 7-185** Data structure description of field **driver\_management**

| Parameter   | Type   | Description  |
|-------------|--------|--------------|
| driver_name | String | Driver name. |

**Table 7-186** Data structure description of field **support\_import\_file\_resp**

| Parameter       | Type   | Description                                   |
|-----------------|--------|-----------------------------------------------|
| file_size       | String | File import threshold.                        |
| previous_select | String | Mode in which objects are selected last time. |

**Table 7-187** Data structure description of field **public\_ip\_list**

| Parameter | Type   | Description            |
|-----------|--------|------------------------|
| id        | String | ID of a specified EIP. |
| public_ip | String | EIP.                   |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | Type of a task with an EIP bound. <ul style="list-style-type: none"> <li>In a primary/standby task, <b>master</b> indicates the primary task, and <b>slave</b> indicates the standby task.</li> <li>In other cases, the value is fixed to <b>master</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>master</b></li> <li><b>slave</b></li> </ul> |

**Table 7-188** Data structure description of field **children**

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| id        | String | Subtask ID.   |
| name      | String | Subtask name. |

**Status code: 400**

**Table 7-189** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying details about the tasks created asynchronously in batches with a specified ID

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/batch-async-jobs/bd4193aa-072d-4ce6-beec-adffc7252341
```

## Example Response

**Status code: 200**

OK

```
{
 "jobs" : [{
 "id" : "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "status" : "CONFIGURATION",
 "create_time" : "2022-11-07T16:15:18Z",
 "base_info" : {
 "name" : "DRS-1234",
 "job_type" : "sync",
 "engine_type" : "oracle-to-gaussdbv5",
 "job_direction" : "up",
 "task_type" : "FULL_INCR_TRANS",
 "net_type" : "eip",
 "charging_mode" : "on_demand",
 "enterprise_project_id" : "0",
 "description" : "",
 "expired_days" : 14,
 "tags" : [{
 "key" : "test",
 "value" : "test"
 }]
 }
]
},
 "source_endpoint" : [{
 "db_type" : "oracle",
 "endpoint_type" : "offline",
 "endpoint_role" : "so",
 "endpoint" : {
 "id" : "f59e6118-da89-4fdb-9b98-65f56709928a",
 "endpoint_name" : "oracle",
 "ip" : "10.154.217.239",
 "db_port" : "1521",
 "db_user" : "ORACLE_USER",
 "db_name" : "serviceName.orcl"
 },
 "ssl" : {
 "ssl_link" : false
 }
 }],
 "target_endpoint" : [{
 "db_type" : "gaussdbv5",
 "endpoint_type" : "cloud",
 "endpoint_role" : "ta",
 "endpoint" : {
 "id" : "10deb576-8885-473b-a213-4d76e668dc0d",
 "endpoint_name" : "cloud_gaussdbv5",
 "instance_id" : "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user" : "root"
 },
 "cloud" : {
 "region" : "cn-north-4",
 "project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code" : "cn-north-4a,cn-north-4g,cn-north-4c"
 },
 "vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 }
 }],
 "alarm_notify" : {
 "alarm_to_user" : true,
 "topic_urn" : "urn:smn:cn-north-4:f2c2468c3ee7410c862a461ca073d2f2:test",
 "delay_time" : 60
 },
 "speed_limit" : [{
 "begin" : "16:00",
 "end" : "15:59",
 "speed" : "10"
 }],
 "policy_config" : {
```

```
"ddl_trans" : false
},
"node_info" : {
 "spec" : {
 "node_type" : "medium"
 }
}, {
 "id" : "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "status" : "INCRE_TRANSFER_STARTED",
 "create_time" : "2022-11-05T15:32:22Z",
 "base_info" : {
 "name" : "DRS-2345",
 "job_type" : "sync",
 "engine_type" : "oracle-to-gaussdbv5",
 "job_direction" : "up",
 "task_type" : "FULL_INCR_TRANS",
 "net_type" : "vpn",
 "charging_mode" : "on_demand",
 "enterprise_project_id" : "0",
 "description" : "",
 "expired_days" : 14,
 "tags" : [{
 "key" : "test",
 "value" : "test"
 }]
 },
 "source_endpoint" : [{
 "db_type" : "oracle",
 "endpoint_type" : "offline",
 "endpoint_role" : "so",
 "endpoint" : {
 "id" : "6a2aea81-c01d-4313-b93e-6a17f9351c51",
 "endpoint_name" : "oracle",
 "ip" : "10.154.227.134",
 "db_port" : "1521",
 "db_user" : "ORACLE_USER",
 "db_name" : "serviceName.orcl"
 },
 "ssl" : {
 "ssl_link" : false
 }
 }],
 "target_endpoint" : [{
 "db_type" : "gaussdbv5",
 "endpoint_type" : "cloud",
 "endpoint_role" : "ta",
 "endpoint" : {
 "id" : "f59e6118-da89-4fdb-9b98-65f56709928a",
 "endpoint_name" : "cloud_gaussdbv5",
 "instance_id" : "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user" : "root"
 },
 "cloud" : {
 "region" : "cn-north-4",
 "project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code" : "cn-north-4a,cn-north-4g,cn-north-4c"
 },
 "vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 },
 "ssl" : {
 "ssl_link" : false
 }
 }],
 "policy_config" : {
 "ddl_trans" : false
 }
}
```

```
},
"node_info": {
 "spec": {
 "node_type": "high"
 }
}
},
"total_count": 2
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000001",
 "error_msg": "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.3.5 Updating Details About Tasks Created Asynchronously in Batches with a Specified ID

### Function

This API is used to update details about the tasks created asynchronously in batches with a specified ID.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

PUT /v5/{project\_id}/batch-async-jobs/{async\_job\_id}

**Table 7-190** Path parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                         |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| async_job_id | Yes       | String | ID of the tasks created asynchronously in batches, which is returned by the API for asynchronously creating tasks in batches.       |

## Request Parameters

**Table 7-191** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> .                                       |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                              |



**Table 7-192** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                |
|-----------|-----------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| jobs      | Yes       | Array of objects | Request body for updating details about the tasks created asynchronously in batches with a specified ID.<br>For details, see <a href="#">Table 7-193</a> . |

**Table 7-193** Data structure description of field **jobs**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <p>Type of the task details to be updated with a specified ID.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• <b>all</b>: Specify all parameters for updating the tasks created asynchronously in batches if parameter verification fails.</li> <li>• <b>endpoint</b>: Update the source or destination database information about the tasks created asynchronously in batches if the connection testing fails.</li> <li>• <b>network</b>: Update the source or destination database information about the tasks created asynchronously in batches if the connection testing fails.</li> <li>• <b>policy</b>: Update the policy configuration of the tasks created asynchronously in batches.</li> <li>• <b>db_object</b>: Update the object information about the tasks created asynchronously in batches.</li> <li>• <b>precheck</b>: Perform the pre-check again for the tasks created asynchronously in batches.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>all</b></li> <li>• <b>endpoint</b></li> <li>• <b>network</b></li> <li>• <b>policy</b></li> <li>• <b>db_object</b></li> <li>• <b>precheck</b></li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                         |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------|
| params    | Yes       | Object | Parameters of the task details to be updated with a specified ID.<br>For details, see <a href="#">Table 7-194</a> . |

**Table 7-194** Data structure description of field **params**

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_id          | No        | String           | ID of the task to be updated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| base_info       | No        | Object           | Basic information body of a task.<br>For details, see <a href="#">Table 7-195</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| source_endpoint | No        | Array of objects | Information body of the source database.<br>For details, see <a href="#">Table 7-197</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| target_endpoint | No        | Array of objects | Information body of the destination database.<br>For details, see <a href="#">Table 7-197</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| alarm_notify    | No        | Object           | Information body for setting task exception notification.<br>For details, see <a href="#">Table 7-204</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| speed_limit     | No        | Array of objects | Flow control information body. <ul style="list-style-type: none"> <li>If you enable flow control, you can customize the maximum migration speed.</li> <li>If you disable flow control, the migration speed is not limited and the outbound bandwidth of the source database is maximally used,</li> </ul> which causes read consumption on the source database accordingly. For example, if the outbound bandwidth of the source database is 100 MB/s and 80% bandwidth is used, the I/O consumption on the source database is 80 MB/s.<br>For details, see <a href="#">Table 7-205</a> . |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                    |
|----------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_migration | No        | Object | User migration information body.<br>For details, see <a href="#">Table 7-206</a> .                                                                                                                                                             |
| policy_config  | No        | Object | Policy information body. This parameter is used to configure migration and synchronization policies, including the conflict policy, DROP DATASE filtering, and object synchronization scope.<br>For details, see <a href="#">Table 7-209</a> . |
| db_object      | No        | Object | Database object information body. This parameter is used to select databases or tables to be migrated for migration and synchronization tasks.<br>For details, see <a href="#">Table 7-210</a> .                                               |
| db_param       | No        | Object | Database parameter information body.<br>For details, see <a href="#">Table 7-216</a> .                                                                                                                                                         |
| tuning_params  | No        | Object | Advanced setting information body.<br>For details, see <a href="#">Table 7-218</a> .                                                                                                                                                           |
| period_order   | No        | Object | Yearly/Monthly information body.<br>For details, see <a href="#">Table 7-219</a> .                                                                                                                                                             |
| node_info      | No        | Object | Information body of the DRS instance.<br>For details, see <a href="#">Table 7-220</a> .                                                                                                                                                        |

**Table 7-195** Data structure description of field **base\_info**

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name        | No        | String  | <p>Task name. The task name can be 4 to 50 characters in length. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_).</p> <ul style="list-style-type: none"> <li>• Minimum length: <b>4</b></li> <li>• Maximum length: <b>50</b></li> </ul> <p>Minimum length: <b>4</b><br/>Maximum length: <b>50</b></p>                                               |
| job_type    | No        | String  | <p>Task scenario. Values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> </ul> |
| multi_write | No        | Boolean | <p>Whether the DR type is dual-active. Note:</p> <ul style="list-style-type: none"> <li>• This parameter is mandatory when <b>job_type</b> is set to <b>cloudDataGuard</b>. If the DR type is dual-active, the value of <b>multi_write</b> is <b>true</b>. Otherwise, the value is <b>false</b>.</li> <li>• If <b>job_type</b> is set to other values, <b>multi_write</b> is optional.</li> </ul> |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type   | No        | String | <p>Engine type. The value can be:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>● <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>● <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b></li> <li>● <b>redis-to-gaussredis</b></li> <li>● <b>rediscluster-to-gaussredis</b></li> </ul> |
| job_direction | No        | String | <p>Migration direction. Values:</p> <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>● <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>up</b></li> <li>● <b>down</b></li> <li>● <b>non-dbs</b></li> </ul>                                                                |
| task_type     | No        | String | <p>Migration type. Values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b>: full migration.</li> <li>● <b>FULL_INCR_TRANS</b>: full +incremental migration.</li> <li>● <b>INCR_TRANS</b>: incremental migration.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b></li> <li>● <b>FULL_INCR_TRANS</b></li> <li>● <b>INCR_TRANS</b></li> </ul>                                                                                                                                          |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| net_type              | No        | String | Network type. Values: <ul style="list-style-type: none"> <li>• <b>eip</b>: public network.</li> <li>• <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>• <b>vpn</b>: VPN or Direct Connect.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>eip</b></li> <li>• <b>vpc</b></li> <li>• <b>vpn</b></li> </ul> |
| charging_mode         | No        | String | Billing mode. The pay-per-use billing is used by default. Values: <ul style="list-style-type: none"> <li>• <b>period</b>: indicates the yearly/monthly billing.</li> <li>• <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>period</b></li> <li>• <b>on_demand</b></li> </ul>               |
| enterprise_project_id | No        | String | Enterprise project ID. The default value is <b>0</b> , indicating the default enterprise project. Default value: <b>0</b>                                                                                                                                                                                                                                                 |
| description           | No        | String | Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: ! <>'&"\ <p>Minimum length: <b>0</b></p> <p>Maximum length: <b>256</b></p>                                                                                                                                                            |
| start_time            | No        | String | Scheduled start time of a task.                                                                                                                                                                                                                                                                                                                                           |
| expired_days          | No        | String | Number of days after which an abnormal task automatically stops. The unit is day. The value ranges from 14 to 100. If this parameter is not specified, the default value is <b>14</b> . Default value: <b>14</b>                                                                                                                                                          |

| Parameter | Mandatory | Type             | Description                                                                                    |
|-----------|-----------|------------------|------------------------------------------------------------------------------------------------|
| tags      | No        | Array of objects | Tag information. Up to 20 tags can be added.<br>For details, see <a href="#">Table 7-196</a> . |

**Table 7-196** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | No        | String | Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>36</b>   |
| value     | No        | String | Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>43</b> |



**Table 7-197** Data structure description of fields **source\_endpoint** and **target\_endpoint**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type       | Yes       | String | <p>Database type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: Oracle.</li> <li>• <b>gaussdbv5</b>: GaussDB distributed.</li> <li>• <b>redis</b>: Redis.</li> <li>• <b>rediscluster</b>: Cluster Redis.</li> <li>• <b>gaussredis</b>: GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>gaussdbv5</b></li> <li>• <b>redis</b></li> <li>• <b>rediscluster</b></li> <li>• <b>gaussredis</b></li> </ul> |
| endpoint_type | Yes       | String | <p>DB instance type. Values:</p> <ul style="list-style-type: none"> <li>• <b>offline</b>: indicates an on-premises database.</li> <li>• <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>• <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>offline</b></li> <li>• <b>ecs</b></li> <li>• <b>cloud</b></li> </ul>                                                                                        |
| endpoint_role | Yes       | String | <p>DB instance role. Values:</p> <ul style="list-style-type: none"> <li>• <b>so</b>: indicates the source database.</li> <li>• <b>ta</b>: indicates the destination database.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>so</b></li> <li>• <b>ta</b></li> </ul>                                                                                                                                                                                                         |
| endpoint      | Yes       | Object | <p>Basic information body of the database.</p> <p>For details, see <a href="#">Table 7-198</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter      | Mandatory | Type   | Description                                                                                                                          |
|----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| cloud          | No        | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-199</a> .                                 |
| vpc            | No        | Object | Information about the VPC, subnet, and security group where a DB instance resides.<br>For details, see <a href="#">Table 7-200</a> . |
| config         | No        | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-201</a> .                                       |
| ssl            | No        | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-202</a> .                                  |
| customized_dns | No        | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-203</a> .                                                                 |

**Table 7-198** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Mandatory | Type   | Description              |
|-----------|-----------|--------|--------------------------|
| id        | No        | String | Database information ID. |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | Yes       | String | <p>Database scenario type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>• <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>• <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>• <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>• <b>redis</b>: On-premises Redis database.</li> <li>• <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>• <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>• <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>ecs_oracle</b></li> <li>• <b>cloud_gaussdbv5</b></li> <li>• <b>mysql</b></li> <li>• <b>ecs_mysql</b></li> <li>• <b>cloud_mysql</b></li> <li>• <b>redis</b></li> <li>• <b>ecs_redis</b></li> <li>• <b>rediscluster</b></li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                                                |
|-----------|-----------|------|----------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <code>ecs_rediscluster</code></li><li>• <code>cloud_gaussdb_redis</code></li></ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip        | No        | String | <p>Database IP address.</p> <p>Constraints:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |

| Parameter       | Mandatory | Type             | Description                                                                                             |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------------|
| db_port         | No        | String           | Database port.<br>The value is an integer ranging from 1 to 65535.                                      |
| db_user         | Yes       | String           | Database username.                                                                                      |
| db_password     | Yes       | String           | Database password.                                                                                      |
| instance_id     | No        | String           | ID of a Huawei Cloud DB instance.                                                                       |
| instance_name   | No        | String           | Name of a Huawei Cloud DB instance.                                                                     |
| db_name         | No        | String           | Database name. For example: <ul style="list-style-type: none"> <li>oracle: serviceName.orcl.</li> </ul> |
| source_sharding | No        | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-198</a> .       |

**Table 7-199** Data structure description of field **cloud**

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | Yes       | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is a combination of the regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                   |
| az_code    | No        | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-200** Data structure description of field **vpc**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | Yes       | String | ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a> .                                                                                                                                                                                              |
| subnet_id         | Yes       | String | ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page. Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a> .                                                                                                                             |
| security_group_id | No        | String | ID of the security group where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a> . |

**Table 7-201** Data structure description of field **config**

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | No        | Boolean | Whether the destination DB instance is set to read-only. This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                     |
| node_num            | No        | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-202** Data structure description of field **ssl**

| Parameter     | Mandatory | Type    | Description                                                                             |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | No        | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | No        | String  | SSL certificate name.                                                                   |
| ssl_cert_key  | No        | String  | SSL certificate content, which is encrypted using Base64.                               |



| Parameter          | Mandatory | Type   | Description                                                                                                                                                  |
|--------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_check_sum | No        | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | No        | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-203** Data structure description of field **customized\_dns**

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Yes       | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | Yes       | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>• <b>add</b>: Add a customized DNS server IP address.</li> <li>• <b>keep</b>: Retain the DNS server IP address.</li> <li>• <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>• <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>add</b></li> <li>• <b>keep</b></li> <li>• <b>update</b></li> <li>• <b>recover</b></li> </ul> |
| dns_ip         | Yes       | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-204** Data structure description of field **alarm\_notify**

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| alarm_to_user | Yes       | Boolean | Whether to notify users of alarms.<br>Default value: <b>false</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| topic_urn     | No        | String  | SMN topic URN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| delay_time    | No        | Long    | Delay threshold, in seconds.<br>The value can be: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b> <ol style="list-style-type: none"> <li>1. A synchronization delay indicates a time difference (in seconds) of synchronization between the source and destination database.</li> <li>2. If the delay exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental migration, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</li> <li>3. This option is available only for full+incremental tasks.</li> </ol> |
| rpo_delay     | No        | Long    | RPO delay threshold, in seconds. Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b> <p>If the RPO delay between the service database and the DRS instance exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental DR, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</p>                                                                                                                                                                                                                            |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rto_delay | No        | Long | RTO delay threshold, in seconds. Values: <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <b>NOTE</b><br>If the RTO delay between the DRS instance and the DR database exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. |

**Table 7-205** Data structure description of field **speed\_limit**

| Parameter | Mandatory | Type   | Description                                                                                                                                                       |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin     | Yes       | String | Start time (UTC) of flow control. The start time is an integer in hh:mm format and the minutes part is ignored. <b>hh</b> indicates the hour, for example, 01:00. |
| end       | Yes       | String | End time (UTC) in the format of hh:mm, for example, 15:59. The value must end with 59.                                                                            |
| speed     | Yes       | String | Speed. The value ranges from 1 to 9,999, in MB/s.                                                                                                                 |

**Table 7-206** Data structure description of field **user\_migration**

| Parameter       | Mandatory | Type    | Description               |
|-----------------|-----------|---------|---------------------------|
| is_migrate_user | Yes       | Boolean | Whether to migrate users. |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                         |
|-----------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_password | Yes       | Boolean          | Whether to reset a unified password. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: Reset a unified password.</li> <li>• <b>false</b>: Do not reset a unified password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL migration.</li> </ul> </li> </ul> |
| password        | No        | String           | Unified password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty.                                                                                                                                                                                                     |
| user_list       | No        | Array of objects | User list in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL-to-MySQL migration and MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-207</a> .                                                                           |
| role_list       | No        | Array of objects | User role in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-208</a> .                                                                                                        |

**Table 7-207** Data structure description of field **user\_list**

| Parameter       | Mandatory | Type    | Description                                                                                                                                                          |
|-----------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | Yes       | String  | User ID.                                                                                                                                                             |
| account         | Yes       | String  | User.                                                                                                                                                                |
| is_set_password | No        | Boolean | Whether to reset the user password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL migration.</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------|
| password  | No        | String | New password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty. |

**Table 7-208** Data structure description of field **role\_list**

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| role      | Yes       | String | Role.       |

**Table 7-209** Data structure description of field **policy\_config**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filter_ddl_policy | No        | String | DDL filtering policy. Values: <ul style="list-style-type: none"> <li>drop_database</li> </ul> Scenarios: <ul style="list-style-type: none"> <li>Real-time migration: For MySQL migration, this parameter can be set to "", indicating that DROP DATABASE is not filtered.</li> <li>Real-time synchronization: For MySQL synchronization, this parameter can only be set to <b>drop_database</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>drop_database</b></li> </ul> |

| Parameter       | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conflict_policy | No        | String | <p>Incremental conflict policy. The conflict policy refers to the conflict handling policy during incremental synchronization. By default, conflicts in the full synchronization phase are ignored. Values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b>: Ignore the conflict. The system will ignore the conflicting data and continue the subsequent synchronization process.</li> <li>● <b>stop</b>: Report an error. The synchronization task will be stopped and fail. You can view the details in synchronization logs.</li> <li>● <b>overwrite</b>: Overwrite the existing data with the synchronized data. Conflicting data will be overwritten.</li> </ul> <p>Scenarios:</p> <ul style="list-style-type: none"> <li>● Real-time migration: Not supported.</li> <li>● Real-time synchronization: Supported.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b></li> <li>● <b>stop</b></li> <li>● <b>overwrite</b></li> </ul> |

| Parameter               | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| index_trans             | No        | Boolean | Object synchronization scope: indicates whether to synchronize normal indexes. By default, DRS synchronizes the primary key or unique index. A normal index refers to an index other than the primary key or unique index. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: All indexes will be synchronized.</li> <li>• <b>false</b>: Only primary key or unique indexes are synchronized.</li> </ul> Default value: <b>true</b>                                                                                      |
| ddl_trans               | No        | Boolean | Object synchronization scope: indicates whether to synchronize DDLs in the incremental phase. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: DDLs are synchronized in the incremental phase.</li> <li>• <b>false</b>: DDLs are not synchronized in the incremental phase.</li> </ul> Default value: <b>true</b>                                                                                                                                                                                                      |
| data_sync_topology_type | No        | String  | Data synchronization topology. Data synchronization supports multiple synchronization topologies. You can plan your synchronization instances based on service requirements. Values: <ul style="list-style-type: none"> <li>• <b>one2one</b>: one-to-one.</li> <li>• <b>one2many</b>: one-to-many.</li> <li>• <b>many2one</b>: many-to-one.</li> </ul> Default value: <b>one2one</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>one2one</b></li> <li>• <b>one2many</b></li> <li>• <b>many2one</b></li> </ul> |

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| support_ddl_info | No        | String | <p>DDLs to be synchronized.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• <b>CREATE_TABLE</b>: Create a table.</li> <li>• <b>ADD_COLUMN</b>: Add a column.</li> <li>• <b>MODIFY_COLUMN</b>: Modify column attribute.</li> <li>• <b>CHANGE_COLUMN</b>: Change column attribute.</li> <li>• <b>DROP_INDEX</b>: Delete an index.</li> <li>• <b>ADD_INDEX</b>: Add an index.</li> <li>• <b>CREATE_INDEX</b>: Create an index.</li> <li>• <b>RENAME_INDEX</b>: Rename an index.</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>• In one-to-one and one-to-many scenarios, if the DDL usage of the source and destination databases must be consistent, high-risk DDLs must be synchronized.</li> <li>• In one-to-one and one-to-many scenarios, if you do not want a high-risk DDL to be performed in the destination, deselect the high-risk DDL to protect destination data. However, filtering DDL may cause synchronization to fail, for example, column deletion.</li> <li>• In many-to-one data synchronization tasks, it is recommended that only the ADD COLUMN operation is synchronized, or tasks may fail or data may be inconsistent due to changes in destination tables. Typical failure scenarios are as follows:</li> </ul> |



| Parameter           | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |           |        | <ul style="list-style-type: none"> <li>- Synchronizing the TRUNCATE operation clears all destination data.</li> <li>- Synchronizing the CREATE INDEX operation locks the destination table.</li> <li>- Synchronizing the RENAME operation causes other task failure because the destination table cannot be found.</li> <li>- Synchronizing the MODIFY COLUMN operation causes other task failure due to incompatible data types.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATE_TABLE</b></li> <li>● <b>ADD_COLUMN</b></li> <li>● <b>MODIFY_COLUMN</b></li> <li>● <b>CHANGE_COLUMN</b></li> <li>● <b>DROP_INDEX</b></li> <li>● <b>ADD_INDEX</b></li> <li>● <b>CREATE_INDEX</b></li> <li>● <b>RENAME_INDEX</b></li> </ul> |
| sync_type_policy    | No        | String | <p>Synchronization object type.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>● <b>supportAllType</b>: All types.</li> <li>● <b>tableData</b>: Data.</li> <li>● <b>tableStructure</b>: Table structure.</li> <li>● <b>constraintData</b>: Index.</li> </ul> <p><b>NOTE</b><br/>Except <b>supportAllType</b>, other types can be specified together, for example, <b>tableData,tableStructure</b>.</p>                                                                                                                                                                                                                                                                                                                                                  |
| increment_read_mode | No        | String | <p>Incremental log reading mode for synchronization from Oracle to GaussDB: <b>logminer</b> or <b>xstream</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter | Mandatory | Type   | Description                                                                                                                                                              |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dml_types | No        | String | DML synchronization type. The value can be: <ul style="list-style-type: none"> <li>• <b>i</b>: INSERT</li> <li>• <b>u</b>: UPDATE</li> <li>• <b>d</b>: DELETE</li> </ul> |

**Table 7-210** Data structure description of field **db\_object**

| Parameter      | Mandatory | Type                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | Yes       | String                      | Migration or synchronization object scope. Values: <ul style="list-style-type: none"> <li>• <b>all</b>: Migrate or synchronize all objects.</li> <li>• <b>database</b>: database-level migration or synchronization.</li> <li>• <b>table</b>: table-level migration or synchronization.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>all</b></li> <li>• <b>database</b></li> <li>• <b>table</b></li> </ul> |
| target_root_db | No        | Object                      | Destination database for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3. For details, see <a href="#">Table 7-211</a> .                                                                                                                                                                                                                                 |
| object_info    | No        | Map<String, DatabaseObject> | Object information for migration or synchronization. If <b>object_scope</b> is set to <b>all</b> , leave this parameter blank. If <b>object_scope</b> is set to <b>database</b> or <b>table</b> , this parameter is mandatory. For details, see <a href="#">Table 7-212</a> .                                                                                                                                                           |

**Table 7-211** Data structure description of field **target\_root\_db**

| Parameter   | Mandatory | Type   | Description                                          |
|-------------|-----------|--------|------------------------------------------------------|
| db_name     | No        | String | Database name.                                       |
| db_encoding | No        | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-212** Data structure description of field **object\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the database in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values:<br><ul style="list-style-type: none"> <li>• <b>config</b></li> </ul> |
| name      | No        | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Parameter          | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | No        | Boolean                  | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | No        | Map<String,SchemaObject> | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-213</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| tables             | No        | Map<String,TableObject>  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-214</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| total_table_number | No        | Integer                  | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| is_synchronized    | No        | Boolean                  | <p>Whether synchronization has been performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 7-213** Data structure description of field **schemas**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String  | Type of the schema in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                             |
| name      | No        | String  | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | No        | Boolean | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |

| Parameter | Mandatory | Type                            | Description                                                                                                                                                  |
|-----------|-----------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tables    | No        | Map<String,<br>T<br>ableObject> | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-214</a> . |

**Table 7-214** Data structure description of field **tables**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the table in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object. |
| type      | No        | String | Object type. Values:<br><ul style="list-style-type: none"> <li>• <b>table</b>: indicates a table.</li> <li>• <b>view</b>: indicates a view.</li> <li>• <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>• <b>table</b></li> <li>• <b>view</b></li> <li>• <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                   |
| name      | No        | String | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all               | No        | Boolean          | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | No        | String           | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| schema_alias_name | No        | String           | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| filtered          | No        | Boolean          | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| filter_conditions | No        | Array of strings | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter         | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_conditions | No        | Array of strings         | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | No        | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | No        | Map<String,ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-215</a> . |



**Table 7-215** Data structure description of field columns

| Parameter                      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type                      | No        | String | Type of the column in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |
| primary_key_for_data_filtering | No        | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                        |
| index_for_data_filtering       | No        | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                              |

| Parameter                        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                             | No        | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| type                             | No        | String | Data type of the column.<br>Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int, long, varchar(256), datetime, or timestamp.</b></li> <li>• <b>create_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>update_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>Expression:</b> The value can be <b>varchar (256)</b>, and the column value must be <b>concat(_current_database, '@', _current_table).</b></li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256).</b></li> </ul> |
| primary_key_for_column_filtering | No        | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | No        | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | No        | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | No        | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default</b>:<br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression</b>:<br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table</b>:<br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Value of the additional column. Note: <ul style="list-style-type: none"> <li>This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul> |

**Table 7-216** Data structure description of field **db\_param**

| Parameter   | Mandatory | Type             | Description                                                                                                                                                                           |
|-------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| common      | No        | Array of objects | Common parameter. Only the values of destination database parameters whose comparison results are inconsistent can be changed.<br>For details, see <a href="#">Table 7-217</a> .      |
| performance | No        | Array of objects | Performance parameter. If the comparison results are consistent, you can also change the values of destination database parameters.<br>For details, see <a href="#">Table 7-217</a> . |

**Table 7-217** Data structure description of fields **common** and **performance**

| Parameter    | Mandatory | Type   | Description                                  |
|--------------|-----------|--------|----------------------------------------------|
| key          | Yes       | String | Database parameter name.                     |
| target_value | Yes       | String | Parameter value of the destination database. |

**Table 7-218** Data structure description of field **tuning\_params**

| Parameter     | Mandatory | Type               | Description                                                |
|---------------|-----------|--------------------|------------------------------------------------------------|
| full_sync     | No        | Map<String,String> | Names and values of full migration parameters.             |
| incre_capture | Yes       | Map<String,String> | Names and values of incremental capture parameters.        |
| incre_apply   | Yes       | Map<String,String> | Names and values of incremental replay parameters.         |
| incre_relay   | No        | Map<String,String> | Names and values of incremental log extraction parameters. |
| recovery      | No        | Boolean            | Whether to restore to the default value.                   |

**Table 7-219** Data structure description of field **period\_order**

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type | Yes       | Integer | Subscription period type.<br>Values: <ul style="list-style-type: none"><li>• <b>2</b>: indicates that the service is subscribed by month.</li><li>• <b>3</b>: indicates that the service is subscribed by year.</li></ul> Default value: <b>3</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>2</b></li><li>• <b>3</b></li></ul> |
| period_num  | Yes       | Integer | Number of subscription periods. This parameter depends on the value of <b>period_type</b> . For example: <ul style="list-style-type: none"><li>• When <b>period_type</b> is set to <b>2</b>, the value <b>1</b> indicates one month.</li><li>• When <b>period_type</b> is set to <b>3</b>, the value <b>1</b> indicates one year.</li></ul>           |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_renew | No        | Integer | <p>Whether auto renewal is enabled. Values:</p> <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that auto renewal is disabled. This is the default value. You need to pay manually.</li> <li>• <b>1</b>: indicates that auto renewal is enabled.</li> </ul> <p>Default value: <b>0</b></p> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>0</b></li> <li>• <b>1</b></li> </ul> |

**Table 7-220** Data structure description of field **node\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                             |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| spec      | Yes       | Object | <p>Information body of DRS instance specifications.</p> <p>For details, see <a href="#">Table 7-221</a>.</p>                                            |
| vpc       | No        | Object | <p>Information body of DRS instance VPC. This parameter is mandatory for self-built databases.</p> <p>For details, see <a href="#">Table 7-222</a>.</p> |
| base_info | No        | Object | <p>Information body of DRS instance VPC. This parameter is mandatory for self-built databases.</p> <p>For details, see <a href="#">Table 7-223</a>.</p> |

**Table 7-221** Data structure description of field **spec**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| node_type | Yes       | String | Specification code. Values: <ul style="list-style-type: none"> <li>• <b>micro</b>: minimum specifications.</li> <li>• <b>small</b>: small specifications.</li> <li>• <b>medium</b>: medium specifications.</li> <li>• <b>high</b>: large specifications.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>micro</b></li> <li>• <b>small</b></li> <li>• <b>medium</b></li> <li>• <b>high</b></li> </ul> |

**Table 7-222** Data structure description of field **vpc**

| Parameter | Mandatory | Type   | Description                                         |
|-----------|-----------|--------|-----------------------------------------------------|
| vpc_id    | Yes       | String | ID of the VPC where the DRS instance is located.    |
| subnet_id | Yes       | String | ID of the subnet where the DRS instance is located. |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| custom_node_ip    | No        | String | <p>IP address of the DRS instance to be created. Use commas (,) to separate multiple values. Only IPv4 addresses are supported. To obtain the IP address, perform the following steps:</p> <ul style="list-style-type: none"> <li>• Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li> <li>• Method 2: Call the API for querying private IP addresses. For details, see "Querying Private IP Addresses". Select a private IP address whose <b>device_owner</b> is left blank. Example:<br/>192.168.0.10,192.168.0.11</li> </ul> |
| security_group_id | No        | String | ID of the security group where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Table 7-223** Data structure description of field **base\_info**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                     |
|---------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_type | Yes       | String | <p>DB instance type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>single</b>: single instance.</li> <li>• <b>ha</b>: primary/standby instance.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>single</b></li> <li>• <b>ha</b></li> </ul> |



| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| arch              | Yes       | String | CPU architecture. The value can be: <ul style="list-style-type: none"> <li>• x86</li> <li>• arm</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>x86</b></li> <li>• <b>arm</b></li> </ul>                                                                                                                                                                                      |
| availability_zone | Yes       | String | AZ ID. If the task instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (,). Example: <ul style="list-style-type: none"> <li>• If <b>instance_type</b> is set to <b>single</b>, the value is <b>cn-north-4a</b>.</li> <li>• If <b>instance_type</b> is set to <b>ha</b>, the value is <b>cn-north-4a,cn-north-4b</b>.</li> </ul> |
| status            | No        | String | Status.                                                                                                                                                                                                                                                                                                                                                                                                 |
| role              | No        | String | Primary/Standby role of a task.                                                                                                                                                                                                                                                                                                                                                                         |

## Response Parameters

Status code: 202

Table 7-224 Response body parameters

| Parameter | Type             | Description                                                                                                                                                 |
|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| jobs      | Array of objects | Response body for updating details about the tasks created asynchronously in batches with a specified ID.<br>For details, see <a href="#">Table 7-225</a> . |

Table 7-225 Data structure description of field **jobs**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | Task ID.    |
| name      | String | Task name.  |

| Parameter  | Type   | Description       |
|------------|--------|-------------------|
| status     | String | Operation result. |
| error_code | String | Error code.       |
| error_msg  | String | Error message.    |

**Status code: 400**

**Table 7-226** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Updating details about the tasks created asynchronously in batches with a specified ID, in which **task\_type** is set to **FULL\_INCR\_TRANS** and **net\_type** is set to **eip**

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/batch-async-jobs/bd4193aa-072d-4ce6-beec-adffc7252341>

```
{
 "jobs": [{
 "type": "all",
 "params": {
 "job_id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "base_info": {
 "name": "DRS-1234",
 "job_type": "sync",
 "engine_type": "oracle-to-gaussdbv5",
 "job_direction": "up",
 "task_type": "FULL_INCR_TRANS",
 "net_type": "eip",
 "charging_mode": "on_demand",
 "enterprise_project_id": "0",
 "description": "",
 "expired_days": "14",
 "tags": [{
 "key": "test",
 "value": "test"
 }]
 }
 }
 },
 "source_endpoint": [{
 "db_type": "oracle",
 "endpoint_type": "offline",
 "endpoint_role": "so",
```

```
"endpoint" : {
 "endpoint_name" : "oracle",
 "ip" : "10.154.217.239",
 "db_port" : "1521",
 "db_user" : "ORACLE_USER",
 "db_name" : "serviceName.orcl",
 "db_password" : "*****"
},
"ssl" : {
 "ssl_link" : false
}
}],
"target_endpoint" : [{
 "db_type" : "gaussdbv5",
 "endpoint_type" : "cloud",
 "endpoint_role" : "ta",
 "endpoint" : {
 "endpoint_name" : "cloud_gaussdbv5",
 "instance_id" : "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user" : "root",
 "db_password" : "*****"
 },
 "cloud" : {
 "region" : "cn-north-4",
 "project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code" : "cn-north-4a,cn-north-4g,cn-north-4c"
 },
 "vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 }
}],
"alarm_notify" : {
 "alarm_to_user" : true,
 "topic_urn" : "urn:smn:cn-north-4:f2c2468c3ee7410c862a461ca073d2f2:test",
 "delay_time" : 60
},
"speed_limit" : [{
 "begin" : "16:00",
 "end" : "15:59",
 "speed" : "10"
}],
"policy_config" : {
 "ddl_trans" : false
},
"db_object" : {
 "object_scope" : "table",
 "target_root_db" : {
 "db_name" : "target_db_name",
 "db_encoding" : "utf8"
 },
 "object_info" : {
 "source_db1" : {
 "name" : "source_db1",
 "all" : false,
 "tables" : {
 "source_tb1" : {
 "type" : "table",
 "name" : "source_tb1",
 "all" : true
 },
 "source_tb2" : {
 "type" : "table",
 "name" : "source_tb2",
 "all" : true
 }
 }
 }
 }
}
```

```
 }
 },
 "node_info": {
 "spec": {
 "node_type": "medium"
 }
 }
}, {
 "type": "endpoint",
 "params": {
 "job_id": "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "source_endpoint": [{
 "db_type": "oracle",
 "endpoint_type": "offline",
 "endpoint_role": "so",
 "endpoint": {
 "endpoint_name": "oracle",
 "ip": "10.154.227.134",
 "db_port": "1521",
 "db_user": "ORACLE_USER",
 "db_name": "serviceName.orcl",
 "db_password": "*****"
 }
 },
 "ssl": {
 "ssl_link": false
 }
 }
}, {
 "target_endpoint": [{
 "db_type": "gaussdbv5",
 "endpoint_type": "cloud",
 "endpoint_role": "ta",
 "endpoint": {
 "id": "f59e6118-da89-4fdb-9b98-65f56709928a",
 "endpoint_name": "cloud_gaussdbv5",
 "instance_id": "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user": "root",
 "db_password": "*****"
 },
 "cloud": {
 "region": "cn-north-4",
 "project_id": "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code": "cn-north-4a,cn-north-4g,cn-north-4c"
 },
 "vpc": {
 "vpc_id": "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id": "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id": "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 },
 "ssl": {
 "ssl_link": false
 }
 }
}
}
}
```

## Example Response

**Status code: 202**

Accepted

```
{
 "jobs": [{
 "id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name": "DRS-1234",
 "status": "Success"
 }, {
```

```

 "id" : "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "name" : "DRS-2345",
 "status" : "Failed",
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID"
 }
}

```

**Status code: 400**

Bad Request

```

{
 "error_code" : "DRS.10000001",
 "error_msg" : "Failed."
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | Accepted    |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.3.6 Downloading the Task Import Template

### Function

This API is used to download the task import template.

### Constraints

This API supports only MySQL migration and synchronization tasks.

### URI

GET /v5/{project\_id}/jobs/template

**Table 7-227** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-228** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 400**

**Table 7-229** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Obtaining the task import template

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/template
```

## Example Response

**Status code: 200**

The response body is in the file stream format, and the downloaded file is in the ZIP format.

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10030009",
 "error_msg" : "Download template file failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.3.7 Importing Tasks in Batches

### Function

This API is used to import the task template to create tasks in batches.

### Constraints

This API supports only MySQL migration and synchronization tasks.

### URI

POST /v5/{project\_id}/jobs/template

**Table 7-230** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-231** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>multipart/form-data</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>Default value: <b>multipart/form-data</b>                                         |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                              |

**Table 7-232** FormData parameter

| Parameter | Mandatory | Type | Description                   |
|-----------|-----------|------|-------------------------------|
| file      | Yes       | File | Template file to be uploaded. |



## Response Parameters

**Status code: 200**

**Table 7-233** Response body parameters

| Parameter             | Type             | Description                                                                                   |
|-----------------------|------------------|-----------------------------------------------------------------------------------------------|
| async_job_id          | String           | ID of the tasks created in batches by importing a template.                                   |
| import_error_messages | Array of objects | Error message displayed for an import failure. For details, see <a href="#">Table 7-234</a> . |
| error_code            | String           | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>                         |
| error_msg             | String           | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b>                      |

**Table 7-234** Data structure description of field **import\_error\_messages**

| Parameter     | Type   | Description                                        |
|---------------|--------|----------------------------------------------------|
| sheet_name    | String | Sheet name.                                        |
| row_num       | String | Error row number.                                  |
| value         | String | Value in the <b>value</b> column of the error row. |
| error_message | String | Error message.                                     |

## Example Request

Importing the task template to create tasks in batches

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/template
```

## Example Response

**Status code: 200**

OK

```
{
 "async_job_id": "dc6016cf-f3b6-4c2d-b4d7-5084b0fdf456"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10120001",
 "error_msg": "Failed to parse the imported file"
 "import_error_messages": [
 {
 "sheet_name": "sheet0",
 "row_num": "10",
 "value": "test",
 "error_message": "base_info.tags parse object failed."
 }
]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

# 7.4 Database Object Configuration

## 7.4.1 Submitting the Query of Database Object Information

### Function

This API is used to submit the query of database object information. Example:

- If **type** is set to **source**, table information in the source database is queried.
- If table information in the source database changes, set **type** to **source** and **is\_refresh** to **true**.
- If the volume of the database table data that has been synchronized to the destination database is too large and data needs to be loaded to the cache, set **type** to **synchronized**.

Use the new API in [Submitting the Query of Database Object Information](#) for query.

### Constraints

- This API supports only the synchronization scenarios from Oracle-> GaussDB distributed, from MySQL to Kafka, and from GaussDB(for MySQL) to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

## URI

POST /v5/{project\_id}/jobs/{job\_id}/db-objects/collect

**Table 7-235** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-236** Query parameters

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset     | No        | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0.                                                                                                                                                                                                                                                                                                                                            |
| limit      | No        | Integer | Number of items displayed per page.                                                                                                                                                                                                                                                                                                                                                                                                            |
| type       | Yes       | String  | Type of the object information to be queried. Values: <ul style="list-style-type: none"><li>• <b>source</b>: Query information about objects in the source database.</li><li>• <b>modified</b>: Query information about the selected objects that are not delivered.</li><li>• <b>synchronized</b>: Query information about synchronized (delivered) objects. This function is used when a task is in the full or incremental phase.</li></ul> |
| is_refresh | No        | Boolean | Whether to forcibly refresh the query. Values: <ul style="list-style-type: none"><li>• <b>true</b>: indicating that data is queried from the source database again.</li><li>• <b>false</b>: indicating that data is queried from the cache.</li></ul>                                                                                                                                                                                          |

| Parameter | Mandatory | Type  | Description           |
|-----------|-----------|-------|-----------------------|
| db_names  | No        | Array | A specified database. |

## Request Parameters

**Table 7-237** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

Status code: 202

**Table 7-238** Response body parameters

| Parameter | Type   | Description      |
|-----------|--------|------------------|
| id        | String | Query result ID. |

| Parameter | Type   | Description                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li>● <b>pending</b></li> <li>● <b>failed</b></li> <li>● <b>success</b></li> </ul> |
| job_id    | String | Task ID.                                                                                                                                                  |

**Status code: 400**

**Table 7-239** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying information about the synchronized objects

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-objects/collect?type=synchronized
```

## Example Response

**Status code: 202**

OK

```
{
 "id" : "036ceb63-51f8-43fb-9164-82c17b2eadbc",
 "status" : "pending",
 "job_id" : "2fccbe0d-4e6b-4957-981a-edca4e2jb201"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.1000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.2 Submitting the Query of Database Object Information

### Function

This API is used to submit the query of database object information. Example:

- If **type** is set to **source**, table information in the source database is queried.
- If table information in the source database changes, set **type** to **source** and **is\_refresh** to **true**.
- If the volume of the database table data that has been synchronized to the destination database is too large and data needs to be loaded to the cache, set **type** to **synchronized**.

### URI

POST /v5.1/{project\_id}/jobs/{job\_id}/db-objects/collect

**Table 7-240** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-241** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

**Table 7-242** Request body parameters

| Parameter | Mandatory | Type             | Description           |
|-----------|-----------|------------------|-----------------------|
| db_names  | No        | Array of strings | A specified database. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type       | Yes       | String | Type of the object information to be queried. Values: <ul style="list-style-type: none"> <li>• <b>source</b>: Query information about objects in the source database.</li> <li>• <b>modified</b>: Query information about the selected objects that are not delivered.</li> <li>• <b>synchronized</b>: Query information about synchronized (delivered) objects. This function is used when a task is in the full or incremental phase.</li> </ul> |
| is_refresh | No        | String | Whether to forcibly refresh the query. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: indicating that data is queried from the source database again.</li> <li>• <b>false</b>: indicating that data is queried from the cache.</li> </ul>                                                                                                                                                                                           |

## Response Parameters

Status code: 202

Table 7-243 Response body parameters

| Parameter | Type   | Description                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Query result ID.                                                                                                                                          |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>failed</b></li> <li>• <b>success</b></li> </ul> |
| job_id    | String | Task ID.                                                                                                                                                  |

Status code: 400



**Table 7-244** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying information about source database objects

```
https://{endpoint}/v5.1/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-objects
```

```
{
 "type" : "source"
}
```

## Example Response

**Status code: 202**

OK

```
{
 "id" : "0eacda0b-9422-4535-8b62-537d1833638b",
 "status" : "pending",
 "job_id" : "2fccbe0d-4e6b-4957-981a-edca4e2jb201"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.3 Obtaining the Result of Querying Database Object Information

### Function

This API is used to obtain the result of querying database object information.

### Constraints

- This API supports only the synchronization scenarios from Oracle-> GaussDB distributed, from MySQL to Kafka, and from GaussDB(for MySQL) to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/db-objects/collection-status

**Table 7-245** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-246** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------|
| query_id  | Yes       | String | ID of the object information query, that is, the ID returned by the API for submitting the query of database object information. |

## Request Parameters

**Table 7-247** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.                                                        |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |
| X-Language   | No        | String | Request language type.                                                                                                                                                                                                        |

## Response Parameters

Status code: 200

**Table 7-248** Response body parameters

| Parameter      | Type                        | Description                                                                                                                                                                                                         |
|----------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | String                      | Type of the database in real-time synchronization.                                                                                                                                                                  |
| target_root_db | Object                      | Destination database information for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3. For details, see <a href="#">Table 7-249</a> . |
| object_info    | Map<String, DatabaseObject> | Migration or synchronization object information. For details, see <a href="#">Table 7-250</a> .                                                                                                                     |
| max_table_num  | Integer                     | Threshold of the number of tables in a database.                                                                                                                                                                    |

| Parameter | Type   | Description                                                                                                                                                                                                |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | Status of submitting the query of database object information.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>failed</b></li> <li>• <b>pending</b></li> </ul> |
| id        | String | Task ID.                                                                                                                                                                                                   |

**Table 7-249** Data structure description of field **target\_root\_db**

| Parameter   | Type   | Description                                          |
|-------------|--------|------------------------------------------------------|
| db_name     | String | Database name.                                       |
| db_encoding | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-250** Data structure description of field **object\_info**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the database in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>config</b></li> </ul> |
| name      | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter          | Type                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | Boolean                                       | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | Map<String,<br><a href="#">SchemaObject</a> > | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-251</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| tables             | Map<String,<br><a href="#">TableObject</a> >  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-252</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| total_table_number | Integer                                       | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| is_synchronized    | Boolean                                       | <p>Whether synchronization has been performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 7-251** Data structure description of field **schemas**

| Parameter | Type                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String                                    | Type of the schema in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                             |
| name      | String                                    | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | Boolean                                   | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| tables    | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-252</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Table 7-252** Data structure description of field **tables**

| Parameter         | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type         | String  | Type of the table in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                               |
| type              | String  | Object type. Values:<br><ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                 |
| name              | String  | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| all               | Boolean | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>● If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>● If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>● If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | String  | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| schema_alias_name | String  | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter         | Type                      | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered          | Boolean                   | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                        |
| filter_conditions | Array of strings          | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                              |
| config_conditions | Array of strings          | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | Boolean                   | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | Map<String, ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-253</a> . |

**Table 7-253** Data structure description of field **columns**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the column in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |



| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| primary_key_filtering    | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| index_for_data_filtering | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| name                     | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| type                     | String | Data type of the column.<br>Column filtering: Enter the data type of the source column.<br>Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int</b>, <b>long</b>, <b>varchar(256)</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>create_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>update_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>Expression:</b> The value can be <b>varchar(256)</b>, and the column value must be <b>concat(__current_database, '@', __current_table)</b>.</li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256)</b>.</li> </ul> |
| primary_key_filtering    | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default</b>:<br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression</b>:<br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table</b>:<br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |
| value          | String  | Value of the additional column. Note: <ul style="list-style-type: none"> <li>• This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>• When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(__current_database, '@', __current_table)</b>.</li> </ul>                                                                                                                                                                                          |

## Example Request

Obtaining the result of querying database object information

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-objects/collection-status?query_id=0eacda0b-9422-4535-8b62-537d1833638b
```

## Example Response

**Status code: 200**

OK

```
{
 "object_scope": "table",
 "target_root_db": {
 "db_name": "mytest",
 "db_encoding": "utf8"
 },
 "object_info": {
 "TEST": {
 "name": "TEST",
 "tables": {
 "TBL_2": {
 "name": "TBL_2",
 "type": "table",
 "all": true,
 "is_synchronized": true
 }
 }
 },
 "is_synchronized": true,
 "total_table_num": 1
 }
},
"max_table_num": 50000,
"id": "0eacda0b-9422-4535-8b62-537d1833638b",
"status": "success"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10030014",
 "error_msg": "Firstly, please the query object info."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.4 Querying Database Object Information

### Function

This API is used to query database object information. Use the new API in [Querying Database Object Information](#) for query.

## Constraints

- This API supports only the synchronization scenarios from Oracle-> GaussDB distributed, from MySQL to Kafka, and from GaussDB(for MySQL) to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

## URI

GET /v5/{project\_id}/jobs/{job\_id}/db-objects

**Table 7-254** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-255** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0.                                                                                                                                                                                                                                                                                     |
| limit     | No        | Integer | Number of items displayed per page.                                                                                                                                                                                                                                                                                                                                                     |
| type      | Yes       | String  | Type of the object information to be queried. Values: <ul style="list-style-type: none"><li>• <b>source</b>: Query information about objects in the source database.</li><li>• <b>modified</b>: Query information about the selected objects that are not delivered or synchronized.</li><li>• <b>synchronized</b>: Query information about synchronized (delivered) objects.</li></ul> |
| db_names  | No        | Array   | A specified database.                                                                                                                                                                                                                                                                                                                                                                   |

## Request Parameters

**Table 7-256** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

**Status code: 200**

**Table 7-257** Response body parameters

| Parameter      | Type   | Description                                                                                                                                                                                                         |
|----------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | String | Type of the database in real-time synchronization.                                                                                                                                                                  |
| target_root_db | Object | Destination database information for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3. For details, see <a href="#">Table 7-258</a> . |

| Parameter     | Type                        | Description                                                                                                                                                                                                                                                                                                                                         |
|---------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_info   | Map<String, DatabaseObject> | Migration or synchronization object information.<br>For details, see <a href="#">Table 7-259</a> .                                                                                                                                                                                                                                                  |
| max_table_num | Integer                     | Threshold of the number of tables in a database.                                                                                                                                                                                                                                                                                                    |
| status        | String                      | Status of submitting the query of database object information. This parameter is returned only when the API in <a href="#">Obtaining the Result of Querying Database Object Information</a> is invoked.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>failed</b></li> <li>• <b>pending</b></li> </ul> |
| id            | String                      | Task ID.                                                                                                                                                                                                                                                                                                                                            |

**Table 7-258** Data structure description of field **target\_root\_db**

| Parameter   | Type   | Description                                          |
|-------------|--------|------------------------------------------------------|
| db_name     | String | Database name.                                       |
| db_encoding | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-259** Data structure description of field **object\_info**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the database in real-time synchronization. <b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>config</b></li> </ul> |

| Parameter          | Type                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name               | String                   | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| all                | Boolean                  | Whether to migrate or synchronize the entire database.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | Map<String,SchemaObject> | Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-260</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| tables             | Map<String,TableObject>  | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-261</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| total_table_number | Integer                  | Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| is_synchronized    | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Table 7-260** Data structure description of field **schemas**

| Parameter | Type                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String                                    | Type of the schema in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                             |
| name      | String                                    | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | Boolean                                   | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| tables    | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-261</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



**Table 7-261** Data structure description of field **tables**

| Parameter         | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type         | String  | Type of the table in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                               |
| type              | String  | Object type. Values:<br><ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                 |
| name              | String  | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| all               | Boolean | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>● If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>● If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>● If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | String  | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| schema_alias_name | String  | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter         | Type                      | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered          | Boolean                   | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                        |
| filter_conditions | Array of strings          | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                              |
| config_conditions | Array of strings          | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | Boolean                   | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | Map<String, ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-262</a> . |

**Table 7-262** Data structure description of field **columns**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the column in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |

| Parameter                        | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| primary_key_for_data_filtering   | String  | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| index_for_data_filtering         | String  | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| name                             | String  | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| type                             | String  | Data type of the column. Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int</b>, <b>long</b>, <b>varchar(256)</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>create_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>update_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>Expression:</b> The value can be <b>varchar(256)</b>, and the column value must be <b>concat(__current_database, '@', __current_table)</b>.</li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256)</b>.</li> </ul> |
| primary_key_for_column_filtering | String  | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| filtered                         | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true:</b> indicates that the column will be synchronized.</li> <li>• <b>false:</b> indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| additional     | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b><br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression:</b><br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table:</b><br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |
| value          | String  | Value of the additional column. Note: <ul style="list-style-type: none"> <li>• This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>• When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul>                                                                                                                                                                                            |

**Status code: 400**

**Table 7-263** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying information about the synchronized objects

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-objects?type=synchronized
```

## Example Response

**Status code: 200**

OK

```
{
 "target_root_db": {
 "db_name": "db1",
 "db_encoding": "UTF-8"
 },
 "object_scope": "table",
 "object_info": {
 "db1": {
 "name": "db1",
 "all": false,
 "schemas": {
 "schema1": {
 "name": "schema1",
 "all": false,
 "tables": {
 "table1": {
 "name": "table1",
 "type": "table",
 "all": true,
 "is_synchronized": false
 }
 }
 }
 }
 }
 },
 "total_table_num": 1
}
{"max_table_num": 500
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000010",
 "error_msg": "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.5 Querying Database Object Information

### Function

This API is used to query database object information.

### URI

GET /v5.1/{project\_id}/jobs/{job\_id}/db-object

**Table 7-264** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-265** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                     |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | Type of the object information to be queried. Values:<br><b>modified</b> : Query information about the selected objects that are not delivered. |

## Request Parameters

**Table 7-266** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 200**

**Table 7-267** Response body parameters

| Parameter      | Type                        | Description                                                                                                                                                                                                            |
|----------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| target_root_db | Object                      | Destination database information for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3.<br>For details, see <a href="#">Table 7-268</a> . |
| object_info    | Map<String, DatabaseObject> | Migration or synchronization object information.<br>For details, see <a href="#">Table 7-269</a> .                                                                                                                     |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                             |
|---------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| max_table_num | Integer | Threshold of the number of tables in a database.                                                                                                                                                                                                                                                                                                        |
| status        | String  | Status of submitting the query of database object information. This parameter is returned only when the API in <a href="#">Obtaining the Result of Querying Database Object Information</a> is invoked.<br><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>failed</b></li> <li>• <b>pending</b></li> </ul> |
| id            | String  | Task ID.                                                                                                                                                                                                                                                                                                                                                |
| object_scope  | String  | Type of the database in real-time synchronization.                                                                                                                                                                                                                                                                                                      |

**Table 7-268** Data structure description of field **target\_root\_db**

| Parameter   | Type   | Description                                          |
|-------------|--------|------------------------------------------------------|
| db_name     | String | Database name.                                       |
| db_encoding | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-269** Data structure description of field **object\_info**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the database in real-time synchronization. Value: <b>config</b><br><br>This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>config</b></li> </ul> |



| Parameter          | Type                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name               | String                   | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| all                | Boolean                  | Whether to migrate or synchronize the entire database.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | Map<String,SchemaObject> | Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-270</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| tables             | Map<String,TableObject>  | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-271</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| total_table_number | Integer                  | Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| is_synchronized    | Boolean                  | Whether data has been synchronized.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**Table 7-270** Data structure description of field **schemas**

| Parameter | Type                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String                                    | Type of the schema in real-time synchronization. Value: <b>config</b><br><br>This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                            |
| name      | String                                    | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| all       | Boolean                                   | Whether to migrate or synchronize the entire schema.<br><br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| tables    | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br><br>For details, see <a href="#">Table 7-271</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Table 7-271** Data structure description of field **tables**

| Parameter         | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type         | String  | Type of the table in real-time synchronization. Value: <b>config</b><br><br>This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                              |
| type              | String  | Object type. Values:<br><ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                 |
| name              | String  | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| all               | Boolean | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>● If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>● If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>● If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | String  | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| schema_alias_name | String  | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter         | Type                      | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered          | Boolean                   | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                        |
| filter_conditions | Array of strings          | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                              |
| config_conditions | Array of strings          | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | Boolean                   | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | Map<String, ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-272</a> . |

**Table 7-272** Data structure description of field **columns**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the column in real-time synchronization. Value: <b>config</b><br>This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |

| Parameter                        | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| primary_key_for_data_filtering   | String  | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| index_for_data_filtering         | String  | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| name                             | String  | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| type                             | String  | Data type of the column. Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int</b>, <b>long</b>, <b>varchar(256)</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>create_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>update_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>Expression:</b> The value can be <b>varchar(256)</b>, and the column value must be <b>concat(__current_database, '@', __current_table)</b>.</li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256)</b>.</li> </ul> |
| primary_key_for_column_filtering | String  | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| filtered                         | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true:</b> indicates that the column will be synchronized.</li> <li>• <b>false:</b> indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| additional     | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b><br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression:</b><br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table:</b><br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |
| value          | String  | Value of the additional column. Note: <ul style="list-style-type: none"> <li>• This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>• When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul>                                                                                                                                                                                            |

**Status code: 400**

**Table 7-273** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying information about the selected database object

```
https://{endpoint}/v5.1/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-object?type=modified
```

## Example Response

**Status code: 200**

OK

```
{
 "object_scope": "table",
 "target_root_db": {
 "db_name": "mytest",
 "db_encoding": "utf8"
 },
 "object_info": {
 "TEST": {
 "name": "TEST",
 "tables": {
 "TBL_2": {
 "name": "TBL_2",
 "type": "table",
 "all": true,
 "is_synchronized": true
 }
 },
 "is_synchronized": true,
 "total_table_num": 1
 }
 },
 "max_table_num": 50000,
 "id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000010",
 "error_msg": "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.6 Downloading the Object Import Template

### Function

This API is used to download the object import template of a task.

### Constraints

- This API is available only for data synchronization scenarios from Oracle to GaussDB Distributed, from GaussDB (for MySQL) to Kafka, and from MySQL to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/db-object/template

**Table 7-274** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-275** Query parameters

| Parameter            | Mandatory | Type   | Description                                                                                                                                                                                                                                                                             |
|----------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_import_db_level | No        | String | The file template supports different levels of data synchronization. If this parameter is left blank, the table level is used by default.<br>Default value: <b>table</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>database</b></li><li>• <b>table</b></li></ul> |



## Request Parameters

**Table 7-276** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 400**

**Table 7-277** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Obtaining the object import template of the task

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-object/template
```

## Example Response

**Status code: 200**

The response body is in the file stream format, and the downloaded file is in the ZIP format.

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000001",
 "error_msg" : "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.7 Uploading the Object Import Template

### Function

This API is used to upload the object import template of a task.

### Constraints

- This API can be used only in certain regions. For details, see [Endpoints](#).
- Only XLS and XLSX files can be imported for data synchronization from Oracle to GaussDB Distributed. The maximum size of a file is 5 MB. The template can be obtained through the API in [Downloading the Object Import Template](#).
- Only JSON and TXT files and ZIP packages containing JSON and TXT files can be imported for data synchronization scenarios from GaussDB(for MySQL) to Kafka and from MySQL to Kafka. A ZIP package can contain only one file.
- Only JSON files can be imported in data synchronization scenarios from GaussDB(for MySQL) to Kafka and from MySQL to Kafka. For details, see

**Updating object details about a task with a specified ID** in the API in **Updating Details About a Task with a Specified ID**.

- The maximum size of a JSON or TXT file imported for data synchronization scenarios from GaussDB (for MySQL) to Kafka and from MySQL to Kafka is 5 MB, the maximum size of a ZIP package is 1 MB, and the maximum size of a file in a ZIP package is 20 MB.

## URI

POST /v5/{project\_id}/jobs/{job\_id}/db-object/template

**Table 7-278** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-279** Query parameters

| Parameter            | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                |
|----------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_import_db_level | No        | String | The file template supports different levels of data synchronization. If this parameter is left blank, the table level is used by default.<br>Default value: <b>table</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>database</b></li> <li>• <b>table</b></li> </ul> |

## Request Parameters

**Table 7-280** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>multipart/form-data</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>Default value: <b>multipart/form-data</b>                                         |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

**Table 7-281** FormData parameter

| Parameter | Mandatory | Type | Description                   |
|-----------|-----------|------|-------------------------------|
| file      | Yes       | File | Template file to be uploaded. |

## Response Parameters

Status code: 200

**Table 7-282** Response body parameters

| Parameter    | Type    | Description                          |
|--------------|---------|--------------------------------------|
| send_success | Boolean | Whether template upload is complete. |

| Parameter                 | Type   | Description                                  |
|---------------------------|--------|----------------------------------------------|
| process_status            | String | File parsing status.                         |
| parsed_succes<br>s_number | String | Number of rows that are successfully parsed. |

**Status code: 400**

**Table 7-283** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Uploading the object import template of the task

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-object/template
```

## Example Response

**Status code: 200**

OK

```
{
 "send_success" : true
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.8 Querying the Progress of Uploading the Object Import Template

### Function

This API is used to query the progress of uploading the object import template of a task.

### Constraints

- This API is available only for data synchronization scenarios from Oracle to GaussDB Distributed, from GaussDB (for MySQL) to Kafka, and from MySQL to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/db-object/template/progress

**Table 7-284** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-285** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                         |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------|
| offset    | No        | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. |
| limit     | No        | Integer | Number of items displayed per page.                                                                 |

## Request Parameters

**Table 7-286** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                              |

## Response Parameters

Status code: 200

**Table 7-287** Response body parameters

| Parameter             | Type    | Description                                  |
|-----------------------|---------|----------------------------------------------|
| send_success          | Boolean | Whether template upload is complete.         |
| process_status        | String  | File parsing status.                         |
| parsed_success_number | String  | Number of rows that are successfully parsed. |

**Status code: 400**

**Table 7-288** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying the progress of uploading the object import template of the task

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-object/template/progress
```

## Example Response

**Status code: 200**

OK

```
{
 "process_status" : "success",
 "parsed_success_number" : "1"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```



## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.4.9 Obtaining the Result of Uploading the Object Import Template

### Function

This API is used to obtain the result of uploading the object import template of a task.

### Constraints

- This API is available only for data synchronization scenarios from Oracle to GaussDB Distributed, from GaussDB (for MySQL) to Kafka, and from MySQL to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/db-object/template/result

**Table 7-289** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-290** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <p>Type of the uploaded result. Values:</p> <ul style="list-style-type: none"> <li>• <b>detail</b>: Obtain the latest uploaded file and verification result. If the uploaded file contains errors, the error cause is marked in the file.</li> <li>• <b>synchronized</b>: Obtain the synchronized (delivered) object file result.</li> <li>• <b>change</b>: Obtain the results of added and deleted objects (used in task editing).</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>detail</b></li> <li>• <b>synchronized</b></li> <li>• <b>change</b></li> </ul> |

## Request Parameters

**Table 7-291** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | <p>MIME type of the request body. Use the default value <b>application/json</b>. For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b>.</p> |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

Status code: 400

**Table 7-292** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying the result of uploading object import template of the task

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-object/template/result?type=detail
```

## Example Response

Status code: 200

The response body is in the file stream format, and the downloaded file is in the ZIP format.

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10030008",
 "error_msg": "Failed to download the file"
}
```

**Status Code**

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

**Error Code**For details, see [Error Code](#).

## 7.4.10 Obtaining the Progress of Saving Objects

**Function**

This API is used to obtain the progress of saving objects.

**Constraints**

- This API supports only the synchronization scenarios from Oracle-> GaussDB distributed, from MySQL to Kafka, and from GaussDB(for MySQL) to Kafka.
- This API can be used only in certain regions. For details, see [Endpoints](#).

**URI**

GET /v5/{project\_id}/jobs/{job\_id}/db-objects/saving-status

**Table 7-293** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-294** Query parameters

| Parameter | Mandatory | Type   | Description                                |
|-----------|-----------|--------|--------------------------------------------|
| query_id  | Yes       | String | ID returned by the API for saving objects. |

## Request Parameters

**Table 7-295** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.                                                        |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |
| X-Language   | No        | String | Request language type.                                                                                                                                                                                                        |

## Response Parameters

**Status code: 200**

**Table 7-296** Response body parameters

| Parameter | Type   | Description                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Query result ID.                                                                                                                                          |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>failed</b></li> <li>• <b>success</b></li> </ul> |
| job_id    | String | Task ID.                                                                                                                                                  |

**Status code: 400**

**Table 7-297** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

### Example Request

Obtaining the progress of saving objects

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-objects/saving-status?query_id=0eacda0b-9422-4535-8b62-537d1833638b
```

### Example Response

**Status code: 200**

OK

```
{
 "id" : "05ef2a25-a472-4144-b444-2e0a11eb5902",
 "status" : "success"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10030015",
 "error_msg" : "Failed to update database object"
}
```

### Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

### Error Code

For details, see [Error Code](#).

## 7.4.11 Querying the Synchronization Mapping List

### Function

This API is used to query the synchronization mapping list. During real-time synchronization, the objects that can be mapped to the destination include databases, schemas, tables, and columns (in data processing).

### URI

POST /v5/{project\_id}/jobs/{job\_id}/object-mappings

**Table 7-298** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

### Request Parameters

**Table 7-299** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 7-300** Request body parameters

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                |
|-----------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset          | No        | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. The default value is <b>0</b> .<br>Default value: <b>0</b>                             |
| limit           | No        | Integer | Number of items displayed per page. The default value is <b>10</b> . The value ranges from 1 to 1000.<br>Minimum value: <b>1</b><br>Maximum value: <b>1000</b><br>Default value: <b>10</b> |
| db_name         | No        | String  | Database name.                                                                                                                                                                             |
| schema_name     | No        | String  | Schema name.                                                                                                                                                                               |
| table_name      | No        | String  | Table name.                                                                                                                                                                                |
| has_column_info | No        | Boolean | Whether there is column mapping.                                                                                                                                                           |

## Response Parameters

Status code: 200

**Table 7-301** Response body parameters

| Parameter           | Type             | Description                                                                             |
|---------------------|------------------|-----------------------------------------------------------------------------------------|
| count               | Long             | Total number.                                                                           |
| object_mapping_list | Array of objects | List of synchronization mapping data.<br>For details, see <a href="#">Table 7-302</a> . |



**Table 7-302** object\_mapping\_list parameters

| Parameter          | Type    | Description                                |
|--------------------|---------|--------------------------------------------|
| source_db_name     | String  | Database name in the source database.      |
| source_schema_name | String  | Schema name in the source database.        |
| source_table_name  | String  | Table name in the source database name.    |
| target_db_name     | String  | Database name in the destination database. |
| target_schema_name | String  | Schema name in the destination database.   |
| target_table_name  | String  | Table name in the destination database.    |
| has_column_info    | Boolean | Whether there is column mapping.           |

**Status code: 400**

**Table 7-303** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying the synchronization mapping list

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/163b98e8-6088-46c3-8b86-c18fea6jb502/
object-mappings
{
 "db_name": "",
 "schema_name": "",
 "table_name": "",
 "offset": 1,
 "limit": 10,
 "has_column_info": false
}
```

## Example Response

**Status code: 200**

```
OK
{
 "object_mapping_list": [{
 "source_db_name": "yf",
 "source_table_name": "aaaa",
 "target_db_name": "yf",
 "target_table_name": "aaaa"
 }],
 "count": 1
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.M05003",
 "error_msg": "Task information not found."
}
```

## Error Code

For details, see [Error Code](#).

## 7.4.12 Querying Whether Object Selection and Column Mapping Are Supported

### Function

This API is used to query information such as the object selection type, column mapping, and object type that can be searched for supported by a task.

### URI

GET /v5/{project\_id}/jobs/{job\_id}/object/support

**Table 7-304** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-305** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                             |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                  |

## Response Parameters

**Status code: 200**

**Table 7-306** Response body parameters

| Parameter                          | Type             | Description                                                   |
|------------------------------------|------------------|---------------------------------------------------------------|
| is_full_trans_support_object       | Boolean          | Whether objects can be selected for a full task.              |
| is_incre_trans_support_object      | Boolean          | Whether objects can be selected for an incremental task.      |
| is_full_incre_trans_support_object | Boolean          | Whether objects can be selected for a full +incremental task. |
| support_object_import_engine       | Array of strings | DB engine that supports object import.                        |

| Parameter                  | Type    | Description                                                                                                                                                                                                                                                                                |
|----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_support_column_mapping  | Boolean | Whether column mapping is supported.                                                                                                                                                                                                                                                       |
| is_database_support_search | Boolean | Whether the database supports data search.                                                                                                                                                                                                                                                 |
| is_schema_support_search   | Boolean | Whether the schema supports data search.                                                                                                                                                                                                                                                   |
| is_table_support_search    | Boolean | Whether the table supports data search.                                                                                                                                                                                                                                                    |
| file_size                  | String  | Maximum size of a file that can be imported, in MB.                                                                                                                                                                                                                                        |
| previous_select            | String  | Mode in which objects are migrated or synchronized last time. <ul style="list-style-type: none"> <li>If this parameter is left blank, the required mode has not been selected.</li> <li><b>srcImportObject</b>: The object file import mode is selected for the task last time.</li> </ul> |
| import_level               | String  | Object import type. <ul style="list-style-type: none"> <li><b>table</b>: table-level import.</li> <li><b>database</b>: database-level import.</li> </ul>                                                                                                                                   |

## Example Request

Querying the information about object selection type and column mapping supported by the task

<https://{enpoint}/v5/246765b9f59445c3919fce121ea801f4/jobs/429b9210-118d-4711-87cb-be8e2dejb201/object/support>

## Example Response

**Status code: 200**

OK

```
{
 "is_full_trans_support_object" : false,
 "is_incre_trans_support_object" : false,
 "is_full_incre_trans_support_object" : false,
 "file_size" : "5.0",
 "support_object_import_engine" : ["oracle-to-mrsKafka", "oracle-to-kafka"],
 "is_support_column_mapping" : false,
 "is_database_support_search" : true,
 "is_table_support_search" : true
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

# 7.5 Task Details

## 7.5.1 Querying Task Details

### Function

This API is used to query task details.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}

**Table 7-307** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                                                            |

**Table 7-308** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <p>Type of task details. Values:</p> <ul style="list-style-type: none"> <li>• <b>detail</b>: basic task information.</li> <li>• <b>network</b>: connection testing result, which must be used together with the <b>query_id</b> parameter.</li> <li>• <b>precheck</b>: pre-check result, which must be used together with the <b>query_id</b> parameter.</li> <li>• <b>progress</b>: task progress information.</li> <li>• <b>log</b>: task log information. Pagination query parameters <b>offset</b> and <b>limit</b> are supported.</li> <li>• <b>compare</b>: a comparison task.</li> <li>• <b>file</b>: object import information.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>detail</b></li> <li>• <b>network</b></li> <li>• <b>precheck</b></li> <li>• <b>progress</b></li> <li>• <b>log</b></li> <li>• <b>compare</b></li> <li>• <b>file</b></li> </ul> |
| query_id  | No        | String | <p>Query ID, which is used to query task details.</p> <p>Note: For task details of some types, query the operation result based on the <b>query_id</b> returned by the request that triggers the operation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset       | No        | Integer | Offset. The records after this offset will be queried.<br>Note: Pagination query is supported for task details of some types. This parameter can be specified to control pagination query.                                                                                                                                                                                                                                                                                                                                                                                        |
| limit        | No        | Integer | Maximum number of records that can be returned.<br>Note: Pagination query is supported for task details of some types. This parameter can be specified to control pagination query.                                                                                                                                                                                                                                                                                                                                                                                               |
| compare_type | No        | String  | Type of a comparison task. This parameter is mandatory when <b>type</b> is set to <b>compare</b> . The value can be: <ul style="list-style-type: none"> <li>● <b>object_compare</b>: object-level comparison.</li> <li>● <b>line_compare</b>: row comparison.</li> <li>● <b>content_compare</b>: value comparison.</li> <li>● <b>data_compare</b>: data-level comparison.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>object_compare</b></li> <li>● <b>line_compare</b></li> <li>● <b>content_compare</b></li> <li>● <b>data_compare</b></li> </ul> |

| Parameter       | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| query_type      | No        | String | Type of the comparison content. This parameter is mandatory when <b>type</b> is set to <b>compare</b> . Values: <ul style="list-style-type: none"> <li>• <b>overview</b>: comparison task overview.</li> <li>• <b>list</b>: list of data comparison tasks.</li> <li>• <b>detail</b>: comparison details.</li> <li>• <b>diff</b>: inconsistency details.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>overview</b></li> <li>• <b>list</b></li> <li>• <b>detail</b></li> <li>• <b>diff</b></li> </ul> |
| object_type     | No        | String | Type of comparison details. Values: <ul style="list-style-type: none"> <li>• <b>DB</b>: database-level comparison details.</li> <li>• <b>TABLE</b>: table-level comparison details.</li> <li>• <b>INDEX</b>: index comparison details.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>DB</b></li> <li>• <b>TABLE</b></li> <li>• <b>INDEX</b></li> </ul>                                                                                                                                               |
| compare_task_id | No        | String | ID of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| source_db_name  | No        | String | Name of the source database for data comparison.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| target_db_name  | No        | String | Name of the destination database for data comparison.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



| Parameter           | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                  |
|---------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| compare_detail_type | No        | String | Type of the comparison result.<br>Values: <ul style="list-style-type: none"> <li>• <b>compare</b>: The comparison is complete.</li> <li>• <b>uncompare</b>: The comparison cannot be performed.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>compare</b></li> <li>• <b>uncompare</b></li> </ul> |

## Request Parameters

**Table 7-309** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

Status code: 200

**Table 7-310** Response body parameters

| Parameter | Type   | Description                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------|
| job       | Object | Response body for querying details about a single task.<br>For details, see <a href="#">Table 7-311</a> . |

**Table 7-311** Data structure description of field **job**

| Parameter       | Type             | Description                                                                                                                                                                                                                   |
|-----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | String           | Task ID.                                                                                                                                                                                                                      |
| status          | String           | Task status.                                                                                                                                                                                                                  |
| create_time     | String           | Task creation time.                                                                                                                                                                                                           |
| total_count     | Integer          | Total number of tasks in the list, which is irrelevant to pagination.                                                                                                                                                         |
| master_job_id   | String           | ID of the primary task.                                                                                                                                                                                                       |
| base_info       | Object           | Basic information body of a task.<br>For details, see <a href="#">Table 7-312</a> .                                                                                                                                           |
| source_endpoint | Array of objects | Information body of the source database.<br>For details, see <a href="#">Table 7-314</a> .                                                                                                                                    |
| target_endpoint | Array of objects | Information body of the destination database.<br>For details, see <a href="#">Table 7-314</a> .                                                                                                                               |
| alarm_notify    | Object           | Information body for setting task exception notification. If this parameter is enabled, the system sends a notification to a specified SMN topic when the task is abnormal.<br>For details, see <a href="#">Table 7-321</a> . |

| Parameter         | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speed_limit       | Array of objects | Flow control information body. <ul style="list-style-type: none"> <li>If you enable flow control, you can customize the maximum migration speed.</li> <li>If you disable flow control, the migration speed is not limited and the outbound bandwidth of the source database is maximally used,</li> </ul> which causes read consumption on the source database accordingly. For example, if the outbound bandwidth of the source database is 100 MB/s and 80% bandwidth is used, the I/O consumption on the source database is 80 MB/s.<br>For details, see <a href="#">Table 7-322</a> . |
| user_migration    | Object           | User migration information body.<br>For details, see <a href="#">Table 7-323</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| policy_config     | Object           | Policy information body. This parameter is used to configure migration and synchronization policies, including the conflict policy, DROP DATASE filtering, and object synchronization scope.<br>For details, see <a href="#">Table 7-326</a> .                                                                                                                                                                                                                                                                                                                                            |
| db_param          | Object           | Database parameter information body.<br>For details, see <a href="#">Table 7-327</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| tuning_parameters | Object           | Advanced setting information body.<br>For details, see <a href="#">Table 7-329</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| period_order      | Object           | Yearly/Monthly information body.<br>For details, see <a href="#">Table 7-331</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| node_info         | Object           | Information body of the DRS instance.<br>For details, see <a href="#">Table 7-332</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| logs              | Array of objects | Information body of a log query result.<br>For details, see <a href="#">Table 7-336</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| network_results   | Array of objects | Information body of a connection testing result.<br>For details, see <a href="#">Table 7-337</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| precheck_result   | Object           | Pre-check result information body.<br>For details, see <a href="#">Table 7-338</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| progress_info     | Object           | Task progress information body.<br>For details, see <a href="#">Table 7-341</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter                      | Type               | Description                                                                                                                                                     |
|--------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| migration_object_progress_info | Object             | Progress information body of objects being migrated.<br>For details, see <a href="#">Table 7-343</a> .                                                          |
| metrics                        | Object             | Node metrics.<br>For details, see <a href="#">Table 7-345</a> .                                                                                                 |
| compare_result                 | Object             | Task comparison result.<br>For details, see <a href="#">Table 7-346</a> .                                                                                       |
| support_import_file_resp       | Object             | <b>file</b> : object import information.<br>For details, see <a href="#">Table 7-355</a> .                                                                      |
| instance_features              | Map<String,String> | A list of task-level functions controlled by both the switch and version.                                                                                       |
| task_version                   | String             | Task version.                                                                                                                                                   |
| connection_management          | Object             | Connection management.<br>For details, see <a href="#">Table 7-356</a> .                                                                                        |
| public_ip_list                 | Array of objects   | Information about a specified EIP.<br>For details, see <a href="#">Table 7-358</a> .                                                                            |
| bind_public_ip_state           | String             | Whether an EIP is successfully bound.                                                                                                                           |
| children                       | Array of objects   | In the case of multiple tasks, if an EIP fails to be bound to a subtask, the subtask information is returned.<br>For details, see <a href="#">Table 7-359</a> . |

**Table 7-312** Data structure description of field **base\_info**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                       |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String | Task name. The task name can be 4 to 50 characters in length. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_).<br><ul style="list-style-type: none"> <li>• Minimum length: <b>4</b></li> <li>• Maximum length: <b>50</b></li> </ul> |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type      | String  | <p>Task scenario. Values:</p> <ul style="list-style-type: none"> <li>● <b>migration</b>: real-time migration.</li> <li>● <b>sync</b>: real-time synchronization.</li> <li>● <b>cloudDataGuard</b>: real-time disaster recovery.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>migration</b></li> <li>● <b>sync</b></li> <li>● <b>cloudDataGuard</b></li> </ul>                                                                                                                                                  |
| multi_write   | Boolean | <p>Whether the DR type is dual-active. Note:</p> <ul style="list-style-type: none"> <li>● This parameter is mandatory when <b>job_type</b> is set to <b>cloudDataGuard</b>. If the DR type is dual-active, the value of <b>multi_write</b> is <b>true</b>. Otherwise, the value is <b>false</b>.</li> <li>● If <b>job_type</b> is set to other values, <b>multi_write</b> is optional.</li> </ul>                                                                                                                                                  |
| engine_type   | String  | <p>Engine type. The value can be:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b>: Synchronization from Oracle to GaussDB distributed.</li> <li>● <b>redis-to-gaussredis</b>: Migration from Redis to GeminiDB Redis.</li> <li>● <b>rediscluster-to-gaussredis</b>: Migration from cluster Redis to GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle-to-gaussdbv5</b></li> <li>● <b>redis-to-gaussredis</b></li> <li>● <b>rediscluster-to-gaussredis</b></li> </ul> |
| job_direction | String  | <p>Migration direction. Values:</p> <ul style="list-style-type: none"> <li>● <b>up</b>: to-the-cloud scenarios and DR scenarios where the current cloud is the standby.</li> <li>● <b>down</b>: out-of-cloud scenarios and DR scenarios where the current cloud is the active.</li> <li>● <b>non-dbs</b>: self-built databases.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>up</b></li> <li>● <b>down</b></li> <li>● <b>non-dbs</b></li> </ul>                                                                |

| Parameter             | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_type             | String | Migration type. Values: <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b>: full migration.</li> <li>● <b>FULL_INCR_TRANS</b>: full+incremental migration.</li> <li>● <b>INCR_TRANS</b>: incremental migration.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>FULL_TRANS</b></li> <li>● <b>FULL_INCR_TRANS</b></li> <li>● <b>INCR_TRANS</b></li> </ul> |
| net_type              | String | Network type. Values: <ul style="list-style-type: none"> <li>● <b>eip</b>: public network.</li> <li>● <b>vpc</b>: VPC network. The VPC network cannot be selected in DR scenarios.</li> <li>● <b>vpn</b>: VPN or Direct Connect.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>eip</b></li> <li>● <b>vpc</b></li> <li>● <b>vpn</b></li> </ul>                  |
| charging_mode         | String | Billing mode. The pay-per-use billing is used by default. Values: <ul style="list-style-type: none"> <li>● <b>period</b>: indicates the yearly/monthly billing.</li> <li>● <b>on_demand</b>: indicates the pay-per-use billing.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>period</b></li> <li>● <b>on_demand</b></li> </ul>                                |
| enterprise_project_id | String | Enterprise project ID. The default value is <b>0</b> , indicating the default enterprise project.<br>Default value: <b>0</b>                                                                                                                                                                                                                                                               |
| description           | String | Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: !<>'&"\<br>Minimum length: <b>0</b><br>Maximum length: <b>256</b>                                                                                                                                                                                      |
| start_time            | String | Scheduled start time of a task.                                                                                                                                                                                                                                                                                                                                                            |

| Parameter    | Type             | Description                                                                                                                                                                                                         |
|--------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| expired_days | String           | Number of days after which an abnormal task automatically stops. The unit is day. The value ranges from 14 to 100. If this parameter is not specified, the default value is <b>14</b> .<br>Default value: <b>14</b> |
| tags         | Array of objects | Tag information. Up to 20 tags can be added. For details, see <a href="#">Table 7-313</a> .                                                                                                                         |

**Table 7-313** Data structure description of field **tags**

| Parameter | Type   | Description                                                                                                                                                                        |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | Tag key. The value can contain a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>36</b>   |
| value     | String | Tag value. The value can contain a maximum of 43 characters, including letters, digits, underscores (_), and hyphens (-).<br>Minimum length: <b>1</b><br>Maximum length: <b>43</b> |

**Table 7-314** Data structure description of fields **source\_endpoint** and **target\_endpoint**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type   | String | Database type. The value can be: <ul style="list-style-type: none"> <li>• <b>oracle</b>: Oracle.</li> <li>• <b>gaussdbv5</b>: GaussDB distributed.</li> <li>• <b>redis</b>: Redis.</li> <li>• <b>rediscluster</b>: Cluster Redis.</li> <li>• <b>gaussredis</b>: GeminiDB Redis.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>gaussdbv5</b></li> <li>• <b>redis</b></li> <li>• <b>rediscluster</b></li> <li>• <b>gaussredis</b></li> </ul> |

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_type  | String | DB instance type. Values: <ul style="list-style-type: none"> <li>● <b>offline</b>: indicates an on-premises database.</li> <li>● <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>● <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>offline</b></li> <li>● <b>ecs</b></li> <li>● <b>cloud</b></li> </ul> |
| endpoint_role  | String | DB instance role. Values: <ul style="list-style-type: none"> <li>● <b>so</b>: indicates the source database.</li> <li>● <b>ta</b>: indicates the destination database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>so</b></li> <li>● <b>ta</b></li> </ul>                                                                                                                  |
| endpoint       | Object | Basic information body of the database.<br>For details, see <a href="#">Table 7-315</a> .                                                                                                                                                                                                                                                                                                                |
| cloud          | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-316</a> .                                                                                                                                                                                                                                                                                                     |
| vpc            | Object | Information about the VPC, subnet, and security group where a DB instance resides.<br>For details, see <a href="#">Table 7-317</a> .                                                                                                                                                                                                                                                                     |
| config         | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-318</a> .                                                                                                                                                                                                                                                                                                           |
| ssl            | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-319</a> .                                                                                                                                                                                                                                                                                                      |
| customized_dns | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-320</a> .                                                                                                                                                                                                                                                                                                                                     |

**Table 7-315** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Type   | Description              |
|-----------|--------|--------------------------|
| id        | String | Database information ID. |



| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | String | <p>Database scenario type. The value can be:</p> <ul style="list-style-type: none"> <li>● <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>● <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>● <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>● <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>● <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>● <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>● <b>redis</b>: On-premises Redis database.</li> <li>● <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>● <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>● <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>● <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>oracle</b></li> <li>● <b>ecs_oracle</b></li> <li>● <b>cloud_gaussdbv5</b></li> <li>● <b>mysql</b></li> <li>● <b>ecs_mysql</b></li> <li>● <b>cloud_mysql</b></li> <li>● <b>redis</b></li> <li>● <b>ecs_redis</b></li> <li>● <b>rediscluster</b></li> <li>● <b>ecs_rediscluster</b></li> <li>● <b>cloud_gaussdb_redis</b></li> </ul> |

| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip            | String | <p>Database IP address. Constraints:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |
| db_port       | String | <p>Database port.</p> <p>The value is an integer ranging from 1 to 65535.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| db_user       | String | Database username.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| db_password   | String | Database password.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| instance_id   | String | ID of a Huawei Cloud DB instance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| instance_name | String | Name of a Huawei Cloud DB instance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| db_name       | String | <p>Database name. Example:</p> <ul style="list-style-type: none"> <li>• oracle: serviceName.orcl.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter       | Type             | Description                                                                                       |
|-----------------|------------------|---------------------------------------------------------------------------------------------------|
| source_sharding | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-315</a> . |

**Table 7-316** Data structure description of field **cloud**

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is a combination of the regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | String | Project ID of a tenant in a region. For details about how to obtain the project ID, see "Obtaining a Project ID".                                                                                                                                                                                                                                                                                     |
| az_code    | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-317** Data structure description of field **vpc**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                               |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id    | String | ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a> .                                                                  |
| subnet_id | String | ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page. Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a> . |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| security_group_id | String | ID of the security group where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a> . |

**Table 7-318** Data structure description of field **config**

| Parameter           | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | Boolean | Whether the destination DB instance is set to read-only. This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                     |
| node_num            | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-319** Data structure description of field **ssl**

| Parameter     | Type    | Description                                                                             |
|---------------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | String  | SSL certificate name.                                                                   |

| Parameter          | Type   | Description                                                                                                                                                  |
|--------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_key       | String | SSL certificate content, which is encrypted using Base64.                                                                                                    |
| ssl_cert_check_sum | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-320** Data structure description of field **customized\_dns**

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>● <b>add</b>: Add a customized DNS server IP address.</li> <li>● <b>keep</b>: Retain the DNS server IP address.</li> <li>● <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>● <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>add</b></li> <li>● <b>keep</b></li> <li>● <b>update</b></li> <li>● <b>recover</b></li> </ul> |
| dns_ip         | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-321** Data structure description of field **alarm\_notify**

| Parameter     | Type    | Description                                                       |
|---------------|---------|-------------------------------------------------------------------|
| alarm_to_user | Boolean | Whether to notify users of alarms.<br>Default value: <b>false</b> |

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| topic_urn  | String | SMN topic URN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| delay_time | Long   | <p>Delay threshold, in seconds. Values:</p> <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <p><b>NOTE</b></p> <ol style="list-style-type: none"> <li>1. A synchronization delay indicates a time difference (in seconds) of synchronization between the source and destination database.</li> <li>2. If the delay exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental migration, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</li> <li>3. This option is available only for full+incremental tasks.</li> </ol> |
| rpo_delay  | Long   | <p>RPO delay threshold, in seconds. Values:</p> <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <p><b>NOTE</b></p> <p>If the RPO delay between the service database and the DRS instance exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients. (In the early stages of an incremental DR, there is more delay because more data is waiting to be synchronized. In this situation, no notifications will be sent.)</p>                                                                                                                                                                                                               |
| rto_delay  | Long   | <p>RTO delay threshold, in seconds. Values:</p> <ul style="list-style-type: none"> <li>• Minimum value: <b>1</b></li> <li>• Maximum value: <b>3600</b></li> <li>• Default value: <b>0</b></li> </ul> <p><b>NOTE</b></p> <p>If the RTO delay between the DRS instance and the DR database exceeds a specified value and lasts for 6 minutes, DRS will notify specified recipients.</p>                                                                                                                                                                                                                                                                                                                                                                                       |

**Table 7-322** Data structure description of field **speed\_limit**

| Parameter | Type   | Description                                                                                                                                                       |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin     | String | Start time (UTC) of flow control. The start time is an integer in hh:mm format and the minutes part is ignored. <b>hh</b> indicates the hour, for example, 01:00. |
| end       | String | End time (UTC) in the format of hh:mm, for example, 15:59. The value must end with 59.                                                                            |
| speed     | String | Speed. The value ranges from 1 to 9,999, in MB/s.                                                                                                                 |

**Table 7-323** Data structure description of field **user\_migration**

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                         |
|-----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_migrate_user | Boolean          | Whether to migrate users.                                                                                                                                                                                                                                                                                                           |
| is_set_password | Boolean          | Whether to reset a unified password. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: Reset a unified password.</li> <li>• <b>false</b>: Do not reset a unified password. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL migration.</li> </ul> </li> </ul> |
| password        | String           | Unified password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty.                                                                                                                                                                                                     |
| user_list       | Array of objects | User list in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MySQL-to-MySQL migration and MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-324</a> .                                                                           |
| role_list       | Array of objects | User role in the migration objects. The following scenarios are supported: <ul style="list-style-type: none"> <li>• Real-time migration: MongoDB-to-DDS migration.</li> </ul> For details, see <a href="#">Table 7-325</a> .                                                                                                        |

**Table 7-324** Data structure description of field **user\_list**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | User ID.    |

| Parameter       | Type    | Description                                                                                                                                                        |
|-----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| account         | String  | User.                                                                                                                                                              |
| is_set_password | Boolean | Whether to reset the user password. The following scenarios are supported: <ul style="list-style-type: none"> <li>Real-time migration: MySQL migration.</li> </ul> |
| password        | String  | New password. This parameter is mandatory when <b>is_set_password</b> is set to <b>true</b> . The password cannot be empty.                                        |

**Table 7-325** Data structure description of field **role\_list**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| role      | String | Role.       |

**Table 7-326** Data structure description of field **policy\_config**

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filter_ddl_policy | String | DDL filtering policy. Values: <ul style="list-style-type: none"> <li>drop_database</li> </ul> Scenarios: <ul style="list-style-type: none"> <li>Real-time migration: For MySQL migration, this parameter can be set to "", indicating that DROP DATABASE is not filtered.</li> <li>Real-time synchronization: For MySQL synchronization, this parameter can only be set to <b>drop_database</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>drop_database</b></li> </ul> |



| Parameter       | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conflict_policy | String  | <p>Incremental conflict policy. The conflict policy refers to the conflict handling policy during incremental synchronization. By default, conflicts in the full synchronization phase are ignored. Values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b>: Ignore the conflict. The system will ignore the conflicting data and continue the subsequent synchronization process.</li> <li>● <b>stop</b>: Report an error. The synchronization task will be stopped and fail. You can view the details in synchronization logs.</li> <li>● <b>overwrite</b>: Overwrite the existing data with the synchronized data. Conflicting data will be overwritten.</li> </ul> <p>Scenarios:</p> <ul style="list-style-type: none"> <li>● Real-time migration: Not supported.</li> <li>● Real-time synchronization: Supported.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>ignore</b></li> <li>● <b>stop</b></li> <li>● <b>overwrite</b></li> </ul> |
| index_trans     | Boolean | <p>Object synchronization scope: indicates whether to synchronize normal indexes. By default, DRS synchronizes the primary key or unique index. A normal index refers to an index other than the primary key or unique index. Values:</p> <ul style="list-style-type: none"> <li>● <b>true</b>: All indexes will be synchronized.</li> <li>● <b>false</b>: Only primary key or unique indexes are synchronized.</li> </ul> <p>Default value: <b>true</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ddl_trans       | Boolean | <p>Object synchronization scope: indicates whether to synchronize DDLs in the incremental phase. Values:</p> <ul style="list-style-type: none"> <li>● <b>true</b>: DDLs are synchronized in the incremental phase.</li> <li>● <b>false</b>: DDLs are not synchronized in the incremental phase.</li> </ul> <p>Default value: <b>true</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_sync_topology_type | String | <p>Data synchronization topology. Data synchronization supports multiple synchronization topologies. You can plan your synchronization instances based on service requirements. Values:</p> <ul style="list-style-type: none"><li>● <b>one2one</b>: one-to-one.</li><li>● <b>one2many</b>: one-to-many.</li><li>● <b>many2one</b>: many-to-one.</li></ul> <p>Default value: <b>one2one</b></p> <p>Enumerated values:</p> <ul style="list-style-type: none"><li>● <b>one2one</b></li><li>● <b>one2many</b></li><li>● <b>many2one</b></li></ul> |

| Parameter        | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| support_ddl_info | String | <p>DDLs to be synchronized. Values:</p> <ul style="list-style-type: none"> <li>● <b>CREATE_TABLE</b>: Create a table.</li> <li>● <b>ADD_COLUMN</b>: Add a column.</li> <li>● <b>MODIFY_COLUMN</b>: Modify column attribute.</li> <li>● <b>CHANGE_COLUMN</b>: Change column attribute.</li> <li>● <b>DROP_INDEX</b>: Delete an index.</li> <li>● <b>ADD_INDEX</b>: Add an index.</li> <li>● <b>CREATE_INDEX</b>: Create an index.</li> <li>● <b>RENAME_INDEX</b>: Rename an index.</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>● In one-to-one and one-to-many scenarios, if the DDL usage of the source and destination databases must be consistent, high-risk DDLs must be synchronized.</li> <li>● In one-to-one and one-to-many scenarios, if you do not want a high-risk DDL to be performed in the destination, deselect the high-risk DDL to protect destination data. However, filtering DDL may cause synchronization to fail, for example, column deletion.</li> <li>● In many-to-one data synchronization tasks, it is recommended that only the ADD COLUMN operation is synchronized, or tasks may fail or data may be inconsistent due to changes in destination tables. Typical failure scenarios are as follows: <ul style="list-style-type: none"> <li>– Synchronizing the TRUNCATE operation clears all destination data.</li> <li>– Synchronizing the CREATE INDEX operation locks the destination table.</li> <li>– Synchronizing the RENAME operation causes other task failure because the destination table cannot be found.</li> <li>– Synchronizing the MODIFY COLUMN operation causes other task failure due to incompatible data types.</li> </ul> </li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CREATE_TABLE</b></li> <li>● <b>ADD_COLUMN</b></li> <li>● <b>MODIFY_COLUMN</b></li> <li>● <b>CHANGE_COLUMN</b></li> </ul> |

| Parameter           | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |        | <ul style="list-style-type: none"> <li>• <b>DROP_INDEX</b></li> <li>• <b>ADD_INDEX</b></li> <li>• <b>CREATE_INDEX</b></li> <li>• <b>RENAME_INDEX</b></li> </ul>                                                                                                                                                                                                                               |
| sync_type_policy    | String | Synchronization object type. Values: <ul style="list-style-type: none"> <li>• <b>supportAllType</b>: All types.</li> <li>• <b>tableData</b>: Data.</li> <li>• <b>tableStructure</b>: Table structure.</li> <li>• <b>constraintData</b>: Index.</li> </ul> <b>NOTE</b><br>Except <b>supportAllType</b> , other types can be specified together, for example, <b>tableData,tableStructure</b> . |
| increment_read_mode | String | Incremental log reading mode for synchronization from Oracle to GaussDB: <b>logminer</b> or <b>xstream</b> .                                                                                                                                                                                                                                                                                  |
| dml_types           | String | DML synchronization type.                                                                                                                                                                                                                                                                                                                                                                     |

**Table 7-327** Data structure description of field **db\_param**

| Parameter   | Type             | Description                                                                                                                                                                           |
|-------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| common      | Array of objects | Common parameter. Only the values of destination database parameters whose comparison results are inconsistent can be changed.<br>For details, see <a href="#">Table 7-328</a> .      |
| performance | Array of objects | Performance parameter. If the comparison results are consistent, you can also change the values of destination database parameters.<br>For details, see <a href="#">Table 7-328</a> . |

**Table 7-328** Data structure description of fields **common** and **performance**

| Parameter    | Type   | Description                                  |
|--------------|--------|----------------------------------------------|
| key          | String | Database parameter name.                     |
| target_value | String | Parameter value of the destination database. |

**Table 7-329** Data structure description of field **tuning\_params**

| Parameter     | Type             | Description                                                                                     |
|---------------|------------------|-------------------------------------------------------------------------------------------------|
| full_sync     | Array of objects | Full migration tuning parameters.<br>For details, see <a href="#">Table 7-330</a> .             |
| incre_capture | Array of objects | Incremental capture tuning parameters.<br>For details, see <a href="#">Table 7-330</a> .        |
| incre_apply   | Array of objects | Incremental replay tuning parameters.<br>For details, see <a href="#">Table 7-330</a> .         |
| incre_relay   | Array of objects | Incremental log extraction tuning parameters.<br>For details, see <a href="#">Table 7-330</a> . |

**Table 7-330** Data structure description of fields **full\_sync**, **incre\_capture**, **incre\_apply**, and **incre\_relay**

| Parameter    | Type    | Description       |
|--------------|---------|-------------------|
| param_name   | String  | Parameter name.   |
| param_value  | String  | Parameter value.  |
| availability | Boolean | Available or not. |

**Table 7-331** Data structure description of field **period\_order**

| Parameter   | Type    | Description                                                                                                                                                                                                                                                                                                                                              |
|-------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type | Integer | Subscription period type. Values: <ul style="list-style-type: none"> <li>• <b>2</b>: indicates that the service is subscribed by month.</li> <li>• <b>3</b>: indicates that the service is subscribed by year.</li> </ul> Default value: <b>3</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>2</b></li> <li>• <b>3</b></li> </ul> |
| period_num  | Integer | Number of subscription periods. This parameter depends on the value of <b>period_type</b> . For example: <ul style="list-style-type: none"> <li>• When <b>period_type</b> is set to <b>2</b>, the value <b>1</b> indicates one month.</li> <li>• When <b>period_type</b> is set to <b>3</b>, the value <b>1</b> indicates one year.</li> </ul>           |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_renew | Integer | Whether auto renewal is enabled. Values: <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that auto renewal is disabled. This is the default value. You need to pay manually.</li> <li>• <b>1</b>: indicates that auto renewal is enabled.</li> </ul> Default value: <b>0</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>0</b></li> <li>• <b>1</b></li> </ul> |

**Table 7-332** Data structure description of field **node\_info**

| Parameter | Type   | Description                                                                                                                                   |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| spec      | Object | Information body of DRS instance specifications.<br>For details, see <a href="#">Table 7-333</a> .                                            |
| vpc       | Object | Information body of DRS instance VPC. This parameter is mandatory for self-built databases.<br>For details, see <a href="#">Table 7-334</a> . |
| base_info | Object | Basic task info.<br>For details, see <a href="#">Table 7-335</a> .                                                                            |

**Table 7-333** Data structure description of field **spec**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| node_type | String | Specification code. Values: <ul style="list-style-type: none"> <li>• <b>micro</b>: minimum specifications.</li> <li>• <b>small</b>: small specifications.</li> <li>• <b>medium</b>: medium specifications.</li> <li>• <b>high</b>: large specifications.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>micro</b></li> <li>• <b>small</b></li> <li>• <b>medium</b></li> <li>• <b>high</b></li> </ul> |

**Table 7-334** Data structure description of field **vpc**

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | String | ID of the VPC where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| subnet_id         | String | ID of the subnet where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| custom_node_ip    | String | IP address of the DRS instance to be created. Use commas (,) to separate multiple values. Only IPv4 addresses are supported. To obtain the IP address, perform the following steps: <ul style="list-style-type: none"><li>• Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li><li>• Method 2: Call the API for querying private IP addresses. For details, see "Querying Private IP Addresses". Select a private IP address whose <b>device_owner</b> is left blank. Example: 192.168.0.10,192.168.0.11</li></ul> |
| security_group_id | String | ID of the security group where the DRS instance is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**Table 7-335** Data structure description of field **base\_info**

| Parameter     | Type   | Description                                                                                                                                                                                                                                                                 |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_type | String | DB instance type. The value can be: <ul style="list-style-type: none"><li>• <b>single</b>: single instance.</li><li>• <b>ha</b>: primary/standby instance.</li></ul> Enumerated values: <ul style="list-style-type: none"><li>• <b>single</b></li><li>• <b>ha</b></li></ul> |
| arch          | String | CPU architecture. The value can be: <ul style="list-style-type: none"><li>• x86</li><li>• arm</li></ul> Enumerated values: <ul style="list-style-type: none"><li>• <b>x86</b></li><li>• <b>arm</b></li></ul>                                                                |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| availability_zone | String | AZ ID. If the task instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (.). Example: <ul style="list-style-type: none"> <li>If <b>instance_type</b> is set to <b>single</b>, the value is <b>cn-north-4a</b>.</li> <li>If <b>instance_type</b> is set to <b>ha</b>, the value is <b>cn-north-4a,cn-north-4b</b>.</li> </ul> |
| status            | String | Status.                                                                                                                                                                                                                                                                                                                                                                                             |
| role              | String | Primary/Standby role of a task.                                                                                                                                                                                                                                                                                                                                                                     |

**Table 7-336** Data structure description of field **logs**

| Parameter   | Type   | Description      |
|-------------|--------|------------------|
| level       | String | Log level.       |
| message     | String | Log information. |
| create_time | String | Log time.        |

**Table 7-337** Data structure description of field **network\_results**

| Parameter  | Type    | Description                                                                                                                                                                                                                                                                                                                       |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip         | String  | IP address for connection testing.                                                                                                                                                                                                                                                                                                |
| success    | Boolean | Whether the connection testing is successful.                                                                                                                                                                                                                                                                                     |
| result     | String  | Connection testing result.                                                                                                                                                                                                                                                                                                        |
| status     | String  | Whether the connection testing is successful.<br>Values: <ul style="list-style-type: none"> <li><b>success</b>: The connection testing is successful.</li> <li><b>failed</b>: The connection testing fails.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>success</b></li> <li><b>failed</b></li> </ul> |
| error_code | String  | Error code of the connection testing failure.                                                                                                                                                                                                                                                                                     |
| error_msg  | String  | Error message of the connection testing failure.                                                                                                                                                                                                                                                                                  |



**Table 7-338** Data structure description of field **precheck\_result**

| Parameter         | Type             | Description                                                          |
|-------------------|------------------|----------------------------------------------------------------------|
| result            | Boolean          | Whether the pre-check items are passed.                              |
| process           | String           | Pre-check progress, in percentage.                                   |
| total_passed_rate | String           | Percentage of passed pre-checks.                                     |
| rds_instance_id   | String           | DB instance ID.                                                      |
| job_direction     | String           | Migration direction.                                                 |
| precheck_results  | Array of objects | Pre-check results.<br>For details, see <a href="#">Table 7-339</a> . |

**Table 7-339** Data structure description of field **precheck\_results**

| Parameter         | Type             | Description                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| item              | String           | Check item.                                                                                                                                                                                                                                                                                                                                                     |
| result            | String           | Check results. Values: <ul style="list-style-type: none"> <li>● <b>PASSED</b>: The check is passed.</li> <li>● <b>ALARM</b>: There are check items to be confirmed.</li> <li>● <b>FAILED</b>: The check fails.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>PASSED</b></li> <li>● <b>ALARM</b></li> <li>● <b>FAILED</b></li> </ul> |
| failed_reason     | String           | Failure cause.                                                                                                                                                                                                                                                                                                                                                  |
| data              | String           | Failure data.                                                                                                                                                                                                                                                                                                                                                   |
| raw_error_message | String           | Failure details.                                                                                                                                                                                                                                                                                                                                                |
| group             | String           | Check item group.                                                                                                                                                                                                                                                                                                                                               |
| is_support_skip   | Boolean          | Whether to skip the check.                                                                                                                                                                                                                                                                                                                                      |
| is_skipped        | Boolean          | Skipped.                                                                                                                                                                                                                                                                                                                                                        |
| failed_sub_jobs   | Array of objects | Details about a failed subtask.<br>For details, see <a href="#">Table 7-340</a> .                                                                                                                                                                                                                                                                               |

**Table 7-340** Data structure description of field **failed\_sub\_jobs**

| Parameter    | Type   | Description           |
|--------------|--------|-----------------------|
| id           | String | Subtask ID.           |
| name         | String | Subtask name.         |
| check_result | String | Subtask check result. |

**Table 7-341** Data structure description of field **progress\_info**

| Parameter               | Type                                               | Description                                                                        |
|-------------------------|----------------------------------------------------|------------------------------------------------------------------------------------|
| progress                | String                                             | Migration comparison progress in percentage.                                       |
| incr_trans_delay        | String                                             | Incremental migration delay (unit: s).                                             |
| incr_trans_delay_millis | String                                             | Incremental migration delay (unit: ms).                                            |
| task_mode               | String                                             | Migration type.                                                                    |
| transfer_statuses       | String                                             | Migration status.                                                                  |
| process_time            | String                                             | Migration time.                                                                    |
| remaining_time          | String                                             | Estimated remaining time.                                                          |
| progress_map            | Map<String, <a href="#">ProgressCompleteInfo</a> > | Full migration progress details.<br>For details, see <a href="#">Table 7-342</a> . |

**Table 7-342** Data structure description of field **progress\_map**

| Parameter      | Type   | Description               |
|----------------|--------|---------------------------|
| completed      | String | Progress.                 |
| remaining_time | String | Estimated remaining time. |

**Table 7-343** Data structure description of field **migration\_object\_progress\_info**

| Parameter                 | Type             | Description                                                         |
|---------------------------|------------------|---------------------------------------------------------------------|
| migration_object_overview | Array of objects | Overview details.<br>For details, see <a href="#">Table 7-344</a> . |

| Parameter          | Type   | Description                          |
|--------------------|--------|--------------------------------------|
| create_time        | String | Data generation time.                |
| full_start_time    | String | Start time of full migration.        |
| full_complete_time | String | End time of full migration.          |
| incr_start_time    | String | Start time of incremental migration. |
| end_time           | String | End time.                            |

**Table 7-344** Data structure description of field **migration\_object\_overview**

| Parameter  | Type   | Description                    |
|------------|--------|--------------------------------|
| type       | String | Type.                          |
| src_count  | String | Amount of data to be migrated. |
| dst_count  | String | Amount of data migrated.       |
| status     | String | Status.                        |
| start_time | String | Start time.                    |
| end_time   | String | End time.                      |

**Table 7-345** Data structure description of field **metrics**

| Parameter                   | Type   | Description                       |
|-----------------------------|--------|-----------------------------------|
| job_id                      | String | Task ID.                          |
| node_id                     | String | Instance ID.                      |
| time_stamp                  | String | Time when the metric is reported. |
| cpu_util                    | String | CPU usage.                        |
| mem_util                    | String | Memory usage.                     |
| network_incoming_bytes_rate | String | Network input throughput.         |
| network_outgoing_bytes_rate | String | Network output throughput.        |
| disk_read_bytes_rate        | String | Disk read throughput.             |

| Parameter                  | Type   | Description                                        |
|----------------------------|--------|----------------------------------------------------|
| disk_write_bytes_rate      | String | Disk write throughput.                             |
| apply_rows_rate            | String | Rows written into destination database per second. |
| apply_transactions_rate    | String | DML TPS.                                           |
| apply_ddl_rate             | String | DDL TPS.                                           |
| apply_average_execute_time | String | Average transaction execution time.                |
| apply_average_commit_time  | String | Average transaction commit time.                   |
| apply_current_state        | String | Synchronization status.                            |

**Table 7-346** Data structure description of field **compare\_result**

| Parameter                      | Type             | Description                                                                                             |
|--------------------------------|------------------|---------------------------------------------------------------------------------------------------------|
| objects_compare_overview_info  | Object           | Information body of object-level comparison overview.<br>For details, see <a href="#">Table 7-347</a> . |
| objects_compare_detail_infos   | Array of objects | Information body of object-level comparison details.<br>For details, see <a href="#">Table 7-349</a> .  |
| data_compare_task_list         | Array of objects | List of data comparison tasks.<br>For details, see <a href="#">Table 7-350</a> .                        |
| line_compare_overview_infos    | Array of objects | Information body of row comparison overview.<br>For details, see <a href="#">Table 7-351</a> .          |
| line_compare_detail_infos      | Array of objects | Information body of row comparison details.<br>For details, see <a href="#">Table 7-352</a> .           |
| content_compare_overview_infos | Array of objects | Information body of value comparison overview.<br>For details, see <a href="#">Table 7-353</a> .        |
| content_compare_detail_infos   | Array of objects | Information body of value comparison details.<br>For details, see <a href="#">Table 7-354</a> .         |

**Table 7-347** Data structure description of field **objects\_compare\_overview\_info**

| Parameter                | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time              | String           | Time when a comparison task is created.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| compare_results          | Array of objects | Comparison result.<br>For details, see <a href="#">Table 7-348</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| start_time               | String           | Start time of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| status                   | String           | Status of a comparison task. Values: <ul style="list-style-type: none"> <li>● <b>RUNNING</b>: The comparison task is in progress.</li> <li>● <b>WAITING_FOR_RUNNING</b>: The comparison task is waiting to be started.</li> <li>● <b>SUCCESSFUL</b>: The comparison task is complete.</li> <li>● <b>FAILED</b>: The comparison task fails.</li> <li>● <b>CANCELLED</b>: The comparison task is canceled.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>RUNNING</b></li> <li>● <b>WAITING_FOR_RUNNING</b></li> <li>● <b>SUCCESSFUL</b></li> <li>● <b>FAILED</b></li> <li>● <b>CANCELLED</b></li> </ul> |
| export_status            | String           | Status of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| report_remaining_seconds | Long             | Remaining validity period of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| compare_job_id           | String           | ID of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| error_msg                | String           | Failure cause.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Table 7-348** Data structure description of field **compare\_results**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <p>Object type. Values:</p> <ul style="list-style-type: none"> <li>● <b>DB</b>: indicates a database.</li> <li>● <b>TABLE</b>: indicates a table.</li> <li>● <b>VIEW</b>: indicates a view.</li> <li>● <b>EVENT</b>: indicates an event.</li> <li>● <b>ROUTINE</b>: indicates a stored procedure and function.</li> <li>● <b>INDEX</b>: indicates an index.</li> <li>● <b>TRIGGER</b>: indicates a trigger.</li> <li>● <b>SYNONYM</b>: indicates a synonym.</li> <li>● <b>FUNCTION</b>: indicates a function.</li> <li>● <b>PROCEDURE</b>: indicates a stored procedure.</li> <li>● <b>TYPE</b>: indicates a user-defined type.</li> <li>● <b>RULE</b>: indicates a rule.</li> <li>● <b>DEFAULT_TYPE</b>: indicates a default value.</li> <li>● <b>PLAN_GUIDE</b>: indicates an execution plan.</li> <li>● <b>CONSTRAINT</b>: indicates a constraint.</li> <li>● <b>FILE_GROUP</b>: indicates a file group.</li> <li>● <b>PARTITION_FUNCTION</b>: indicates a partition function.</li> <li>● <b>PARTITION_SCHEME</b>: indicates a partition scheme.</li> <li>● <b>TABLE_COLLATION</b>: indicates table sorting rule.</li> <li>● <b>EXTENSIONS</b>: indicates a plug-in.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>DB</b></li> <li>● <b>TABLE</b></li> <li>● <b>VIEW</b></li> <li>● <b>EVENT</b></li> <li>● <b>ROUTINE</b></li> <li>● <b>INDEX</b></li> <li>● <b>TRIGGER</b></li> <li>● <b>SYNONYM</b></li> <li>● <b>FUNCTION</b></li> <li>● <b>PROCEDURE</b></li> <li>● <b>TYPE</b></li> <li>● <b>RULE</b></li> <li>● <b>DEFAULT_TYPE</b></li> </ul> |

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |        | <ul style="list-style-type: none"> <li>• <b>PLAN_GUIDE</b></li> <li>• <b>CONSTRAINT</b></li> <li>• <b>FILE_GROUP</b></li> <li>• <b>PARTITION_FUNCTION</b></li> <li>• <b>PARTITION_SCHEME</b></li> <li>• <b>TABLE_COLLATION</b></li> <li>• <b>EXTENSIONS</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| source_count | Long   | Number of source objects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| target_count | Long   | Number of destination objects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| status       | String | <p>Comparison result. Values: <b>CONSISTENT</b>: consistent. <b>INCONSISTENT</b>: inconsistent. <b>COMPARING</b>: The comparison is in progress. <b>WAITING_FOR_COMPARISON</b>: waiting for comparison. <b>FAILED_TO_COMPARE</b>: The comparison fails. <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist. <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</p> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>CONSISTENT</b></li> <li>• <b>INCONSISTENT</b></li> <li>• <b>COMPARING</b></li> <li>• <b>WAITING_FOR_COMPARISON</b></li> <li>• <b>FAILED_TO_COMPARE</b></li> <li>• <b>TARGET_DB_NOT_EXIST</b></li> <li>• <b>CAN_NOT_COMPARE</b></li> </ul> |

**Table 7-349** Data structure description of field **objects\_compare\_detail\_infos**

| Parameter       | Type   | Description                                   |
|-----------------|--------|-----------------------------------------------|
| source_db_value | String | Comparison value of the source database.      |
| target_db_value | String | Comparison value of the destination database. |
| source_db_name  | String | Source database name.                         |
| target_db_name  | String | Destination database name.                    |

| Parameter     | Type   | Description    |
|---------------|--------|----------------|
| error_message | String | Failure cause. |

**Table 7-350** Data structure description of field **data\_compare\_task\_list**

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id                       | String | ID of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| type                     | String | Comparison type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| start_time               | String | Start time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| end_time                 | String | End time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| status                   | String | <p>Status of a comparison task. Values:</p> <ul style="list-style-type: none"> <li>● <b>RUNNING</b>: The comparison task is in progress.</li> <li>● <b>WAITING_FOR_RUNNING</b>: The comparison task is waiting to be started.</li> <li>● <b>SUCCESSFUL</b>: The comparison task is complete.</li> <li>● <b>FAILED</b>: The comparison task fails.</li> <li>● <b>CANCELLED</b>: The comparison task is canceled.</li> <li>● <b>TIMEOUT_INTERRUPT</b>: The comparison task times out.</li> <li>● <b>FULL_DOING</b>: Full verification is in progress.</li> <li>● <b>INCRE_DOING</b>: Incremental verification is in progress.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>RUNNING</b></li> <li>● <b>WAITING_FOR_RUNNING</b></li> <li>● <b>SUCCESSFUL</b></li> <li>● <b>FAILED</b></li> <li>● <b>CANCELLED</b></li> <li>● <b>TIMEOUT_INTERRUPT</b></li> <li>● <b>FULL_DOING</b></li> <li>● <b>INCRE_DOING</b></li> </ul> |
| compute_type             | String | Compute resource of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| export_status            | String | Status of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| report_remaining_seconds | String | Remaining validity period of the exported comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



| Parameter       | Type               | Description               |
|-----------------|--------------------|---------------------------|
| compare_job_tag | Map<String,String> | Tag of a comparison task. |
| error_msg       | String             | Failure cause.            |

**Table 7-351** Data structure description of field **line\_compare\_overview\_infos**

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source_db_name | String | Source database name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| target_db_name | String | Destination database name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| status         | String | <p>Row comparison result. Values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b>: consistent.</li> <li>● <b>INCONSISTENT</b>: inconsistent.</li> <li>● <b>COMPARING</b>: The comparison is in progress.</li> <li>● <b>WAITING_FOR_COMPARISON</b>: waiting for comparison.</li> <li>● <b>FAILED_TO_COMPARE</b>: The comparison fails.</li> <li>● <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist.</li> <li>● <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b></li> <li>● <b>INCONSISTENT</b></li> <li>● <b>COMPARING</b></li> <li>● <b>WAITING_FOR_COMPARISON</b></li> <li>● <b>FAILED_TO_COMPARE</b></li> <li>● <b>TARGET_DB_NOT_EXIST</b></li> <li>● <b>CAN_NOT_COMPARE</b></li> </ul> |

**Table 7-352** Data structure description of field **line\_compare\_detail\_infos**

| Parameter         | Type   | Description                        |
|-------------------|--------|------------------------------------|
| source_table_name | String | Table name of the source database. |

| Parameter          | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source_row_num     | String | Number of table rows in the source database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| target_table_name  | String | Table name of the destination database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| target_row_num     | String | Number of table rows in the destination database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| difference_row_num | String | Difference value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| status             | String | <p>Comparison result. Values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b>: consistent.</li> <li>● <b>INCONSISTENT</b>: inconsistent.</li> <li>● <b>COMPARING</b>: The comparison is in progress.</li> <li>● <b>WAITING_FOR_COMPARISON</b>: waiting for comparison.</li> <li>● <b>FAILED_TO_COMPARE</b>: The comparison fails.</li> <li>● <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist.</li> <li>● <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b></li> <li>● <b>INCONSISTENT</b></li> <li>● <b>COMPARING</b></li> <li>● <b>WAITING_FOR_COMPARISON</b></li> <li>● <b>FAILED_TO_COMPARE</b></li> <li>● <b>TARGET_DB_NOT_EXIST</b></li> <li>● <b>CAN_NOT_COMPARE</b></li> </ul> |
| message            | String | Message.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Table 7-353** Data structure description of field **content\_compare\_overview\_infos**

| Parameter | Type   | Description                |
|-----------|--------|----------------------------|
| source_db | String | Source database name.      |
| target_db | String | Destination database name. |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status         | String  | <p>Comparison result. Values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b>: consistent.</li> <li>● <b>INCONSISTENT</b>: inconsistent.</li> <li>● <b>COMPARING</b>: The comparison is in progress.</li> <li>● <b>WAITING_FOR_COMPARISON</b>: waiting for comparison.</li> <li>● <b>FAILED_TO_COMPARE</b>: The comparison fails.</li> <li>● <b>TARGET_DB_NOT_EXIST</b>: The destination database does not exist.</li> <li>● <b>CAN_NOT_COMPARE</b>: Comparison cannot be performed.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>CONSISTENT</b></li> <li>● <b>INCONSISTENT</b></li> <li>● <b>COMPARING</b></li> <li>● <b>WAITING_FOR_COMPARISON</b></li> <li>● <b>FAILED_TO_COMPARE</b></li> <li>● <b>TARGET_DB_NOT_EXIST</b></li> <li>● <b>CAN_NOT_COMPARE</b></li> </ul> |
| compare_result | Boolean | Comparison result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**Table 7-354** Data structure description of field **content\_compare\_detail\_infos**

| Parameter         | Type   | Description                                       |
|-------------------|--------|---------------------------------------------------|
| source_db         | String | Source database name.                             |
| target_db         | String | Destination database name.                        |
| source_table_name | String | Table name of the source database.                |
| target_table_name | String | Table name of the destination database.           |
| source_row_number | Long   | Number of table rows in the source database.      |
| target_row_number | Long   | Number of table rows in the destination database. |

| Parameter              | Type    | Description                                                                                                                                          |
|------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| difference_row_num     | Long    | Number of inconsistent rows.                                                                                                                         |
| line_compare_result    | Boolean | Row comparison result. Values: <ul style="list-style-type: none"> <li>● <b>true</b>: consistent.</li> <li>● <b>false</b>: inconsistent.</li> </ul>   |
| content_compare_result | Boolean | Value comparison result. Values: <ul style="list-style-type: none"> <li>● <b>true</b>: consistent.</li> <li>● <b>false</b>: inconsistent.</li> </ul> |
| message                | String  | Failure cause.                                                                                                                                       |

**Table 7-355** Data structure description of field **support\_import\_file\_resp**

| Parameter       | Type   | Description                                   |
|-----------------|--------|-----------------------------------------------|
| file_size       | String | File import threshold.                        |
| previous_select | String | Mode in which objects are selected last time. |

**Table 7-356** Data structure description of field **connection\_management**

| Parameter         | Type   | Description                                                          |
|-------------------|--------|----------------------------------------------------------------------|
| driver_management | Object | Driver management.<br>For details, see <a href="#">Table 7-357</a> . |

**Table 7-357** Data structure description of field **driver\_management**

| Parameter   | Type   | Description  |
|-------------|--------|--------------|
| driver_name | String | Driver name. |

**Table 7-358** Data structure description of field **public\_ip\_list**

| Parameter | Type   | Description            |
|-----------|--------|------------------------|
| id        | String | ID of a specified EIP. |
| public_ip | String | EIP.                   |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | Type of a task with an EIP bound. <ul style="list-style-type: none"> <li>In a primary/standby task, <b>master</b> indicates the primary task, and <b>slave</b> indicates the standby task.</li> <li>In other cases, the value is fixed to <b>master</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>master</b></li> <li><b>slave</b></li> </ul> |

**Table 7-359** Data structure description of field **children**

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| id        | String | Subtask ID.   |
| name      | String | Subtask name. |

**Status code: 400**

**Table 7-360** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

- Querying the synchronization progress of a task

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=progress
```
- Querying the row comparison overview

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=compare&query_type=overview&compare_type=line_compare&compare_task_id=1994b3e6-15ef-471e-8af1-7e2ed3e85b06&offset=0&limit=10
```
- Querying task details

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=detail
```

- Querying data-level comparison tasks  
[https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=compare&compare\\_type=data\\_compare&query\\_type=list&limit=10&offset=0](https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=compare&compare_type=data_compare&query_type=list&limit=10&offset=0)
- Querying synchronization logs  
<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=log&offset=0&limit=10>
- Querying the connection testing result  
[https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=network&query\\_id=669c9c19-99e3-4628-8c90-397136266701](https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r?type=network&query_id=669c9c19-99e3-4628-8c90-397136266701)

## Example Response

**Status code: 200**

OK

Querying basic task information (when **type** is set to **detail**)

```
{
 "job": {
 "id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "status": "CONFIGURATION",
 "create_time": "2022-11-07T16:15:18Z",
 "base_info": {
 "name": "DRS-1234",
 "job_type": "sync",
 "engine_type": "oracle-to-gaussdbv5",
 "job_direction": "up",
 "task_type": "FULL_INCR_TRANS",
 "net_type": "eip",
 "charging_mode": "on_demand",
 "enterprise_project_id": "0",
 "description": "",
 "expired_days": 14,
 "tags": [{
 "key": "test",
 "value": "test"
 }]
 }
 },
 "source_endpoint": [{
 "db_type": "oracle",
 "endpoint_type": "offline",
 "endpoint_role": "so",
 "endpoint": {
 "id": "f59e6118-da89-4fdb-9b98-65f56709928a",
 "endpoint_name": "oracle",
 "ip": "10.154.217.239",
 "db_port": "1521",
 "db_user": "ORACLE_USER",
 "db_name": "serviceName.orcl"
 }
 },
 "ssl": {
 "ssl_link": false
 }
 },
 "target_endpoint": [{
 "db_type": "gaussdbv5",
 "endpoint_type": "cloud",
 "endpoint_role": "ta",
 "endpoint": {
 "id": "10deb576-8885-473b-a213-4d76e668dc0d",
 "endpoint_name": "cloud_gaussdbv5",
 "instance_id": "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user": "root"
 }
 },
 "cloud": {
 "region": "cn-north-4",
 }
}
```

```

"project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
"az_code" : "cn-north-4a,cn-north-4g,cn-north-4c"
},
"vpc" : {
"vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
"subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
"security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
}
}],
"alarm_notify" : {
"alarm_to_user" : true,
"topic_urn" : "urn:smn:cn-north-4:f2c2468c3ee7410c862a461ca073d2f2:test",
"delay_time" : 60
},
"speed_limit" : [{
"begin" : "16:00",
"end" : "15:59",
"speed" : "10"
}],
"policy_config" : {
"ddl_trans" : false
},
"node_info" : {
"spec" : {
"node_type" : "medium"
}
}
}
}

```

**Status code: 400**

Bad Request

```

{
"error_code" : "DRS.10000010",
"error_msg" : "Job does not exist, please check job ID."
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.5.2 Obtaining Task Pricing Details

### Function

This API is used to query the task pricing details.

### Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

## URI

GET /v5/{project\_id}/jobs/{job\_id}/metering

**Table 7-361** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-362** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> .                                       |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                              |



## Response Parameters

Status code: 200

**Table 7-363** Response body parameters

| Parameter         | Type             | Description                                                                  |
|-------------------|------------------|------------------------------------------------------------------------------|
| product_info_list | Array of objects | Resource information list.<br>For details, see <a href="#">Table 7-364</a> . |

**Table 7-364** Data structure description of field **product\_info\_list**

| Parameter                | Type    | Description                                                                                                                                                                                                                                                                                                                |
|--------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id                       | String  | ID, which is used to identify the mapping between the inquiry result and the request and must be unique in an inquiry.                                                                                                                                                                                                     |
| cloud_service_type       | String  | Specifies the service type code of the purchased product. For example, the service type code for EC2 is <b>hws.service.type.ec2</b> .                                                                                                                                                                                      |
| resource_type            | String  | Specifies the resource type code of the purchased product. For example, the resource type code for VMs in EC2 is <b>hws.resource.type.vm</b> .                                                                                                                                                                             |
| resource_spec_code       | String  | Specifies the resource specifications code of the purchased product. For example, the value for VMs of the small specifications is <b>m1.tiny</b> .                                                                                                                                                                        |
| resource_size            | Integer | Resource capacity measurement ID.                                                                                                                                                                                                                                                                                          |
| resource_size_measure_id | Integer | Specifies the resource capacity. It can be the subscribed volume size or bandwidth size.                                                                                                                                                                                                                                   |
| usage_factor             | String  | Specifies the usage factor. This parameter is mandatory for a pay-per-use task. The value is the same as the usage factor of SDRs. The mappings between cloud services and usage factors are as follows: <ul style="list-style-type: none"> <li>● <b>Duration</b>: Cloud server</li> <li>● <b>flow</b>: traffic</li> </ul> |
| usage_value              | Double  | Specifies the usage value. This parameter is mandatory for a pay-per-use task. For example, the resources are billed by hour, the usage value is <b>1</b> , and the usage measurement unit is hour.                                                                                                                        |

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| usage_measurement_id | Integer | Specifies the usage measurement unit. This parameter is mandatory for a pay-per-use task. For example, the resources are billed by hour, the usage value is <b>1</b> , and the usage measurement unit is hour. <ul style="list-style-type: none"> <li>● <b>4</b>: Hour</li> <li>● <b>10</b>: GB</li> <li>● <b>11</b>: MB</li> <li>● <b>13</b>: Byte</li> <li>● <b>17</b>: FLOW_GB</li> </ul> |

**Status code: 400**

**Table 7-365** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Obtaining the task pricing details

`https://{endpoint}/v5/{project_id}/jobs/{job_id}/metering`

## Example Response

**Status code: 200**

OK

```
{
 "product_info_list": [
 {
 "id": "78f3a9f1-3d8d-43f0-acc4-ee93f8a9d934",
 "cloud_service_type": "hws.service.type.drs",
 "resource_type": "hws.resource.type.drs.vm",
 "resource_spec_code": "drs.lg.dr",
 "resource_size": 1,
 "usage_factor": "Duration",
 "usage_value": 1,
 "usage_measurement_id": 4
 }
],
}
```

```

 "id": "f52a74ce-5b11-4c5b-b365-488d9fc38882",
 "cloud_service_type": "hws.service.type.drs",
 "resource_type": "hws.resource.type.drs.flow",
 "resource_spec_code": "drs.flow.free",
 "resource_size": 1,
 "usage_factor": "flow",
 "usage_value": 1,
 "usage_measure_id": 17
 }
]
}

```

**Status code: 400**

Bad Request

```

{
 "error_code": "DRS.M00202",
 "error_msg": "The value of parameter jobId is invalid."
}

```

## Error Code

For details, see [Error Code](#).

## 7.5.3 Querying the Abnormal Data List

### Function

This API is used to query the abnormal data list.

### Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/dirty-data

**Table 7-366** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-367** Query parameters

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                |
|------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin_time | No        | Integer | Start time in UTC format, for example, <b>2020-09-01T18:50:20Z</b> .                                                                                                                       |
| end_time   | No        | Integer | End time in UTC format, for example, <b>2020-09-01T19:50:20Z</b> .                                                                                                                         |
| limit      | No        | String  | Number of items displayed per page. The default value is <b>10</b> . The value ranges from 1 to 1000.<br>Minimum value: <b>1</b><br>Maximum value: <b>1000</b><br>Default value: <b>10</b> |
| offset     | No        | String  | Offset, which is the position where the query starts. The value must be greater than or equal to 0. The default value is <b>0</b> .<br>Default value: <b>0</b>                             |

## Request Parameters

**Table 7-368** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

Status code: 200

**Table 7-369** Response body parameters

| Parameter       | Type             | Description                                                              |
|-----------------|------------------|--------------------------------------------------------------------------|
| count           | Integer          | Total number.                                                            |
| dirty_data_list | Array of objects | List of abnormal data.<br>For details, see <a href="#">Table 7-370</a> . |

**Table 7-370** dirty\_data\_list parameters

| Parameter   | Type   | Description                                                                   |
|-------------|--------|-------------------------------------------------------------------------------|
| db_name     | String | Database name.                                                                |
| schema_name | String | Schema name.                                                                  |
| table_name  | String | Table name.                                                                   |
| error_sql   | String | Abnormal SQL statement.                                                       |
| error_time  | String | UTC time when an exception occurs, for example, <b>2023-06-10T03:01:52Z</b> . |
| error_msg   | String | Exception information.                                                        |



## 7.5.4 Exporting Task Operation Statistics

### Function

This API is used to export the operation statistics of a specified task.

### URI

POST /v5/{project\_id}/jobs/{job\_id}/operation-statistics/export

**Table 7-372** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

### Request Parameters

**Table 7-373** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> .      |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                       |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

## Response Parameters

None

## Example Request

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/operation-statistics/export
```

## Example Response

**Status code: 200**

The response body is in the file stream format, and the downloaded file is in the .xlsx format.

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000001",
 "error_msg" : "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.5.5 Querying Monitoring Data

### Function

This API is used to obtain task monitoring data.



## URI

GET /v5/{project\_id}/jobs/{job\_id}/monitor-data

**Table 7-374** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-375** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                                |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                        |

## Response Parameters

Status code: 200

**Table 7-376** Response body parameters

| Parameter         | Type    | Description                                            |
|-------------------|---------|--------------------------------------------------------|
| bandwidth         | String  | EIP bandwidth. Unit: MB/s.                             |
| is_src_normal     | Boolean | Whether the source database connection is normal.      |
| is_dst_normal     | Boolean | Whether the destination database connection is normal. |
| src_offset        | String  | Offset of the source database.                         |
| node_offset       | String  | Offset of the replication instance.                    |
| dst_offset        | String  | Offset of the destination database.                    |
| src_delay         | Integer | Delay of the source database.                          |
| dst_delay         | Integer | Delay of the destination database.                     |
| src_rps           | String  | Source database RPS.                                   |
| src_io            | String  | Source database I/O.                                   |
| dst_rps           | String  | Destination database RPS.                              |
| dst_io            | String  | Destination database I/O.                              |
| trans_data        | String  | Amount of data to be migrated. Unit: MB                |
| trans_lines       | String  | Number of rows to be migrated.                         |
| used_volumes      | String  | Storage space usage. Unit: GB                          |
| used_memory       | String  | Memory usage. Unit: MB                                 |
| used_cpu_per cent | String  | CPU usage.                                             |
| node_volume_size  | Integer | Total size of the node disk. Unit: GB                  |
| node_memory_size  | Integer | Total size of the node memory. Unit: MB                |
| update_time       | String  | Update time.                                           |
| apply_rate        | Integer | Synchronization speed. Unit: byte/s                    |

## Example Request

Querying task monitoring data

```
https://{endpoint}/v5/04f9aca88c00d3202fd4c01ed679daf0/jobs/ee5ed538-90c6-4f70-bd2e-ac084abjb502/monitor-data
```

## Example Response

Status code: 200

OK

```
{
 "bandwidth" : "37",
 "is_src_normal" : true,
 "is_dst_normal" : true,
 "src_offset" : "mysql-bin.000646:196",
 "node_offset" : "mysql-bin.000646:196",
 "dst_offset" : "mysql-bin.000646:196",
 "src_delay" : 0,
 "dst_delay" : 0,
 "src_rps" : "0",
 "src_io" : "0.0",
 "dst_rps" : "0",
 "dst_io" : "0.0",
 "trans_data" : "0",
 "trans_lines" : "29",
 "used_volumes" : "4",
 "used_memory" : "2124",
 "used_cpu_percent" : "1.4",
 "node_volume_size" : 500,
 "node_memory_size" : 8192,
 "update_time" : "2023-07-19T03:09:25Z",
 "apply_rate" : 0
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.5.6 Querying Incremental Component Details

### Function

This API is used to query details about incremental components for an incremental or full+incremental task. For details, see [Querying the Synchronization Progress](#).

### Constraints

- This API is available only for data synchronization scenarios from Oracle to GaussDB Distributed, from Oracle to GaussDB Primary/Standby, from GaussDB Distributed to GaussDB Distributed, from GaussDB Distributed to MySQL, from GaussDB Distributed to GaussDB Primary/Standby, from GaussDB Distributed to GaussDB(DWS), GaussDB Distributed to Oracle, GaussDB Primary/Standby to GaussDB Primary/Standby, from GaussDB Primary/Standby to GaussDB Distributed, from GaussDB Primary/Standby to

GaussDB(DWS), from GaussDB Primary/Standby to Oracle, from Oracle to GaussDB(DWS), and from Oracle to MySQL.

- This API can be used only in certain regions. For details, see [Endpoints](#).

## URI

GET /v5/{project\_id}/jobs/{job\_id}/increment-components-detail

**Table 7-377** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-378** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                                |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                        |

## Response Parameters

Status code: 200

**Table 7-379** Response body parameters

| Parameter                 | Type             | Description                                                                      |
|---------------------------|------------------|----------------------------------------------------------------------------------|
| update_time               | String           | Update time.                                                                     |
| increment_components_list | Array of objects | Incremental component details.<br>For details, see <a href="#">Table 7-380</a> . |

**Table 7-380** increment\_components\_list parameters

| Parameter       | Type   | Description                                                                                                                                                                                                                                                                            |
|-----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type            | String | Component type. The value can be: <ul style="list-style-type: none"> <li>● <b>capture</b>: capture component.</li> <li>● <b>apply</b>: replay component.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>capture</b></li> <li>● <b>apply</b></li> </ul>      |
| status          | String | Status. <ul style="list-style-type: none"> <li>● <b>STOPPED</b>: The component is stopped.</li> <li>● <b>STARTED</b>: The component is in progress.</li> <li>● <b>STOPPING</b>: The component is being stopped.</li> <li>● <b>STARTING</b>: The component is being started.</li> </ul> |
| start_time      | String | Start time.                                                                                                                                                                                                                                                                            |
| start_point     | String | Start position.                                                                                                                                                                                                                                                                        |
| current_point   | String | Current position.                                                                                                                                                                                                                                                                      |
| resolution_time | String | Parsing time.                                                                                                                                                                                                                                                                          |
| delay           | String | Delay, in seconds.                                                                                                                                                                                                                                                                     |

## Example Request

Querying the incremental component details

```
https://{enpoint}/v5/246765b9f59445c3919fce121ea801f4/jobs/429b9210-118d-4711-87cb-be8e2dejb201/increment-components-detail
```

## Example Response

**Status code: 200**

OK

```
{
 "increment_components_list" : [{
 "type" : "capture",
 "status" : "STARTED",
 "start_time" : "2023-07-19T03:09:25Z",
 "start_point" : "0;0|0",
 "current_point" : "0;0|0",
 "resolution_time" : "2023-07-19T03:09:25Z",
 "delay" : "2"
 }, {
 "type" : "apply",
 "status" : "STARTED",
 "start_time" : "2023-07-19T03:09:25Z",
 "start_point" : "-1",
 "current_point" : "0;0|0",
 "resolution_time" : "2023-07-19T03:09:25Z",
 "delay" : "3"
 }],
 "update_time" : "2023-07-19T03:09:25Z"
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

# 7.6 Task Operations

## 7.6.1 Performing Operations on a Task with a Specified ID

### Function

This API is used to perform operations on a task with a specified ID.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

## URI

POST /v5/{project\_id}/jobs/{job\_id}/action

**Table 7-381** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .    |
| job_id     | Yes       | String | Task ID. (In the multi-task scenario, this parameter is set to the value of <b>master_job_id</b> returned by the parent task details.) |

## Request Parameters

**Table 7-382** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 7-383** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                   |
|-----------|-----------|--------|-------------------------------------------------------------------------------|
| job       | Yes       | Object | Operation on a single task.<br>For details, see <a href="#">Table 7-384</a> . |

**Table 7-384** Data structure description of field **job**

| Parameter | Mandatory | Type   | Description                                                                                                                            |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| job_id    | No        | String | Task ID. (In the multi-task scenario, this parameter is set to the value of <b>master_job_id</b> returned by the parent task details.) |



| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action_name | Yes       | String | <p>Name of an operation. Values:</p> <ul style="list-style-type: none"> <li>• <b>network</b>: indicates the operation for testing the connection to the source or destination database.</li> <li>• <b>precheck</b>: indicates the operation for performing a precheck.</li> <li>• <b>start</b>: indicates the operation for starting a task.</li> <li>• <b>stop</b>: indicates the operation for pausing a task.</li> <li>• <b>restart</b>: indicates the operation for resuming a task.</li> <li>• <b>reset</b>: indicates the operation for resetting a task.</li> <li>• <b>skip_precheck</b>: indicates the operation for skipping the precheck.</li> <li>• <b>create_compare</b>: indicates the operation for creating a comparison task.</li> <li>• <b>cancel_compare</b>: indicates the operation for canceling a comparison task.</li> <li>• <b>column_limit</b>: indicates the operation for filtering fields.</li> <li>• <b>reload_parameters</b>: indicates the operation for reloading task parameters.</li> <li>• <b>bind_eip</b>: indicates operation for binding an EIP.</li> <li>• <b>unbind_eip</b>: indicates the operation for unbinding an EIP.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>network</b></li> <li>• <b>precheck</b></li> <li>• <b>start</b></li> </ul> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                    |
|-------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |           |        | <ul style="list-style-type: none"> <li>• <b>stop</b></li> <li>• <b>restart</b></li> <li>• <b>reset</b></li> <li>• <b>skip_precheck</b></li> <li>• <b>create_compare</b></li> <li>• <b>cancel_compare</b></li> <li>• <b>column_limit</b></li> <li>• <b>reload_parameters</b></li> <li>• <b>bind_eip</b></li> <li>• <b>unbind_eip</b></li> </ul> |
| action_parameters | No        | Object | Parameter of an operation. For details, see <a href="#">Table 7-385</a> .                                                                                                                                                                                                                                                                      |

**Table 7-385** Data structure description of field **action\_params**

| Parameter          | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                          |
|--------------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoints          | No        | Array of objects | Database information. For details, see <a href="#">Table 7-386</a> .                                                                                                                                                                                                                                                                 |
| precheck_mode      | No        | String           | Pre-check mode. This parameter is mandatory during pre-check. The values are as follows: <ul style="list-style-type: none"> <li>• <b>forStartJob</b>: pre-check before starting a task.</li> <li>• <b>forRetryJob</b>: pre-check before editing a task.</li> <li>• <b>forResetJob</b>: pre-check before resetting a task.</li> </ul> |
| skip_precheck_info | No        | Object           | Parameter for skipped pre-check items. This parameter is mandatory when pre-check items are skipped. For details, see <a href="#">Table 7-393</a> .                                                                                                                                                                                  |
| pause_mode         | No        | String           | Task pause mode. Set this parameter when a task is paused. To stop capturing logs of the source database, set the parameter to <b>all</b> . Default value: <b>target</b> .                                                                                                                                                           |

| Parameter          | Mandatory | Type    | Description                                                                                                                                                                                      |
|--------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time         | No        | String  | Scheduled start time of a task.                                                                                                                                                                  |
| compare_task_param | No        | Object  | Information body for performing operations on a comparison task. This parameter is mandatory when you perform operations on a comparison task.<br>For details, see <a href="#">Table 7-394</a> . |
| is_sync_reedit     | No        | Boolean | When you resume a task after editing it, set this parameter to <b>true</b> and <b>action_name</b> to <b>restart</b> .                                                                            |
| force_delete       | No        | Boolean | When a task is forcibly stopped, set this parameter to <b>true</b> .                                                                                                                             |
| public_ip_config   | No        | Object  | Public IP address of a tenant.<br>For details, see <a href="#">Table 7-399</a> .                                                                                                                 |

**Table 7-386** Data structure description of field endpoints

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type   | Yes       | String | Database type. The value can be: <ul style="list-style-type: none"> <li>● <b>oracle</b>: Oracle.</li> <li>● <b>gaussdbv5</b>: GaussDB distributed.</li> <li>● <b>redis</b>: Redis.</li> <li>● <b>rediscluster</b>: Cluster Redis.</li> <li>● <b>gaussredis</b>: GeminiDB Redis.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>oracle</b></li> <li>● <b>gaussdbv5</b></li> <li>● <b>redis</b></li> <li>● <b>rediscluster</b></li> <li>● <b>gaussredis</b></li> </ul> |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_type  | Yes       | String | DB instance type. Values: <ul style="list-style-type: none"> <li>• <b>offline</b>: indicates an on-premises database.</li> <li>• <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>• <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>offline</b></li> <li>• <b>ecs</b></li> <li>• <b>cloud</b></li> </ul> |
| endpoint_role  | Yes       | String | DB instance role. Values: <ul style="list-style-type: none"> <li>• <b>so</b>: indicates the source database.</li> <li>• <b>ta</b>: indicates the destination database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>so</b></li> <li>• <b>ta</b></li> </ul>                                                                                                                  |
| endpoint       | Yes       | Object | Basic information body of the database.<br>For details, see <a href="#">Table 7-387</a> .                                                                                                                                                                                                                                                                                                                |
| cloud          | No        | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-388</a> .                                                                                                                                                                                                                                                                                                     |
| vpc            | No        | Object | Information about the VPC, subnet, and security group where a DB instance resides.<br>For details, see <a href="#">Table 7-389</a> .                                                                                                                                                                                                                                                                     |
| config         | No        | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-390</a> .                                                                                                                                                                                                                                                                                                           |
| ssl            | No        | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-391</a> .                                                                                                                                                                                                                                                                                                      |
| customized_dns | No        | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-392</a> .                                                                                                                                                                                                                                                                                                                                     |

**Table 7-387** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Mandatory | Type   | Description              |
|-----------|-----------|--------|--------------------------|
| id        | No        | String | Database information ID. |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | Yes       | String | <p>Database scenario type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>• <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>• <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>• <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>• <b>redis</b>: On-premises Redis database.</li> <li>• <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>• <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>• <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>ecs_oracle</b></li> <li>• <b>cloud_gaussdbv5</b></li> <li>• <b>mysql</b></li> <li>• <b>ecs_mysql</b></li> <li>• <b>cloud_mysql</b></li> <li>• <b>redis</b></li> <li>• <b>ecs_redis</b></li> <li>• <b>rediscluster</b></li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                  |
|-----------|-----------|------|----------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>ecs_rediscluster</li><li>cloud_gaussdb_redis</li></ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip        | No        | String | <p>Database IP address.</p> <p>Constraints:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |



| Parameter       | Mandatory | Type             | Description                                                                                         |
|-----------------|-----------|------------------|-----------------------------------------------------------------------------------------------------|
| db_port         | No        | String           | Database port.<br>The value is an integer ranging from 1 to 65535.                                  |
| db_user         | Yes       | String           | Database username.                                                                                  |
| db_password     | Yes       | String           | Database password.                                                                                  |
| instance_id     | No        | String           | ID of a Huawei Cloud DB instance.                                                                   |
| instance_name   | No        | String           | Name of a Huawei Cloud DB instance.                                                                 |
| db_name         | No        | String           | Database name. Example: <ul style="list-style-type: none"> <li>oracle: serviceName.orcl.</li> </ul> |
| source_sharding | No        | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-387</a> .   |

**Table 7-388** Data structure description of field **cloud**

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | Yes       | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is a combination of the regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | Yes       | String | Project ID of a tenant in a region. For details about how to obtain the project ID, see "Obtaining a Project ID".                                                                                                                                                                                                                                                                                     |
| az_code    | No        | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                         |

**Table 7-389** Data structure description of field **vpc**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | Yes       | String | ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a> .                                                                                                                                                                                              |
| subnet_id         | Yes       | String | ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page. Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a> .                                                                                                                             |
| security_group_id | No        | String | ID of the security group where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a> . |

**Table 7-390** Data structure description of field **config**

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | No        | Boolean | Whether the destination DB instance is set to read-only. This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                     |
| node_num            | No        | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-391** Data structure description of field **ssl**

| Parameter     | Mandatory | Type    | Description                                                                             |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | No        | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | No        | String  | SSL certificate name.                                                                   |
| ssl_cert_key  | No        | String  | SSL certificate content, which is encrypted using Base64.                               |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                  |
|--------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_check_sum | No        | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | No        | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-392** Data structure description of field **customized\_dns**

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Yes       | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | Yes       | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>• <b>add</b>: Add a customized DNS server IP address.</li> <li>• <b>keep</b>: Retain the DNS server IP address.</li> <li>• <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>• <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>add</b></li> <li>• <b>keep</b></li> <li>• <b>update</b></li> <li>• <b>recover</b></li> </ul> |
| dns_ip         | Yes       | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-393** Data structure description of field **skip\_precheck\_info**

| Parameter             | Mandatory | Type             | Description                             |
|-----------------------|-----------|------------------|-----------------------------------------|
| skipped_precheck_list | Yes       | Array of strings | Skipped pre-check item.                 |
| skip_reason           | Yes       | String           | Reason for skipping the pre-check item. |

**Table 7-394** Data structure description of field **compare\_task\_param**

| Parameter       | Mandatory | Type                       | Description                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|-----------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| compare_task_id | No        | String                     | This parameter is mandatory for canceling a comparison task.                                                                                                                                                                                                                                                                                                |
| type            | No        | String                     | Comparison task mode.<br>Values: <ul style="list-style-type: none"> <li>• <b>object</b>: object-level comparison.</li> <li>• <b>lines</b>: row comparison.</li> <li>• <b>contents</b>: value comparison.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>object</b></li> <li>• <b>lines</b></li> <li>• <b>contents</b></li> </ul> |
| start_time      | No        | String                     | Scheduled start time, in timestamp format.                                                                                                                                                                                                                                                                                                                  |
| option          | No        | Map<String,String>         | Comparison policy.                                                                                                                                                                                                                                                                                                                                          |
| db_object       | No        | Map<String,DatabaseObject> | Comparison object.<br>For details, see <a href="#">Table 7-395</a> .                                                                                                                                                                                                                                                                                        |

**Table 7-395** Data structure description of field **db\_object**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the database in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values:<br>• <b>config</b> |
| name      | No        | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter          | Mandatory | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | No        | Boolean                                    | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>• If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>• If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | No        | Map<String, <a href="#">SchemaObject</a> > | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-396</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| tables             | No        | Map<String, <a href="#">TableObject</a> >  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-397</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| total_table_number | No        | Integer                                    | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| is_synchronized    | No        | Boolean                                    | <p>Whether synchronization has been performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Table 7-396** Data structure description of field **schemas**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String  | Type of the schema in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                             |
| name      | No        | String  | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | No        | Boolean | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |



| Parameter | Mandatory | Type                                      | Description                                                                                                                                                  |
|-----------|-----------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tables    | No        | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-397</a> . |

**Table 7-397** Data structure description of field **tables**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the table in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object. |
| type      | No        | String | Object type. Values: <ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                         |
| name      | No        | String | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all               | No        | Boolean          | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | No        | String           | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| schema_alias_name | No        | String           | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| filtered          | No        | Boolean          | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| filter_conditions | No        | Array of strings | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter         | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_conditions | No        | Array of strings         | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | No        | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | No        | Map<String,ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-398</a> . |

**Table 7-398** Data structure description of field columns

| Parameter                      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type                      | No        | String | Type of the column in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |
| primary_key_for_data_filtering | No        | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                        |
| index_for_data_filtering       | No        | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                              |

| Parameter                              | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                                   | No        | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| type                                   | No        | String | Data type of the column.<br>Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int, long, varchar(256), datetime, or timestamp.</b></li> <li>• <b>create_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>update_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>Expression:</b> The value can be <b>varchar (256)</b>, and the column value must be <b>concat(_current_database, '@', _current_table).</b></li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256).</b></li> </ul> |
| primary_key_filter_or_column_filtering | No        | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | No        | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | No        | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | No        | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default</b>:<br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression</b>:<br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table</b>:<br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Value of the additional column. Note: <ul style="list-style-type: none"> <li>This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul> |

**Table 7-399** Data structure description of field **public\_ip\_config**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | Yes       | String | ID of a specified EIP.                                                                                                                                                                                                                                                                                                                                                       |
| public_ip | Yes       | String | EIP.                                                                                                                                                                                                                                                                                                                                                                         |
| type      | Yes       | String | Type of a task with an EIP bound. <ul style="list-style-type: none"> <li>In a primary/standby task, <b>master</b> indicates the primary task, and <b>slave</b> indicates the standby task.</li> <li>In other cases, the value is fixed to <b>master</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>master</b></li> <li><b>slave</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 7-400** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |
| id         | String | Task ID.                                                                 |
| name       | String | Task name.                                                               |
| status     | String | Operation result.                                                        |

**Status code: 202**

**Table 7-401** Response body parameters

| Parameter | Type   | Description                                  |
|-----------|--------|----------------------------------------------|
| query_id  | String | Query ID of the asynchronous operation task. |

**Status code: 400**

**Table 7-402** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

- Performing a precheck (asynchronous calling)  
<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/action>

```
{
 "job" : {
 "action_name" : "precheck",
```



```
"action_params" : {
 "precheck_mode" : "forStartJob"
}
}
```

- **Testing the connection to the destination database (asynchronous calling)**

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/action>

```
{
 "job" : {
 "action_name" : "network",
 "action_params" : {
 "endpoints" : [{
 "db_type" : "gaussdbv5",
 "endpoint_type" : "cloud",
 "endpoint_role" : "ta",
 "endpoint" : {
 "endpoint_name" : "cloud_gaussdbv5",
 "instance_id" : "c2c7579bc09c490b9d8009db715aeb0ain14",
 "db_user" : "root",
 "db_password" : "*****"
 }
 },
 "cloud" : {
 "region" : "cn-north-4",
 "project_id" : "9dc8c0f3f74c4dbb23c29cf0318ee561",
 "az_code" : "cn-north-4a,cn-north-4g,cn-north-4c"
 },
 "vpc" : {
 "vpc_id" : "2cb5d364-ae63-4fbb-85b7-7d59f4a88f8f",
 "subnet_id" : "2cb54324-ae63-4fbb-85b7-7d59f4a88f8f",
 "security_group_id" : "039a3s89-665a-43e2-9b4f-bda7d9ee148d"
 }
 }
 }
}
```

- **Testing the connection to the source database (asynchronous calling)**

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/action>

```
{
 "job" : {
 "action_name" : "network",
 "action_params" : {
 "endpoints" : [{
 "db_type" : "oracle",
 "endpoint_type" : "offline",
 "endpoint_role" : "so",
 "endpoint" : {
 "endpoint_name" : "oracle",
 "ip" : "10.154.217.239",
 "db_port" : "1521",
 "db_user" : "ORACLE_USER",
 "db_password" : "*****",
 "id" : "971e1840-9395-4044-b6c8-00ef1f83ce48",
 "db_name" : "serviceName.orcl"
 }
 },
 "ssl" : {
 "ssl_link" : false
 }
 }
 }
}
```

- **Creating an object comparison task (asynchronous calling)**

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action>

```
{
 "job" : {
 "action_name" : "create_compare",
 "action_params" : {
 "compare_task_param" : {
 "type" : "object"
 }
 }
 }
}
```

- **Creating a row comparison task (asynchronous calling)**

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action>

```
{
 "job" : {
 "action_name" : "create_compare",
 "action_params" : {
 "compare_task_param" : {
 "type" : "lines",
 "option" : {
 "comparePolicy" : "normal"
 },
 "db_object" : {
 "db1" : {
 "name" : "db1",
 "tables" : {
 "table1" : {
 "name" : "table1"
 }
 }
 }
 }
 }
 }
 }
}
```

- **Starting a task upon its creation**

<https://{endpoint}/v5/0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action>

```
{
 "job": {
 "action_name": "start",
 "action_params": {}
 }
}
```

- **Pausing a task**

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action>

```
{
 "job": {
 "action_name": "stop",
 "action_params": {}
 }
}
```

- **Resuming a task**

<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action>

```
{
 "job": {
 "action_name": "restart",
 "action_params": {}
 }
}
```

- **Resetting a task**  
`https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action`

```
{
 "job": {
 "action_name": "reset",
 "action_params": {}
 }
}
```
- **Skipping the pre-check**  
`https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action`

```
{
 "job": {
 "action_name": "skip_precheck",
 "action_params": {
 "skip_precheck_info": {
 "skipped_precheck_list": [
 "MysqlForeignKeyReferentialActionCheck"
],
 "skip_reason": "test11111"
 }
 }
 }
}
```
- **Binding an EIP to a DB instance**  
`https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action`

```
{
 "job" : {
 "action_name" : "bind_eip",
 "action_params" : {
 "public_ip_config" : {
 "id" : "018d9e56-26d5-455a-97dc-e6f5f44a2cbd",
 "public_ip" : "*****",
 "type" : "master"
 }
 }
 }
}
```
- **Unbinding an EIP from a DB instance**  
`https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/d0f96c1d-571f-4b63-98a5-3b85b36jb20r/action`

```
{
 "job" : {
 "action_name" : "unbind_eip"
 }
}
```

## Example Response

**Status code: 200**

OK

```
{
 "status": "success"
}
```

**Status code: 202**

Accepted

```
{
 "query_id" : "c5c1ffb3-c902-4b31-a606-dfa1231831f9"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job id."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 202         | Accepted    |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.6.2 Collecting Database Position Information

### Function

This API is used to collect database position information.

### Constraints

- This API is available only for data synchronization from MySQL to GaussDB(DWS).
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

POST /v5/{project\_id}/jobs/{job\_id}/collect-db-position

**Table 7-403** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-404** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

**Table 7-405** Request body parameters

| Parameter           | Mandatory | Type   | Description                                                                   |
|---------------------|-----------|--------|-------------------------------------------------------------------------------|
| reset_position_time | Yes       | String | Position in time to be set, in UTC time format. Example: 2023-09-19T07:00:00Z |

## Response Parameters

Status code: 202

**Table 7-406** Response body parameters

| Parameter | Type   | Description                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Query result ID.                                                                                                                                          |
| job_id    | String | Task ID.                                                                                                                                                  |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li>● <b>pending</b></li> <li>● <b>failed</b></li> <li>● <b>success</b></li> </ul> |

**Status code: 400**

**Table 7-407** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Collecting database position information (asynchronous calling)

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/collect-position
```

```
{
 "reset_position_time" : "2023-09-19T07:00:00Z"
}
```

## Example Response

**Status code: 202**

Accepted

```
{
 "id" : "0eacda0b-9422-4535-8b62-537d1833638b",
 "job_id": "177738d1-4eee-4fcb-a4e1-09aea79jb20i",
 "status" : "pending"
}
```

**Status code: 400**

### Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job id."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | Accepted    |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.6.3 Stopping a Task

### Function

This API is used to stop a task with a specified ID.

### URI

POST /v5/{project\_id}/jobs/{job\_id}/stop

**Table 7-408** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-409** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                                          |

**Table 7-410** Request body parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                           |
|---------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------|
| is_force_stop | No        | Boolean | Set this parameter to <b>true</b> when a task is forcibly stopped. The default value is <b>false</b> .<br>Default value: <b>false</b> |

## Response Parameters

Status code: 200



**Table 7-411** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |
| id         | String | Task ID.                                                                 |
| name       | String | Task name.                                                               |
| status     | String | Operation result.                                                        |

**Status code: 400**

**Table 7-412** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Stopping a task in the asynchronous mode

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/stop
{
 "is_force_stop" : true
}
```

## Example Response

**Status code: 200**

```
{
 "status" : "success"
}
```

**Status code: 400**

### Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job id."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.6.4 Batch Performing Operations on Tasks with Specified IDs

### Function

This API is used to batch perform operations on tasks with specified IDs.

### Constraints

- This API is available only for synchronization from MySQL to MySQL, migration from Redis to GeminiDB Redis, migration from cluster Redis to GeminiDB Redis, and synchronization from Oracle to GaussDB Distributed.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

POST /v5/{project\_id}/jobs/action

**Table 7-413** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-414** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

**Table 7-415** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                                |
|-----------|-----------|------------------|------------------------------------------------------------------------------------------------------------|
| jobs      | Yes       | Array of objects | Request body for performing operations on tasks in batches. For details, see <a href="#">Table 7-416</a> . |

**Table 7-416** Data structure description of field **jobs**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                            |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_id    | No        | String | Task ID. This parameter is mandatory for batch operations. In the multi-task scenario, this parameter is set to the value of <b>master_job_id</b> returned by the parent task details. |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action_name | Yes       | String | <p>Name of an operation. Currently, tasks can only be stopped in batches.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• <b>network</b>: indicates the operation for testing the connection to the source or destination database.</li> <li>• <b>precheck</b>: indicates the operation for performing a precheck.</li> <li>• <b>start</b>: indicates the operation for starting a task.</li> <li>• <b>stop</b>: indicates the operation for pausing a task.</li> <li>• <b>restart</b>: indicates the operation for resuming a task.</li> <li>• <b>reset</b>: indicates the operation for resetting a task.</li> <li>• <b>skip_precheck</b>: indicates the operation for skipping the precheck.</li> <li>• <b>create_compare</b>: indicates the operation for creating a comparison task.</li> <li>• <b>cancel_compare</b>: indicates the operation for canceling a comparison task.</li> <li>• <b>column_limit</b>: indicates the operation for filtering fields.</li> <li>• <b>reload_parameters</b>: indicates the operation for reloading task parameters.</li> <li>• <b>bind_eip</b>: indicates operation for binding an EIP.</li> <li>• <b>unbind_eip</b>: indicates the operation for unbinding an EIP.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>network</b></li> </ul> |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |           |        | <ul style="list-style-type: none"> <li>• <b>precheck</b></li> <li>• <b>start</b></li> <li>• <b>stop</b></li> <li>• <b>restart</b></li> <li>• <b>reset</b></li> <li>• <b>skip_precheck</b></li> <li>• <b>create_compare</b></li> <li>• <b>cancel_compare</b></li> <li>• <b>column_limit</b></li> <li>• <b>reload_parameters</b></li> <li>• <b>bind_eip</b></li> <li>• <b>unbind_eip</b></li> </ul> |
| action_params | No        | Object | Parameter of an operation.<br>For details, see <a href="#">Table 7-417</a> .                                                                                                                                                                                                                                                                                                                      |

**Table 7-417** Data structure description of field **action\_params**

| Parameter          | Mandatory | Type             | Description                                                                                                                                                                   |
|--------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoints          | No        | Array of objects | Database information.<br>For details, see <a href="#">Table 7-418</a> .                                                                                                       |
| precheck_mode      | No        | String           | Pre-check mode.                                                                                                                                                               |
| skip_precheck_info | No        | Object           | Parameter for skipped pre-check items.<br>For details, see <a href="#">Table 7-425</a> .                                                                                      |
| pause_mode         | No        | String           | Task pause mode. Set this parameter when a task is paused. To stop capturing logs of the source database, set the parameter to <b>all</b> .<br>Default value: <b>target</b> . |
| start_time         | No        | String           | Scheduled start time of a task.                                                                                                                                               |
| compare_task_param | No        | Object           | Information body for performing operations on a comparison task.<br>For details, see <a href="#">Table 7-426</a> .                                                            |

| Parameter        | Mandatory | Type    | Description                                                                   |
|------------------|-----------|---------|-------------------------------------------------------------------------------|
| is_sync_re_edit  | No        | Boolean | Set this parameter to <b>true</b> when you resume a task after editing it.    |
| force_delete     | No        | Boolean | Set this parameter to <b>true</b> when a task is forcibly stopped.            |
| public_ip_config | No        | Object  | Public IP address of a tenant. For details, see <a href="#">Table 7-431</a> . |

**Table 7-418** Data structure description of field **endpoints**

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_type       | Yes       | String | Database type. The value can be: <ul style="list-style-type: none"> <li>• <b>oracle</b>: Oracle.</li> <li>• <b>gaussdbv5</b>: GaussDB distributed.</li> <li>• <b>redis</b>: Redis.</li> <li>• <b>rediscluster</b>: Cluster Redis.</li> <li>• <b>gaussredis</b>: GeminiDB Redis.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>gaussdbv5</b></li> <li>• <b>redis</b></li> <li>• <b>rediscluster</b></li> <li>• <b>gaussredis</b></li> </ul> |
| endpoint_type | Yes       | String | DB instance type. Values: <ul style="list-style-type: none"> <li>• <b>offline</b>: indicates an on-premises database.</li> <li>• <b>ecs</b>: indicates a database built on Huawei Cloud ECSs.</li> <li>• <b>cloud</b>: indicates a Huawei cloud database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>offline</b></li> <li>• <b>ecs</b></li> <li>• <b>cloud</b></li> </ul>                                                                                        |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                             |
|----------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_role  | Yes       | String | DB instance role. Values: <ul style="list-style-type: none"> <li>• <b>so</b>: indicates the source database.</li> <li>• <b>ta</b>: indicates the destination database.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>so</b></li> <li>• <b>ta</b></li> </ul> |
| endpoint       | Yes       | Object | Basic information body of the database.<br>For details, see <a href="#">Table 7-419</a> .                                                                                                                                                                                               |
| cloud          | No        | Object | Region and project where a DB instance is located.<br>For details, see <a href="#">Table 7-420</a> .                                                                                                                                                                                    |
| vpc            | No        | Object | Information about the VPC, subnet, and security group where a DB instance resides.<br>For details, see <a href="#">Table 7-421</a> .                                                                                                                                                    |
| config         | No        | Object | Basic information body of database settings.<br>For details, see <a href="#">Table 7-422</a> .                                                                                                                                                                                          |
| ssl            | No        | Object | Information body of the database SSL certificate.<br>For details, see <a href="#">Table 7-423</a> .                                                                                                                                                                                     |
| customized_dns | No        | Object | Custom DNS server.<br>For details, see <a href="#">Table 7-424</a> .                                                                                                                                                                                                                    |

**Table 7-419** Data structure description of fields **endpoint** and **source\_sharding**

| Parameter | Mandatory | Type   | Description              |
|-----------|-----------|--------|--------------------------|
| id        | No        | String | Database information ID. |



| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint_name | Yes       | String | <p>Database scenario type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b>: indicates the on-premises Oracle database.</li> <li>• <b>ecs_oracle</b>: indicates the Oracle database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdbv5</b>: indicates the Huawei Cloud distributed GaussDB database.</li> <li>• <b>mysql</b>: indicates the MySQL database built on other clouds or on-premises MySQL database.</li> <li>• <b>ecs_mysql</b>: indicates the MySQL database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_mysql</b>: indicates the Huawei Cloud RDS for MySQL database.</li> <li>• <b>redis</b>: On-premises Redis database.</li> <li>• <b>ecs_redis</b>: Redis database built on Huawei Cloud ECSs.</li> <li>• <b>rediscluster</b>: On-premises cluster Redis database.</li> <li>• <b>ecs_rediscluster</b>: Cluster Redis database built on Huawei Cloud ECSs.</li> <li>• <b>cloud_gaussdb_redis</b>: Huawei Cloud GeminiDB Redis.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>oracle</b></li> <li>• <b>ecs_oracle</b></li> <li>• <b>cloud_gaussdbv5</b></li> <li>• <b>mysql</b></li> <li>• <b>ecs_mysql</b></li> <li>• <b>cloud_mysql</b></li> <li>• <b>redis</b></li> <li>• <b>ecs_redis</b></li> <li>• <b>rediscluster</b></li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                                                |
|-----------|-----------|------|----------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <code>ecs_rediscluster</code></li><li>• <code>cloud_gaussdb_redis</code></li></ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip        | No        | String | <p>Database IP address.<br/>Constraints:</p> <ul style="list-style-type: none"> <li>• If an on-premises MongoDB database is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values. A maximum of three IP addresses or domain names can be entered.</li> <li>• If a DDS instance is used, use colons (:) to separate the database IP address and port number, and use commas (,) to separate multiple values.</li> <li>• If the database is a cluster Redis database, enter the IP addresses and port numbers of all shards in the source cluster Redis database. Use colons (:) to separate a database IP address and port number. Use commas (,) to separate multiple values. You are advised to enter the IP address of the slave node of a cluster shard. Up to 32 IP addresses or domain names can be entered. Use commas (,) to separate multiple IP addresses or domain names.</li> </ul> <p>Example:</p> <ul style="list-style-type: none"> <li>• MongoDB:<br/>192.168.0.10:8080,192.168.0.11:8080,192.168.0.12:8080</li> <li>• DDS:<br/>192.168.205.130:8635,192.168.250.64:8635</li> <li>• Cluster Redis:<br/>192.168.0.1:8080,192.168.0.2:8080</li> </ul> |

| Parameter       | Mandatory | Type             | Description                                                                                         |
|-----------------|-----------|------------------|-----------------------------------------------------------------------------------------------------|
| db_port         | No        | String           | Database port.<br>The value is an integer ranging from 1 to 65535.                                  |
| db_user         | Yes       | String           | Database username.                                                                                  |
| db_password     | Yes       | String           | Database password.                                                                                  |
| instance_id     | No        | String           | ID of a Huawei Cloud DB instance.                                                                   |
| instance_name   | No        | String           | Name of a Huawei Cloud DB instance.                                                                 |
| db_name         | No        | String           | Database name. Example: <ul style="list-style-type: none"> <li>oracle: serviceName.orcl.</li> </ul> |
| source_sharding | No        | Array of objects | Information about the physical source database.<br>For details, see <a href="#">Table 7-419</a> .   |

**Table 7-420** Data structure description of field **cloud**

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                         |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region     | Yes       | String | Region ID. This parameter is mandatory when <b>DB Instance Type</b> is set to <b>ecs</b> (database built on Huawei Cloud ECSs) or <b>cloud</b> (Huawei cloud database). For details, see <a href="#">Regions and Endpoints</a> . Note: If there are subprojects in a region, the region ID is the combination of regional project ID and subproject ID, which are combined using an underscore (_). |
| project_id | Yes       | String | Project ID of a tenant in a region. For details about how to obtain the project ID, see "Obtaining a Project ID".                                                                                                                                                                                                                                                                                   |
| az_code    | No        | String | Name of the AZ where the database is located.                                                                                                                                                                                                                                                                                                                                                       |

**Table 7-421** Data structure description of field **vpc**

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id            | Yes       | String | ID of the VPC where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. Method 2: Call the API for querying VPCs. For details, see <a href="#">Querying VPCs</a> .                                                                                                                                                                                              |
| subnet_id         | Yes       | String | ID of the subnet where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page to view the network ID on the displayed page. Method 2: Call the API for querying subnets. For details, see <a href="#">Querying Subnets</a> .                                                                                                                             |
| security_group_id | No        | String | ID of the security group where a DB instance is located. To obtain the ID, perform the following steps: Method 1: Log in to the VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: Call the API for querying security groups. For details, see <a href="#">Querying Security Groups</a> . |

**Table 7-422** Data structure description of field **config**

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_target_read_only | No        | Boolean | Whether the destination DB instance is set to read-only.<br>This parameter is available only when <b>job_direction</b> is set to <b>up</b> during MySQL migration and DR. In the DR scenario, this parameter is mandatory and set to <b>true</b> if the current cloud is the standby in single-active DR. If this parameter is not specified, the default value is <b>true</b> .<br>Default value: <b>true</b>                                                                                                  |
| node_num            | No        | Integer | Number of subtasks connected to the source cluster Redis instance for data migration from cluster Redis to GeminiDB Redis. The value ranges from 1 to 16 and cannot be greater than the number of shards in the source cluster Redis instance. Set this parameter based on the scale of the source cluster Redis instance. You are advised to set one subtask to connect to four shards in the source cluster Redis instance.<br>Minimum value: <b>1</b><br>Maximum value: <b>16</b><br>Default value: <b>0</b> |

**Table 7-423** Data structure description of field **ssl**

| Parameter     | Mandatory | Type    | Description                                                                             |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------|
| ssl_link      | No        | Boolean | Whether SSL is enabled. If SSL is enabled, the value of this parameter is <b>true</b> . |
| ssl_cert_name | No        | String  | SSL certificate name.                                                                   |
| ssl_cert_key  | No        | String  | SSL certificate content, which is encrypted using Base64.                               |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                  |
|--------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_cert_check_sum | No        | String | The checksum value of the SSL certificate, which is used for backend verification. This parameter is mandatory for secure connection to the source database. |
| ssl_cert_password  | No        | String | SSL certificate password. This parameter is mandatory if the certificate file name extension is .p12.                                                        |

**Table 7-424** Data structure description of field **customized\_dns**

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_set_dns     | Yes       | Boolean | Specifies whether to set your own DNS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| set_dns_action | Yes       | String  | Behavior of setting your own DNS server. <ul style="list-style-type: none"> <li>• <b>add</b>: Add a customized DNS server IP address.</li> <li>• <b>keep</b>: Retain the DNS server IP address.</li> <li>• <b>update</b>: Update the customized DNS server IP address. (The update takes effect when the DNS server IP address changes.)</li> <li>• <b>recover</b>: Restore the default DNS server IP address. (Restoration may cause domain name resolution failures. Exercise caution when performing this operation.)</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>add</b></li> <li>• <b>keep</b></li> <li>• <b>update</b></li> <li>• <b>recover</b></li> </ul> |
| dns_ip         | Yes       | String  | DNS server IP address.<br>Minimum length: <b>0</b><br>Maximum length: <b>15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 7-425** Data structure description of field **skip\_precheck\_info**

| Parameter             | Mandatory | Type             | Description                             |
|-----------------------|-----------|------------------|-----------------------------------------|
| skipped_precheck_list | Yes       | Array of strings | Skipped pre-check item.                 |
| skip_reason           | Yes       | String           | Reason for skipping the pre-check item. |

**Table 7-426** Data structure description of field **compare\_task\_param**

| Parameter       | Mandatory | Type                       | Description                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|-----------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| compare_task_id | No        | String                     | This parameter is mandatory for canceling a comparison task.                                                                                                                                                                                                                                                                                                |
| type            | No        | String                     | Comparison task mode.<br>Values: <ul style="list-style-type: none"> <li>• <b>object</b>: object-level comparison.</li> <li>• <b>lines</b>: row comparison.</li> <li>• <b>contents</b>: value comparison.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>object</b></li> <li>• <b>lines</b></li> <li>• <b>contents</b></li> </ul> |
| start_time      | No        | String                     | Scheduled start time, in timestamp format.                                                                                                                                                                                                                                                                                                                  |
| option          | No        | Map<String,String>         | Comparison policy.                                                                                                                                                                                                                                                                                                                                          |
| db_object       | No        | Map<String,DatabaseObject> | Comparison object.<br>For details, see <a href="#">Table 7-427</a> .                                                                                                                                                                                                                                                                                        |



**Table 7-427** Data structure description of field **db\_object**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the database in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values:<br>• <b>config</b> |
| name      | No        | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter          | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | No        | Boolean                  | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>• If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>• If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | No        | Map<String,SchemaObject> | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-428</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| tables             | No        | Map<String,TableObject>  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-429</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| total_table_number | No        | Integer                  | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| is_synchronized    | No        | Boolean                  | <p>Whether synchronization has been performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Table 7-428** Data structure description of field **schemas**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String  | Type of the schema in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                             |
| name      | No        | String  | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | No        | Boolean | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |

| Parameter | Mandatory | Type                                      | Description                                                                                                                                                  |
|-----------|-----------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tables    | No        | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-429</a> . |

**Table 7-429** Data structure description of field **tables**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the table in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object. |
| type      | No        | String | Object type. Values:<br><ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                   |
| name      | No        | String | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all               | No        | Boolean          | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | No        | String           | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| schema_alias_name | No        | String           | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| filtered          | No        | Boolean          | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| filter_conditions | No        | Array of strings | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter         | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_conditions | No        | Array of strings         | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | No        | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | No        | Map<String,ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-430</a> . |

**Table 7-430** Data structure description of field columns

| Parameter                      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type                      | No        | String | Type of the column in real-time synchronization. Values:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |
| primary_key_for_data_filtering | No        | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                        |
| index_for_data_filtering       | No        | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                              |

| Parameter                              | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                                   | No        | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| type                                   | No        | String | Data type of the column.<br>Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int, long, varchar(256), datetime, or timestamp.</b></li> <li>• <b>create_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>update_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>Expression:</b> The value can be <b>varchar (256)</b>, and the column value must be <b>concat(_current_database, '@', _current_table).</b></li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256).</b></li> </ul> |
| primary_key_filter_or_column_filtering | No        | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | No        | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. Values: <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | No        | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                    |
| operation_type | No        | String  | Operation type. The new column is filled with a specific operation type. Values: <ul style="list-style-type: none"> <li>• <b>Default</b>:<br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression</b>:<br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table</b>:<br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Value of the additional column. Note: <ul style="list-style-type: none"> <li>This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul> |

**Table 7-431** Data structure description of field **public\_ip\_config**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | Yes       | String | ID of a specified EIP.                                                                                                                                                                                                                                                                                                                                                       |
| public_ip | Yes       | String | EIP.                                                                                                                                                                                                                                                                                                                                                                         |
| type      | Yes       | String | Type of a task with an EIP bound. <ul style="list-style-type: none"> <li>In a primary/standby task, <b>master</b> indicates the primary task, and <b>slave</b> indicates the standby task.</li> <li>In other cases, the value is fixed to <b>master</b>.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li><b>master</b></li> <li><b>slave</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 7-432** Response body parameters

| Parameter | Type             | Description                                                                                                    |
|-----------|------------------|----------------------------------------------------------------------------------------------------------------|
| jobs      | Array of objects | Response body for performing operations on tasks in batches.<br>For details, see <a href="#">Table 7-433</a> . |

**Table 7-433** Data structure description of field **jobs**

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |
| id         | String | Task ID.                                                                 |
| name       | String | Task name.                                                               |
| status     | String | Operation result.                                                        |

**Status code: 202****Table 7-434** Response body parameters

| Parameter | Type             | Description                                                                                                                   |
|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------|
| jobs      | Array of objects | Response body for asynchronously performing operations on tasks in batches.<br>For details, see <a href="#">Table 7-435</a> . |

**Table 7-435** Data structure description of field **jobs**

| Parameter | Type   | Description                                  |
|-----------|--------|----------------------------------------------|
| query_id  | String | Query ID of the asynchronous operation task. |
| id        | String | Task ID.                                     |
| name      | String | Task name.                                   |

**Status code: 400**

**Table 7-436** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Batch performing operations on tasks with specified IDs

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/action
```

```
{
 "jobs" : [{
 "job_id" : "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "action_name" : "start"
 }, {
 "job_id" : "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "action_name" : "stop"
 }
]
```

## Example Response

**Status code: 200**

OK

```
{
 "jobs" : [{
 "id" : "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name" : "DRS-1234",
 "status" : "Success"
 }, {
 "id" : "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "name" : "DRS-2345",
 "status" : "Failed",
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID"
 }
]
```

**Status code: 202**

Accepted

```
{
 "jobs" : [{
 "id" : "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name" : "DRS-1234",
 "query_id" : "7debc9c-8e09-4a5d-8dd6-cc44f45566"
 }, {
 "id" : "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "name" : "DRS-2345",
 "query_id" : "7debc9c-8e09-4a5d-8dd6-cc44f45566"
 }
]
```

```
 }]
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.1000001",
 "error_msg" : "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 202         | Accepted    |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.6.5 Batch Stopping Tasks

### Function

This API is used to batch stop tasks with a specified ID.

### URI

POST /v5/{project\_id}/jobs/batch-stop

**Table 7-437** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-438** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

**Table 7-439** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                       |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------|
| jobs      | Yes       | Array of objects | Request body for stopping tasks in batches.<br><br>For details, see <a href="#">Table 7-440</a> . |

**Table 7-440** Data structure description of field **jobs**

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| job_id    | Yes       | String | Task ID.    |

| Parameter     | Mandatory | Type    | Description                                                                                                                           |
|---------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------|
| is_force_stop | No        | Boolean | Set this parameter to <b>true</b> when a task is forcibly stopped. The default value is <b>false</b> .<br>Default value: <b>false</b> |

## Response Parameters

**Status code: 200**

**Table 7-441** Response body parameters

| Parameter | Type             | Description                                                                                                    |
|-----------|------------------|----------------------------------------------------------------------------------------------------------------|
| jobs      | Array of objects | Response body for performing operations on tasks in batches.<br>For details, see <a href="#">Table 7-442</a> . |

**Table 7-442** Data structure description of field **jobs**

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |
| id         | String | Task ID.                                                                 |
| name       | String | Task name.                                                               |
| status     | String | Operation result.                                                        |

**Status code: 400**

**Table 7-443** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Batch stopping tasks with a specified ID

https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-stop

```
{
 "jobs": [
 {
 "job_id": "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r"
 },
 {
 "job_id": "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20s",
 "is_force_stop": false
 },
 {
 "job_id": "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20t",
 "is_force_stop": true
 }
]
}
```

## Example Response

**Status code: 200**

OK

```
{
 "jobs" : [{
 "id" : "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "name" : "DRS-1234",
 "status" : "Success"
 }, {
 "id" : "dc6016cf-f3b6-4c2d-b4d7-5084b0fjb20r",
 "name" : "DRS-2345",
 "status" : "Failed",
 "error_code" : "DRS.10020102",
 "error_msg" : "Job does not exist, please check job ID"
 }]
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000001",
```



```
"error_msg" : "Failed."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.6.6 Obtaining the Operations Allowed in a Specified Task

### Function

This API is used to obtain information about allowed, not allowed, and current operations of a specified task.

### Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/actions

**Table 7-444** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-445** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 200**

**Table 7-446** Response body parameters

| Parameter  | Type   | Description                                                                                         |
|------------|--------|-----------------------------------------------------------------------------------------------------|
| job_action | Object | Collection of allowed and not allowed operations.<br>For details, see <a href="#">Table 7-447</a> . |

**Table 7-447** Data structure description of field **job\_action**

| Parameter         | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| available_actions | Array of strings | <p>The collection of operation commands that can be executed for a task.</p> <p>The value can be:</p> <ul style="list-style-type: none"> <li>● <b>CREATE</b>: indicates the operation command for creating a task.</li> <li>● <b>CHOOSE_OBJECT</b>: indicates the operation command for selecting objects during the incremental task editing.</li> <li>● <b>PRE_CHECK</b>: indicates the operation command for pre-check.</li> <li>● <b>CHANGE_MODE</b>: indicates the operation command for changing the task mode.</li> <li>● <b>FREE_RESOURCE</b>: indicates the operation command for releasing resources.</li> <li>● <b>MODIFY_DB_CONFIG</b>: indicates the operation command for modifying database configurations.</li> <li>● <b>RESET_DB_PWD</b>: indicates the operation command for resetting the password of the source or destination database.</li> <li>● <b>MODIFY_CONFIGURATION</b>: indicates the operation command for modifying task configurations.</li> <li>● <b>PAUSE</b>: indicates the operation command for pausing a task.</li> <li>● <b>START</b>: indicates the operation command for starting a task.</li> <li>● <b>CHANGE</b>: indicates the operation command for modifying a task.</li> <li>● <b>RETRY</b>: indicates the operation command for retrying a task.</li> <li>● <b>RESET</b>: indicates the operation command for resetting a task.</li> <li>● <b>DELETE</b>: indicates the operation command for deleting a task.</li> <li>● <b>QUERY_PRE_CHECK</b>: indicates the operation command for performing a pre-check.</li> <li>● <b>SWITCH_OVER</b>: indicates the operation command for performing a DR switchover.</li> <li>● <b>START_INCR</b>: indicates the operation command for starting an incremental Cassandra task.</li> </ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"> <li>● <b>MODIFY_TASK_NUMBER</b>: indicates the operation command for modifying the number of Cassandra threads.</li> <li>● <b>CONTINUE_JOB</b>: indicates the operation command for resuming a failed or stopped task from Oracle to GaussDB distributed.</li> <li>● <b>STOP_JOB</b>: indicates the operation command for stopping a task from Oracle to GaussDB distributed.</li> <li>● <b>CONTINUE_CAPTURE</b>: indicates the operation command for starting data capture.</li> <li>● <b>STOP_CAPTURE</b>: indicates the operation command for stopping data capture.</li> <li>● <b>CONTINUE_APPLY</b>: indicates the operation command for starting data replay.</li> <li>● <b>STOP_APPLY</b>: indicates the operation command for stopping data replay.</li> <li>● <b>PAY_ORDER</b>: indicates the operation command for paying a yearly/monthly order.</li> <li>● <b>UNSUBSCRIBE</b>: indicates the operation command for unsubscribing from a yearly/monthly subscription.</li> <li>● <b>TO_PERIOD</b>: indicates the operation command for changing the billing mode from pay-per-use to yearly/monthly.</li> <li>● <b>TO_RENEW</b>: indicates the operation command for renewing a yearly/monthly subscription.</li> <li>● <b>ORDER_INFO</b>: indicates the operation command for querying order details.</li> <li>● <b>CHANGE_FLAVOR</b>: indicates the operation command for changing task specifications.</li> <li>● <b>CLONE</b>: indicates the operation command for cloning a task.</li> </ul> |

| Parameter           | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| unavailable_actions | Array of strings | <p>The collection of operation commands that cannot be executed for a task.</p> <p>The value can be:</p> <ul style="list-style-type: none"> <li>● <b>CREATE</b>: indicates the operation command for creating a task.</li> <li>● <b>CHOOSE_OBJECT</b>: indicates the operation command for selecting objects during the incremental task editing.</li> <li>● <b>PRE_CHECK</b>: indicates the operation command for pre-check.</li> <li>● <b>CHANGE_MODE</b>: indicates the operation command for changing the task mode.</li> <li>● <b>FREE_RESOURCE</b>: indicates the operation command for releasing resources.</li> <li>● <b>MODIFY_DB_CONFIG</b>: indicates the operation command for modifying database configurations.</li> <li>● <b>RESET_DB_PWD</b>: indicates the operation command for resetting the password of the source or destination database.</li> <li>● <b>MODIFY_CONFIGURATION</b>: indicates the operation command for modifying task configurations.</li> <li>● <b>PAUSE</b>: indicates the operation command for pausing a task.</li> <li>● <b>START</b>: indicates the operation command for starting a task.</li> <li>● <b>CHANGE</b>: indicates the operation command for modifying a task.</li> <li>● <b>RETRY</b>: indicates the operation command for retrying a task.</li> <li>● <b>RESET</b>: indicates the operation command for resetting a task.</li> <li>● <b>DELETE</b>: indicates the operation command for deleting a task.</li> <li>● <b>QUERY_PRE_CHECK</b>: indicates the operation command for performing a pre-check.</li> <li>● <b>SWITCH_OVER</b>: indicates the operation command for performing a DR switchover.</li> <li>● <b>START_INCR</b>: indicates the operation command for starting an incremental Cassandra task.</li> <li>● <b>MODIFY_TASK_NUMBER</b>: indicates the operation command for modifying the number of Cassandra threads.</li> </ul> |

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |        | <ul style="list-style-type: none"> <li>● <b>CONTINUE_JOB</b>: indicates the operation command for resuming a failed or stopped task from Oracle to GaussDB distributed.</li> <li>● <b>STOP_JOB</b>: indicates the operation command for stopping a task from Oracle to GaussDB distributed.</li> <li>● <b>CONTINUE_CAPTURE</b>: indicates the operation command for starting data capture.</li> <li>● <b>STOP_CAPTURE</b>: indicates the operation command for stopping data capture.</li> <li>● <b>CONTINUE_APPLY</b>: indicates the operation command for starting data replay.</li> <li>● <b>STOP_APPLY</b>: indicates the operation command for stopping data replay.</li> <li>● <b>PAY_ORDER</b>: indicates the operation command for paying a yearly/monthly order.</li> <li>● <b>UNSUBSCRIBE</b>: indicates the operation command for unsubscribing from a yearly/monthly subscription.</li> <li>● <b>TO_PERIOD</b>: indicates the operation command for changing the billing mode from pay-per-use to yearly/monthly.</li> <li>● <b>TO_RENEW</b>: indicates the operation command for renewing a yearly/monthly subscription.</li> <li>● <b>ORDER_INFO</b>: indicates the operation command for querying order details.</li> <li>● <b>CHANGE_FLAVOR</b>: indicates the operation command for changing task specifications.</li> <li>● <b>CLONE</b>: indicates the operation command for cloning a task.</li> </ul> |
| current_action | String | The current operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Status code: 422**

**Table 7-448** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Obtaining the operation information about a specified task

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/163b98e8-6088-46c3-8b86-c18fea6jb502/actions
```

## Example Response

**Status code: 200**

OK

```
{
 "job_action": {
 "available_actions": [
 "CREATE",
 "CHOOSE_OBJECT",
 "PRE_CHECK"
],
 "unavailable_actions": [
 "START",
 "QUICK_START",
 "CHANGE",
 "RETRY"
],
 "current_action": "SWITCH_OVER"
 }
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000001",
 "error_msg": "Failed."
}
```

## Error Code

For details, see [Error Code](#).

## 7.6.7 Obtaining the Result for Querying Database Position

### Function

This API is used to obtain the result for querying the database position.

### Constraints

- This API is available only for data synchronization from MySQL to GaussDB(DWS).
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/db-position

**Table 7-449** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-450** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                               |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------|
| query_id  | Yes       | String | ID of the result for collecting database position information, which is returned by the API for collecting database position information. |



## Request Parameters

**Table 7-451** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 200**

**Table 7-452** Response body parameters

| Parameter | Type   | Description                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_id    | String | Task ID.                                                                                                                                                  |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>failed</b></li> <li>• <b>success</b></li> </ul> |
| position  | String | Position information.                                                                                                                                     |

**Status code: 400**

**Table 7-453** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Obtaining the result for querying database position

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/db-position?query_id=0eacda0b-9422-4535-8b62-537d1833638b
```

## Example Response

**Status code: 200**

OK

```
{
 "job_id" : "c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r",
 "position" : "mysql-bin.000277:805",
 "status" : "pending"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10030014",
 "error_msg" : "Firstly, please the query object info."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.6.8 Verifying a Task Name

### Function

This API is used to verify a task name during task creation.

### Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

POST /v5/{project\_id}/jobs/name-validation

**Table 7-454** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

### Request Parameters

**Table 7-455** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

**Table 7-456** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | Task name, which must start with a letter and consist of 4 to 50 characters. It can contain only letters, digits, hyphens (-), and underscores (_).                                                                                                                  |
| type      | Yes       | String | Task type. <ul style="list-style-type: none"> <li>• <b>trans</b>: used for real-time migration, synchronization, and disaster recovery.</li> <li>• <b>subscription</b>: used for data subscription.</li> <li>• <b>offline</b>: used for backup migration.</li> </ul> |

## Response Parameters

Status code: 200

**Table 7-457** Response body parameters

| Parameter | Type    | Description                     |
|-----------|---------|---------------------------------|
| is_valid  | Boolean | Whether the task name is valid. |

**Status code: 422****Table 7-458** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Verifying a task name

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/name-validation
{
 "name": "DRS-211",
 "type": "trans"
}
```

## Example Response

**Status code: 200**

OK

```
{
 "is_valid": true
}
```

**Status code: 422**

Bad Request

```
{
 "error_code": "DRS.M00277",
 "error_msg": "The task name already exists."
}
```

## Error Code

For details, see [Error Code](#).

## 7.6.9 Updating the Start Point of an Incremental Task

### Function

This API is used to update the start point of an incremental task.

### Constraints

- This API is available only for incremental synchronization scenarios from MySQL to MySQL, from MySQL to GaussDB(DWS), from MySQL to GaussDB(for MySQL), from MySQL to Oracle, from MySQL to Kafka, from GaussDB(for MySQL) to GaussDB(for MySQL), from GaussDB(for MySQL) to MySQL, from GaussDB(for MySQL) to Oracle, from GaussDB(for MySQL) to Kafka, from MongoDB to Kafka, and from MongoDB to DDS.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

PUT /v5/{project\_id}/jobs/{job\_id}/start-position

**Table 7-459** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

### Request Parameters

**Table 7-460** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                               |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                         |

**Table 7-461** Request body parameters

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_and_position | Yes       | String | <ul style="list-style-type: none"> <li>When MySQL serves as the source database, run <b>show master status</b> to obtain the start point of the source database and set <b>File</b> and <b>Position</b> as prompted. For example, <b>mysql-bin.000277:805</b>, in which the file name can contain only 1 to 60 characters and cannot contain the following special character <code>&lt;&gt;&amp;:'"/\</code>, the file number can contain only 3 to 20 digits, the binlog event position can contain only 1 to 20 digits, and the total length cannot exceed 100 characters. The value is in the format of <b>File_name.file_number:Event_position</b>.</li> <li>When MongoDB serves as the source database, the source database logs are obtained from within the time range of the oplog, starting with the current start position. To check whether the start position is within the oplog time range, run <b>db.getReplicationInfo()</b> for a non-cluster instance, and for a cluster instance, run <b>db.watch([], {startAtOperationTime: Timestamp(xx, xx)})</b>, where <b>xx</b> is the start position you specified. The value is in the format of <b>timestamp:incr</b>. The values of <b>timestamp</b> and <b>incr</b> are integers ranging from 1 to 2,147,483,647.</li> </ul> |



| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| gtid_set  | No        | String | <ul style="list-style-type: none"> <li>This parameter is mandatory for tasks whose source database is MySQL. Run <b>show master status</b> to obtain the start point of the source database and set <b>Executed_Gtid_Set</b> as prompted. (If the source database is MySQL 5.5, synchronization tasks are not supported.)</li> <li>Enter a maximum of 2048 characters. Chinese characters and the following special characters are not allowed: &lt; &gt; &amp; " ' / \\</li> </ul> |

## Response Parameters

None

## Example Request

- Updating start point for a synchronization task from MySQL to MySQL  
<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/start-position>

```
{
 "file_and_position" : "mysql-bin.000277:805",
 "gtid_set" : "123"
}
```
- Updating start point for a synchronization task from MongoDB to Kafka  
<https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/start-position>

```
{
 "file_and_position" : "123:12345"
}
```

## Example Response

Status code: 200

OK

```
{}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.6.10 Uploading a Driver File

### Function

This API is used to upload a driver file.

### Constraints

- This API is available only in the synchronization scenario where DB2 for LUW serves as the source database.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

POST /v5/{project\_id}/jdbc-driver

**Table 7-462** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

### Request Parameters

**Table 7-463** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                               |
|--------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>multipart/form-data</b> . For APIs used to upload objects or images, the value varies depending on the flow type. |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

**Table 7-464** FormData parameter

| Parameter | Mandatory | Type | Description                                                                                                                                                                     |
|-----------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file      | Yes       | File | Driver file. The driver file name contains 5 to 64 characters and ends with <b>.jar</b> . If a driver file with the same name exists, the file is replaced by the uploaded one. |

## Response Parameters

None

## Example Request

Uploading a driver file

`https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jdbc-driver`

## Example Response

**Status code: 200**

OK

{ }

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.6.11 Deleting a Driver File

### Function

This API is used to delete a driver file.

### Constraints

- This API is available only in the synchronization scenario where DB2 for LUW serves as the source database.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

DELETE /v5/{project\_id}/jdbc-drivers

**Table 7-465** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 7-466** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

**Table 7-467** Request body parameters

| Parameter    | Mandatory | Type             | Description                                                                                                                          |
|--------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| driver_names | Yes       | Array of strings | JDBC driver file list. The list contains 1 to 20 files. The driver file name contains 5 to 64 characters and ends with <b>.jar</b> . |

## Response Parameters

None

## Example Request

Deleting a driver file

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jdbc-drivers
{
 "driver_names": ["****.jar"]
}
```

## Example Response

**Status code: 200**

OK

```
{ }
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.6.12 Synchronizing a Driver File

### Function

This API is used to synchronize a driver file.

### Constraints

- This API is available only in the synchronization scenario where DB2 for LUW serves as the source database.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

PUT /v5/{project\_id}/jobs/{job\_id}/update-jdbc-driver

**Table 7-468** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-469** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

**Table 7-470** Request body parameters

| Parameter   | Mandatory | Type   | Description                                                                                     |
|-------------|-----------|--------|-------------------------------------------------------------------------------------------------|
| driver_name | Yes       | String | Name of the JDBC driver file. The value contains 5 to 64 characters and ends with <b>.jar</b> . |

## Response Parameters

None

## Example Request

Synchronizing a driver file

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/d27f6a81-7d6b-4d56-a184-7d30576jb201/update-jdbc-driver
```

```
{
 "driver_name" : "jcc-11.5.6.0.jar"
}
```

## Example Response

**Status code: 200**

OK

```
{}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.6.13 Querying the Driver File List

### Function

This API is used to query the driver file list.

### Constraints

- This API is available only in the synchronization scenario where DB2 for LUW serves as the source database.
- This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jdbc-drivers

**Table 7-471** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |



**Table 7-472** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Number of items displayed per page. The default value is <b>10</b> . The value ranges from 1 to 1000.<br>Minimum value: <b>1</b><br>Maximum value: <b>1000</b><br>Default value: <b>10</b> |
| offset    | No        | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. The default value is <b>0</b> .<br>Default value: <b>0</b>                             |

## Request Parameters

**Table 7-473** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> .                                       |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                       |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul> |

## Response Parameters

Status code: 200

Table 7-474 Response body parameters

| Parameter | Type                               | Description                   |
|-----------|------------------------------------|-------------------------------|
| count     | Integer                            | Total number of driver files. |
| items     | Array of <b>DriverInfo</b> objects | Driver file list.             |

Table 7-475 DriverInfo

| Parameter     | Type    | Description             |
|---------------|---------|-------------------------|
| driver_name   | String  | File name.              |
| last_modified | String  | Last modification time. |
| size          | Integer | File size, in bytes.    |

## Example Request

Obtaining the driver file list

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jdbc-drivers?limit=10&offset=0
```

## Example Response

Status code: 200

OK

```
{
 "count" : 10,
 "items" : [{
 "driver_name" : "db2jcc_****.jar",
 "size" : 102400000,
 "last_modified" : "2020-09-01T18:50:20Z"
 }]
```

```
}]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

# 7.7 Comparison Management

## 7.7.1 Querying the Comparison Policy

### Function

This API is used to query the comparison policy.

### Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/compare-policy

**Table 7-476** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-477** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                            |
|--------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                                  |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br><br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br><br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                                   |

## Response Parameters

**Status code: 200**

**Table 7-478** Response body parameters

| Parameter     | Type    | Description            |
|---------------|---------|------------------------|
| interval_hour | Integer | Time interval.         |
| period        | String  | Comparison period.     |
| begin_time    | String  | Comparison start time. |
| end_time      | String  | Comparison end time.   |

| Parameter         | Type             | Description                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| compare_type      | Array of strings | Comparison type. <ul style="list-style-type: none"> <li>● <b>object</b>: object-level comparison.</li> <li>● <b>lines</b>: row comparison.</li> <li>● <b>contents</b>: value comparison.</li> <li>● <b>account</b>: Account-level comparison.</li> </ul>                                                                                                                                 |
| status            | String           | Status of the comparison policy. <ul style="list-style-type: none"> <li>● <b>OPEN</b>: Enabled.</li> <li>● <b>CLOSED</b>: Disabled, indicating that no comparison policy is set.</li> <li>● <b>NO_SUPPORT</b>: No data is available.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>● <b>OPEN</b></li> <li>● <b>CLOSED</b></li> <li>● <b>NO_SUPPORT</b></li> </ul> |
| next_compare_time | String           | Next comparison time (UTC), for example, 2023-06-12T08:00:00Z.                                                                                                                                                                                                                                                                                                                           |
| compare_policy    | String           | Comparison policy. <ul style="list-style-type: none"> <li>● <b>normal</b>: One-to-one comparison.</li> <li>● <b>manyToOne</b>: Many-to-one comparison.</li> </ul>                                                                                                                                                                                                                        |

**Status code: 400**

**Table 7-479** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying the comparison policy

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/163b98e8-6088-46c3-8b86-c18fea6jb502/compare-policy
```

## Example Response

**Status code: 200**

OK

```
{
 "period": "** * 1,2,3,4,5,6,7",
 "status": "OPEN",
 "begin_time": "08:00:00",
 "end_time": "10:00:00",
 "compare_type": [
 "lines",
 "account",
 "object_comparison"
],
 "next_compare_time": "2023-06-12T08:00:00Z",
 "compare_policy": "normal"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.M05003",
 "error_msg": "Task information not found."
}
```

## Error Code

For details, see [Error Code](#).

## 7.7.2 Querying the Health Comparison List

### Function

This API is used to query the health comparison list.

### Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/jobs/{job\_id}/health-compare-jobs

**Table 7-480** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-481** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | No        | String | <p>Status. If this parameter is not specified, all statuses are queried.</p> <ul style="list-style-type: none"> <li>● <b>WAITING_FOR_RUNNING:</b> The comparison task is waiting to be started.</li> <li>● <b>RUNNING:</b> The comparison task is in progress.</li> <li>● <b>SUCCESSFUL:</b> The comparison task is complete.</li> <li>● <b>FAILED:</b> The comparison task failed.</li> <li>● <b>CANCELLED:</b> The comparison task is canceled.</li> <li>● <b>TIMEOUT_INTERRUPT:</b> The comparison task times out.</li> <li>● <b>FULL_DOING:</b> Full verification is in progress.</li> <li>● <b>INCRE_DOING:</b> Incremental verification is in progress.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>● <b>WAITING_FOR_RUNNING</b></li> <li>● <b>RUNNING</b></li> <li>● <b>SUCCESSFUL</b></li> <li>● <b>FAILED</b></li> <li>● <b>CANCELLED</b></li> <li>● <b>TIMEOUT_INTERRUPT</b></li> <li>● <b>FULL_DOING</b></li> <li>● <b>INCRE_DOING</b></li> </ul> |
| limit     | No        | String | <p>Number of items displayed per page. The default value is <b>10</b>. The value ranges from 1 to 1000.</p> <p>Minimum value: <b>1</b><br/>Maximum value: <b>1000</b><br/>Default value: <b>10</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter | Mandatory | Type   | Description                                                                                                                                                    |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | String | Offset, which is the position where the query starts. The value must be greater than or equal to 0. The default value is <b>0</b> .<br>Default value: <b>0</b> |

## Request Parameters

**Table 7-482** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

Status code: 200



**Table 7-483** Response body parameters

| Parameter    | Type             | Description                                                                        |
|--------------|------------------|------------------------------------------------------------------------------------|
| count        | Integer          | Total number.                                                                      |
| compare_jobs | Array of objects | List of health comparison tasks.<br>For details, see <a href="#">Table 7-484</a> . |

**Table 7-484** compare\_jobs parameters

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id           | String | Task ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| type         | String | Comparison type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| start_time   | String | Comparison start time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| end_time     | String | Comparison end time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| status       | String | Status. <ul style="list-style-type: none"><li>● <b>WAITING_FOR_RUNNING</b>: The comparison task is waiting to be started.</li><li>● <b>RUNNING</b>: The comparison task is in progress.</li><li>● <b>SUCCESSFUL</b>: The comparison task is complete.</li><li>● <b>FAILED</b>: The comparison task failed.</li><li>● <b>CANCELLED</b>: The comparison task is canceled.</li><li>● <b>TIMEOUT_INTERRUPT</b>: The comparison task times out.</li><li>● <b>FULL_DOING</b>: Full verification is in progress.</li><li>● <b>INCRE_DOING</b>: Incremental verification is in progress.</li></ul> |
| compute_type | String | Compute resource of a comparison task.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Status code: 400****Table 7-485** Response body parameters

| Parameter  | Type   | Description                                                           |
|------------|--------|-----------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b> |

| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| error_msg | String | Error message.<br>Minimum length: 1<br>Maximum length: 512 |

## Example Request

Querying the health comparison list

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/163b98e8-6088-46c3-8b86-c18fea6jb502/health-compare-jobs?offset=1&limit=10
```

## Example Response

**Status code: 200**

OK

```
{
 "count": 1,
 "compare_jobs": [
 {
 "id": "cd05434c-ad91-479c-a8d3-d90d58eccc43",
 "type": "lines,account,object_comparison",
 "status": "SUCCESSFUL",
 "start_time": "1686038400512",
 "end_time": "1686038408711",
 "compute_type": "drs"
 }
]
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.M05003",
 "error_msg": "Task information not found."
}
```

## Error Code

For details, see [Error Code](#).

## 7.7.3 Querying the Data-Level Streaming Comparison List

### Function

This API is used to query the migration progress of different migration tasks. Note:

- Before the task is completed, do not modify the information about all source and destination database users, passwords, and permissions.
- If the status indicates a full or incremental migration is complete, there may still be triggers or events to be migrated before the entire task is finished.

## Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

## URI

GET /v5/{project\_id}/jobs/{job\_id}/progress-data/{type}

**Table 7-486** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                 |
|------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                            |
| job_id     | Yes       | String | Task ID.                                                                                                                                                                                                                                    |
| type       | Yes       | String | Migration object type. <ul style="list-style-type: none"><li>• table</li><li>• event</li><li>• table_structure</li><li>• procedure</li><li>• view</li><li>• function</li><li>• database</li><li>• trigger</li><li>• table_indexes</li></ul> |

**Table 7-487** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | String | Number of items displayed per page. The default value is <b>10</b> . The value ranges from 1 to 1000.<br>Minimum value: <b>1</b><br>Maximum value: <b>1000</b><br>Default value: <b>10</b> |
| offset    | No        | String | Offset, which is the position where the query starts. The value must be greater than or equal to 0. The default value is <b>0</b> .<br>Default value: <b>0</b>                             |

## Request Parameters

**Table 7-488** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                           |

## Response Parameters

Status code: 200

**Table 7-489** Response body parameters

| Parameter         | Type             | Description                                                          |
|-------------------|------------------|----------------------------------------------------------------------|
| count             | Long             | Total number.                                                        |
| create_time       | String           | Data generation time.                                                |
| flow_compare_data | Array of objects | Comparison result.<br>For details, see <a href="#">Table 7-490</a> . |

**Table 7-490** flow\_compare\_data parameters

| Parameter | Type    | Description                |
|-----------|---------|----------------------------|
| src_db    | String  | Source database name.      |
| src_tb    | String  | Source object name.        |
| dst_db    | String  | Destination database name. |
| dst_tb    | String  | Destination object name.   |
| progress  | Integer | Progress.                  |

**Status code: 400**

**Table 7-491** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying the data-level streaming comparison list

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/jobs/163b98e8-6088-46c3-8b86-c18fea6jb502/progress-data/table?offset=1&limit=10
```

## Example Response

**Status code: 200**

OK

```
{
 "count": 1,
 "create_time": "1686038576882",
 "flow_compare_data": [
 {
 "src_db": "a",
 "src_tb": "b",
 "dst_db": "c",
 "dst_tb": "d",
 "progress": 10
 }
]
}
```

**Status code: 400**

### Bad Request

```
{
 "error_code": "DRS.M05003",
 "error_msg": "Task information not found."
}
```

## Error Code

For details, see [Error Code](#).

# 7.8 Enterprise Projects

## 7.8.1 Querying Enterprise Projects

### Function

This API is used to query the enterprise projects.

### Constraints

This API can be used only in certain regions. For details, see [Endpoints](#).

### URI

GET /v5/{project\_id}/enterprise-projects

**Table 7-492** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

**Table 7-493** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                            |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. The default value is 0.<br>Default value: <b>0</b> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                    |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Number of items displayed per page. The default value is <b>1000</b> . The value ranges from 1 to 1000.<br>Minimum value: <b>1</b><br>Maximum value: <b>1000</b><br>Default value: <b>1000</b> |
| name      | No        | String  | Specifies the enterprise project name. Fuzzy search is supported.                                                                                                                              |
| domain_id | No        | String  | ID of the account to which the IAM user belongs. This parameter is mandatory for the op_service permission and optional for non-op_service permissions.                                        |

## Request Parameters

**Table 7-494** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                          |
| X-Auth-Token | Yes       | String | User token obtained from IAM.<br>It is a response to the API for obtaining a user token. This API is the only one that does not require authentication.<br>After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 7-495** Response body parameters

| Parameter               | Type             | Description                                                            |
|-------------------------|------------------|------------------------------------------------------------------------|
| count                   | Integer          | Total number.                                                          |
| enterprise_project_list | Array of objects | Enterprise projects.<br>For details, see <a href="#">Table 7-496</a> . |

**Table 7-496** Data structure description of field **enterprise\_project\_list**

| Parameter   | Type   | Description                                                             |
|-------------|--------|-------------------------------------------------------------------------|
| id          | String | Enterprise project ID.                                                  |
| name        | String | Enterprise project name.                                                |
| description | String | Description.                                                            |
| status      | String | Enterprise project status.                                              |
| created_at  | String | Specifies the creation time, for example, <b>2023-01-20T07:18:26Z</b> . |
| updated_at  | String | Specifies the update time, for example, <b>2023-03-01T09:42:02Z</b> .   |

Status code: 400



**Table 7-497** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying the enterprise projects

`https://{endpoint}/v5/{project_id}/enterprise-projects`

## Example Response

**Status code: 200**

OK

```
{
 "count": 113,
 "enterprise_project_list": [
 {
 "id": "0",
 "name": "default",
 "status": "1"
 },
 {
 "id": "2d8315f3-f25f-4481-a867-b7ef05a4b9c2",
 "name": "eps_test_new_name",
 "status": "1",
 "created_at": "2023-01-20T07:18:26Z",
 "updated_at": "2023-01-20T15:32:29Z"
 },
 {
 "id": "81b344c4-5644-485b-8ea7-398f3b8013cf",
 "name": "(!@$%^_-=+[{]}:./?~#*;|)",
 "status": "1",
 "created_at": "2022-09-27T02:41:22Z",
 "updated_at": "2023-03-01T09:42:02Z"
 },
 {
 "id": "59add094-0be7-49d0-a3ee-22de62f7eb4c",
 "name": "DDS-test01_01",
 "status": "1",
 "created_at": "2022-02-25T08:04:44Z",
 "updated_at": "2022-07-13T03:45:24Z"
 },
 {
 "id": "6e2795dd-6fd1-4413-9038-cf1c1acc0940",
 "name": "gaussdb_test02",
 "description": "gaussdb_test02",
 "status": "1",
 "created_at": "2022-02-25T07:39:05Z",
 "updated_at": "2022-02-25T07:39:05Z"
 }
]
}
```

```
]
}
```

**Status code: 422**

Bad Request

```
{
 "error_code": "DRS.M00277",
 "error_msg": "The task name already exists."
}
```

## Error Code

For details, see [Error Code](#).

# 7.9 Data Processing

## 7.9.1 Updating Data Processing Rules for a Specified Task

### Function

This API is used to update the data processing rules for a specified task.

### URI

PUT /v5/{project\_id}/jobs/{job\_id}/data-processing-rules

**Table 7-498** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-499** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .         |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                          |

**Table 7-500** Request body parameters

| Parameter         | Mandatory | Type             | Description                                                                                                    |
|-------------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------|
| data_process_info | No        | Array of objects | Request body for data processing rules for a specified task.<br>For details, see <a href="#">Table 7-501</a> . |

**Table 7-501** Data structure description of field **data\_process\_info**

| Parameter         | Mandatory | Type             | Description                                                                                                    |
|-------------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------|
| filter_conditions | No        | Array of objects | Request body for data processing rules for a specified task.<br>For details, see <a href="#">Table 7-502</a> . |

| Parameter               | Mandatory | Type               | Description                                                                                                                                                                                                                                                                                                            |
|-------------------------|-----------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_batch_process        | No        | Boolean            | The value is <b>true</b> for database-level and batch table-level data processing and <b>false</b> for single-table data processing.                                                                                                                                                                                   |
| add_columns             | No        | Array of objects   | Additional column. This parameter is mandatory when adding additional columns is required. You must use additional columns to avoid data conflicts in many-to-one operations.<br>For details, see <a href="#">Table 7-503</a> .                                                                                        |
| ddl_operation           | No        | Map<String,String> | DDL operations to be migrated or synchronized in an incremental task. If this parameter is set to <b>table</b> , DDL operations including CREATE TABLE, ALTER TABLE, DROP TABLE, and RENAME TABLE can be migrated or synchronized. If this parameter is left blank, DDL operations cannot be migrated or synchronized. |
| dml_operation           | No        | String             | DML operations to be migrated or synchronized. <ul style="list-style-type: none"> <li>• <b>i</b>: INSERT</li> <li>• <b>u</b>: UPDATE</li> <li>• <b>d</b>: DELETE</li> </ul> If this parameter is left blank, DML operations cannot be migrated or synchronized in an incremental task.                                 |
| db_object_column_info   | No        | Object             | Column mapping and filtering information. This parameter is mandatory when column mapping and filtering information is required.<br>For details, see <a href="#">Table 7-504</a> .                                                                                                                                     |
| db_or_table_rename_rule | No        | Object             | Database table mapping rule.<br>For details, see <a href="#">Table 7-506</a> .                                                                                                                                                                                                                                         |

| Parameter       | Mandatory | Type    | Description                                                                                                                                                              |
|-----------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_object       | No        | Object  | Data processing object information, which is mandatory when column mapping and data filtering conditions are verified.<br>For details, see <a href="#">Table 7-507</a> . |
| is_synchronized | No        | Boolean | Whether the rule has been synchronized to the destination database.                                                                                                      |

**Table 7-502** Data structure description of field **filter\_conditions**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Filtering criteria. If <b>filtering_type</b> is set to <b>configConditionalFilter</b> , <b>value</b> is set to <b>config</b> by default. When <b>filtering_type</b> is set to <b>contentConditionalFilter</b> , <b>value</b> is set to the filtering conditions by default. |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Each table has only one verification rule.</li> <li>• Up to 500 tables can be filtered at a time.</li> <li>• Standard SQL statements can be used to filter records. Each expression cannot contain packages, functions, variables, or constants specific to a database engine. Enter the part following WHERE in the SQL statement (excluding WHERE and semicolons), for example, sid &gt; 3 and sname like "G %". A maximum of 512 characters are allowed.</li> <li>• In SQL statements for setting filter criteria, keywords must be enclosed in backquotes, and the value of <b>datetime</b> (including date and time) must be enclosed in single quotation marks, for example, `update` &gt; '2022-07-13 00:00:00' and age &gt;10.</li> <li>• Filter criteria cannot be configured for large objects, such as CLOB, BLOB, and BYTEA.</li> <li>• Filtering rules cannot be set for objects whose database names and table names contain newline characters.</li> <li>• You are not advised to set filter criteria for fields of approximate numeric types, such as FLOAT, DECIMAL, and DOUBLE.</li> <li>• Do not use fields containing special characters as a filter condition.</li> <li>• You are not advised to use non-idempotent expressions or functions as data processing conditions, such as SYSTIMESTAMP and SYSDATE, because the returned result may be different each time the function is called.</li> </ul> |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                           |
|----------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtering_type | No        | String | Filter condition type.<br><b>contentConditionalFilter</b> : simple condition-based filtering.<br><b>configConditionalFilter</b> : association table filtering.<br>Enumerated values:<br><ul style="list-style-type: none"> <li>• <b>contentConditionalFilter</b></li> <li>• <b>configConditionalFilter</b></li> </ul> |

**Table 7-503** Data structure description of field **add\_columns**

| Parameter    | Mandatory | Type   | Description            |
|--------------|-----------|--------|------------------------|
| column_type  | No        | String | Column type.           |
| column_name  | No        | String | Column name.           |
| column_value | No        | String | Column value.          |
| data_type    | No        | String | Data type of a column. |

**Table 7-504** Data structure description of field **db\_object\_column\_info**

| Parameter    | Mandatory | Type             | Description                                                                                                             |
|--------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------|
| db_name      | No        | String           | Database name.                                                                                                          |
| schema_name  | No        | String           | Schema name.                                                                                                            |
| table_name   | No        | String           | Table name.                                                                                                             |
| column_infos | No        | Array of objects | Column information.<br>For details, see <a href="#">Table 7-505</a> .                                                   |
| total_count  | No        | Integer          | Total number of database column records, which is irrelevant to pagination and is used only as a return body parameter. |

**Table 7-505** Data structure description of field **column\_infos**

| Parameter   | Mandatory | Type   | Description  |
|-------------|-----------|--------|--------------|
| column_name | No        | String | Column name. |



| Parameter                   | Mandatory | Type    | Description                                                                                                                                                                                    |
|-----------------------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| column_type                 | No        | String  | Column type.                                                                                                                                                                                   |
| primary_key_or_unique_index | No        | String  | Primary key or unique index. The value can be: <ul style="list-style-type: none"> <li>• <b>P</b>: primary key</li> <li>• <b>U</b>: unique key</li> <li>• <b>D</b>: distribution key</li> </ul> |
| column_mapped_name          | No        | String  | Mapped column name.                                                                                                                                                                            |
| is_filtered                 | No        | Boolean | Whether the column is filtered.                                                                                                                                                                |
| is_partition_key            | No        | Boolean | Whether the column is a partition column.                                                                                                                                                      |

**Table 7-506** Data structure description of field **db\_or\_table\_rename\_rule**

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| prefix_name | No        | String | Prefix name. When <b>type</b> is set to <b>prefixAndSuffix</b> , this parameter is mandatory, and only a prefix is added to the database table name. If <b>suffix_name</b> is also specified, both a prefix and a suffix are added to the database table name. |
| suffix_name | No        | String | Suffix name. When <b>type</b> is set to <b>prefixAndSuffix</b> , this parameter is mandatory, and only a suffix is added to the database table name. If <b>prefix_name</b> is also specified, both a prefix and a suffix are added to the database table name. |
| type        | No        | String | Database table mapping type.<br><b>prefixAndSuffix</b> : prefix, suffix, or prefix and suffix.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>prefixAndSuffix</b></li> <li>• <b>manyToOne</b></li> </ul>                                    |

**Table 7-507** Data structure description of field **db\_object**

| Parameter      | Mandatory | Type                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | Yes       | String                      | <p>Migration or synchronization object scope. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>all</b>: Migrate or synchronize all objects.</li> <li>• <b>database</b>: database-level migration or synchronization.</li> <li>• <b>table</b>: table-level migration or synchronization.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>all</b></li> <li>• <b>database</b></li> <li>• <b>table</b></li> </ul> |
| target_root_db | No        | Object                      | <p>Destination database for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3.</p> <p>For details, see <a href="#">Table 7-508</a>.</p>                                                                                                                                                                                                                                            |
| object_info    | No        | Map<String, DatabaseObject> | <p>Object information for migration or synchronization. If <b>object_scope</b> is set to <b>all</b>, leave this parameter blank. If <b>object_scope</b> is set to <b>database</b> or <b>table</b>, this parameter is mandatory.</p> <p>For details, see <a href="#">Table 7-509</a>.</p>                                                                                                                                                                        |

**Table 7-508** Data structure description of field **target\_root\_db**

| Parameter   | Mandatory | Type   | Description                                          |
|-------------|-----------|--------|------------------------------------------------------|
| db_name     | No        | String | Database name.                                       |
| db_encoding | No        | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-509** Data structure description of field **object\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | <p>Type of the database in real-time synchronization. The value can be:</p> <p><b>config</b>: This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b>.</p> <p><b>NOTE</b><br/>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.</p> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>config</b></li> </ul> |
| name      | No        | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Parameter          | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | No        | Boolean                  | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | No        | Map<String,SchemaObject> | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-510</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| tables             | No        | Map<String,TableObject>  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-511</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| total_table_number | No        | Integer                  | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| is_synchronized    | No        | Boolean                  | <p>Whether data has been synchronized.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

**Table 7-510** Data structure description of field **schemas**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String  | Type of the schema in real-time synchronization. The value can be:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                   |
| name      | No        | String  | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | No        | Boolean | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |

| Parameter | Mandatory | Type                                      | Description                                                                                                |
|-----------|-----------|-------------------------------------------|------------------------------------------------------------------------------------------------------------|
| tables    | No        | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> . |

**Table 7-511** Data structure description of field **tables**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the table in real-time synchronization. The value can be:<br><br><b>config:</b> This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object. |
| type      | No        | String | Object type. The value can be:<br><ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                           |
| name      | No        | String | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all               | No        | Boolean          | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | No        | String           | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| schema_alias_name | No        | String           | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| filtered          | No        | Boolean          | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| filter_conditions | No        | Array of strings | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter         | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_conditions | No        | Array of strings         | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | No        | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | No        | Map<String,ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-512</a> . |



**Table 7-512** Data structure description of field **columns**

| Parameter                      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type                      | No        | String | Type of the column in real-time synchronization. The value can be:<br><br><b>config:</b> This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |
| primary_key_for_data_filtering | No        | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                         |
| index_for_data_filtering       | No        | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                               |

| Parameter                        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                             | No        | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| type                             | No        | String | Data type of the column.<br>Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. The value can be: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int, long, varchar(256), datetime, or timestamp.</b></li> <li>• <b>create_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>update_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>Expression:</b> The value can be <b>varchar (256)</b>, and the column value must be <b>concat(_current_database, '@', _current_table).</b></li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256).</b></li> </ul> |
| primary_key_for_column_filtering | No        | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | No        | Boolean | <p>Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | No        | Boolean | <p>Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.</p>                                                                                                                                                                                                                                                                                                                                              |
| operation_type | No        | String  | <p>Operation type. The new column is filled with a specific operation type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>Default:</b><br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression:</b><br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table:</b><br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Value of the additional column. Constraints: <ul style="list-style-type: none"> <li>This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul> |

## Response Parameters

**Status code: 202**

**Table 7-513** Response body parameters

| Parameter | Type   | Description                                                                                                                                         |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Query result ID.                                                                                                                                    |
| job_id    | String | Task ID.                                                                                                                                            |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li><b>pending</b></li> <li><b>failed</b></li> <li><b>success</b></li> </ul> |

**Status code: 400**

**Table 7-514** Response body parameters

| Parameter  | Type   | Description                                                           |
|------------|--------|-----------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b> |

| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| error_msg | String | Error message.<br>Minimum length: 1<br>Maximum length: 512 |

## Example Request

Updating the mapping information, column information, data filtering information, additional column information, DDL information, and DML information of a database table

PUT <https://{endPoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/data-processing-rules>

```
{
 "data_process_info": [{
 "filter_conditions": [{
 "filtering_type": "contentConditionalFilter",
 "value": "id>1"
 }],
 "is_batch_process": false,
 "add_columns": [{
 "column_type": "ADDITIONALCOLUMN,create_time",
 "column_name": "id",
 "column_value": "_create_timestamp",
 "data_type": "long"
 }],
 "ddl_operation": {
 "table": "ct,at"
 },
 "dml_operation": "i,u",
 "db_object_column_info": {
 "db_name": "testDb",
 "schema_name": "testSchema",
 "table_name": "testTable",
 "column_infos": [{
 "column_name": "ID",
 "column_type": "NUMBER",
 "primary_key_or_unique_index": "P",
 "column_mapped_name": null,
 "is_filtered": false,
 "is_partition_key": true
 }, {
 "column_name": "C1",
 "column_type": "VARCHAR2",
 "primary_key_or_unique_index": null,
 "column_mapped_name": "t1",
 "is_filtered": false,
 "is_partition_key": false
 }, {
 "column_name": "C2",
 "column_type": "VARCHAR2",
 "primary_key_or_unique_index": null,
 "column_mapped_name": null,
 "is_filtered": true,
 "is_partition_key": false
 }, {
 "column_name": "C1",
 "column_type": "VARCHAR2",
 "primary_key_or_unique_index": null,
 "column_mapped_name": null,
 "is_filtered": false,
```

```
 "is_partition_key" : false
 }]
},
"db_or_table_rename_rule" : {
 "type" : "prefixAndSuffix",
 "prefix_name" : "test"
},
"db_object" : {
 "object_info" : {
 "dyh4" : {
 "name" : "dyh4",
 "all" : false,
 "tables" : {
 "test1_table1" : {
 "name" : "test1_table1",
 "type" : "table",
 "all" : true
 },
 "test1_table10" : {
 "name" : "test1_table10",
 "type" : "table",
 "all" : true
 },
 "test1_table11" : {
 "name" : "test1_table11",
 "type" : "table",
 "all" : true
 }
 }
 }
 }
},
"object_scope" : "table"
}]
}
```

## Example Response

**Status code: 202**

Accept

```
{
 "id" : "0eacda0b-9422-4535-8b62-537d1833638b",
 "job_id" : "177738d1-4eee-4fcb-a4e1-09aea79jb20i",
 "status" : "pending"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | Accept      |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.9.2 Obtaining the Data Processing Rule Update Result for a Specified Task

### Function

This API is used to obtain the data processing rule update result for a specified task.

### URI

GET /v5/{project\_id}/jobs/{job\_id}/data-processing-rules/result

**Table 7-515** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-516** Query parameters

| Parameter | Mandatory | Type   | Description                                   |
|-----------|-----------|--------|-----------------------------------------------|
| query_id  | Yes       | String | ID of the data processing rule update request |

### Request Parameters

**Table 7-517** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                          |

## Response Parameters

**Status code: 200**

**Table 7-518** Response body parameters

| Parameter | Type   | Description                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Query result ID.                                                                                                                                          |
| job_id    | String | Task ID.                                                                                                                                                  |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>failed</b></li> <li>• <b>success</b></li> </ul> |

**Status code: 400**

**Table 7-519** Response body parameters

| Parameter  | Type   | Description                                                           |
|------------|--------|-----------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b> |



| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| error_msg | String | Error message.<br>Minimum length: 1<br>Maximum length: 512 |

## Example Request

Obtaining the data processing rule update result for a specified task

```
GET https://{endPoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/data-processing-rules/result?query_id=009bb221-2794-4767-91e6-6ed7f79792b4
```

## Example Response

**Status code: 200**

OK

```
{
 "id": "009bb221-2794-4767-91e6-6ed7f79792b4",
 "job_id": "177738d1-4eee-4fcb-a4e1-09aea79jb20i",
 "status": "success"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code": "DRS.10000010",
 "error_msg": "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.9.3 Querying Data Processing Rules

### Function

This API is used to query data processing rules, including database table mapping information, column information, data filtering information, additional column information, DDL information, and DML information.

## URI

GET /v5/{project\_id}/jobs/{job\_id}/data-processing-rules

**Table 7-520** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-521** Query parameters

| Parameter | Mandatory | Type    | Description                                            |
|-----------|-----------|---------|--------------------------------------------------------|
| offset    | No        | Integer | Offset. The records after this offset will be queried. |
| limit     | No        | Integer | Maximum number of records that can be returned.        |

## Request Parameters

**Table 7-522** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> .      |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

## Response Parameters

Status code: 200

**Table 7-523** Response body parameters

| Parameter         | Type             | Description                                                                                |
|-------------------|------------------|--------------------------------------------------------------------------------------------|
| data_process_info | Array of objects | Response body for data processing rules.<br>For details, see <a href="#">Table 7-524</a> . |
| count             | Integer          | Total number of data processing rules.                                                     |

**Table 7-524** Data structure description of field **data\_process\_info**

| Parameter         | Type             | Description                                                                                                                                                                                                                                       |
|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filter_conditions | Array of objects | Request body for data processing rules for a specified task.<br>For details, see <a href="#">Table 7-525</a> .                                                                                                                                    |
| is_batch_process  | Boolean          | The value is <b>true</b> for database-level and batch table-level data processing and <b>false</b> for single-table data processing.                                                                                                              |
| add_columns       | Array of objects | Additional column. This parameter is mandatory when adding additional columns is required.<br>For details, see <a href="#">Table 7-526</a> .<br><b>NOTE</b><br>You must use additional columns to avoid data conflicts in many-to-one operations. |

| Parameter               | Type               | Description                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ddl_operation           | Map<String,String> | DDL operations to be migrated or synchronized in an incremental task. The value can be:<br><br>If this parameter is set to <b>table</b> , DDL operations including CREATE TABLE, ALTER TABLE, DROP TABLE, and RENAME TABLE can be migrated or synchronized.<br><br>If this parameter is left blank, DDL operations cannot be migrated or synchronized. |
| dml_operation           | String             | DML operations to be migrated or synchronized.<br><br><ul style="list-style-type: none"> <li>• <b>i</b>: INSERT</li> <li>• <b>u</b>: UPDATE</li> <li>• <b>d</b>: DELETE</li> </ul> If this parameter is left blank, DML operations cannot be migrated or synchronized in an incremental task.                                                          |
| db_object_column_info   | Object             | Column mapping and filtering information. This parameter is mandatory when column mapping and filtering information is required.<br>For details, see <a href="#">Table 7-527</a> .                                                                                                                                                                     |
| db_or_table_rename_rule | Object             | Database table mapping rule.<br>For details, see <a href="#">Table 7-529</a> .                                                                                                                                                                                                                                                                         |
| db_object               | Object             | Data processing object information, which is mandatory when column mapping and data filtering conditions are verified.<br>For details, see <a href="#">Table 7-530</a> .                                                                                                                                                                               |
| is_synchronized         | Boolean            | Whether the rule has been synchronized to the destination database.                                                                                                                                                                                                                                                                                    |

**Table 7-525** Data structure description of field **filter\_conditions**

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value          | String | <p>Filtering criteria. If <b>filtering_type</b> is set to <b>configConditionalFilter</b>, <b>value</b> is set to <b>config</b> by default. When <b>filtering_type</b> is set to <b>contentConditionalFilter</b>, <b>value</b> is set to the filtering conditions by default.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Each table has only one verification rule.</li> <li>• Up to 500 tables can be filtered at a time.</li> <li>• Standard SQL statements can be used to filter records. Each expression cannot contain packages, functions, variables, or constants specific to a database engine. Enter the part following WHERE in the SQL statement (excluding WHERE and semicolons), for example, sid &gt; 3 and sname like "G %". A maximum of 512 characters are allowed.</li> <li>• In SQL statements for setting filter criteria, keywords must be enclosed in backquotes, and the value of <b>datetime</b> (including date and time) must be enclosed in single quotation marks, for example, `update` &gt; '2022-07-13 00:00:00' and age &gt;10.</li> <li>• Filter criteria cannot be configured for large objects, such as CLOB, BLOB, and BYTEA.</li> <li>• Filtering rules cannot be set for objects whose database names and table names contain newline characters.</li> <li>• You are not advised to set filter criteria for fields of approximate numeric types, such as FLOAT, DECIMAL, and DOUBLE.</li> <li>• Do not use fields containing special characters as a filter condition.</li> <li>• You are not advised to use non-idempotent expressions or functions as data processing conditions, such as SYSTIMESTAMP and SYSDATE, because the returned result may be different each time the function is called.</li> </ul> |
| filtering_type | String | <p>Filter condition type.</p> <ul style="list-style-type: none"> <li>• <b>contentConditionalFilter</b>: simple condition-based filtering.</li> <li>• <b>configConditionalFilter</b>: association table filtering.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>contentConditionalFilter</b></li> <li>• <b>configConditionalFilter</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 7-526** Data structure description of field **add\_columns**

| Parameter    | Type   | Description            |
|--------------|--------|------------------------|
| column_type  | String | Column type.           |
| column_name  | String | Column name.           |
| column_value | String | Column value.          |
| data_type    | String | Data type of a column. |

**Table 7-527** Data structure description of field **db\_object\_column\_info**

| Parameter    | Type             | Description                                                                                                             |
|--------------|------------------|-------------------------------------------------------------------------------------------------------------------------|
| db_name      | String           | Database name.                                                                                                          |
| schema_name  | String           | Schema name.                                                                                                            |
| table_name   | String           | Table name.                                                                                                             |
| column_infos | Array of objects | Column information.<br>For details, see <a href="#">Table 7-528</a> .                                                   |
| total_count  | Integer          | Total number of database column records, which is irrelevant to pagination and is used only as a return body parameter. |

**Table 7-528** Data structure description of field **column\_infos**

| Parameter                   | Type    | Description                               |
|-----------------------------|---------|-------------------------------------------|
| column_name                 | String  | Column name.                              |
| column_type                 | String  | Column type.                              |
| primary_key_or_unique_index | String  | Primary key or unique index.              |
| column_mapped_name          | String  | Mapped column name.                       |
| is_filtered                 | Boolean | Whether the column is filtered.           |
| is_partition_key            | Boolean | Whether the column is a partition column. |

**Table 7-529** Data structure description of field **db\_or\_table\_rename\_rule**

| Parameter   | Type   | Description                                                                                                                                                                                                                                                    |
|-------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| prefix_name | String | Prefix name. When <b>type</b> is set to <b>prefixAndSuffix</b> , this parameter is mandatory, and only a prefix is added to the database table name. If <b>suffix_name</b> is also specified, both a prefix and a suffix are added to the database table name. |
| suffix_name | String | Suffix name. When <b>type</b> is set to <b>prefixAndSuffix</b> , this parameter is mandatory, and only a suffix is added to the database table name. If <b>prefix_name</b> is also specified, both a prefix and a suffix are added to the database table name. |
| type        | String | Database table mapping type.<br><b>prefixAndSuffix</b> : prefix, suffix, or prefix and suffix.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>prefixAndSuffix</b></li> <li>• <b>manyToOne</b></li> </ul>                                    |

**Table 7-530** Data structure description of field **db\_object**

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | String | Migration or synchronization object scope. The value can be: <ul style="list-style-type: none"> <li>• <b>all</b>: Migrate or synchronize all objects.</li> <li>• <b>database</b>: database-level migration or synchronization.</li> <li>• <b>table</b>: table-level migration or synchronization.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>all</b></li> <li>• <b>database</b></li> <li>• <b>table</b></li> </ul> |
| target_root_db | Object | Destination database for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3.<br>For details, see <a href="#">Table 7-531</a> .                                                                                                                                                                                                                                        |

| Parameter   | Type                        | Description                                                                                                                                                                                                                                                                      |
|-------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_info | Map<String, DatabaseObject> | Object information for migration or synchronization. If <b>object_scope</b> is set to <b>all</b> , leave this parameter blank. If <b>object_scope</b> is set to <b>database</b> or <b>table</b> , this parameter is mandatory.<br>For details, see <a href="#">Table 7-532</a> . |

**Table 7-531** Data structure description of field **target\_root\_db**

| Parameter   | Type   | Description                                          |
|-------------|--------|------------------------------------------------------|
| db_name     | String | Database name.                                       |
| db_encoding | String | Encoding format. The default value is <b>UTF-8</b> . |

**Table 7-532** Data structure description of field **object\_info**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the database in real-time synchronization. The value can be:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values:<br><ul style="list-style-type: none"> <li><b>config</b></li> </ul> |
| name      | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



| Parameter          | Type                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | Boolean                                       | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | Map<String,<br><a href="#">SchemaObject</a> > | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-533</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| tables             | Map<String,<br><a href="#">TableObject</a> >  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-534</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| total_table_number | Integer                                       | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| is_synchronized    | Boolean                                       | <p>Whether data has been synchronized.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

**Table 7-533** Data structure description of field **schemas**

| Parameter | Type                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String                                    | Type of the schema in real-time synchronization. The value can be:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                   |
| name      | String                                    | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | Boolean                                   | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| tables    | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-534</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Table 7-534** Data structure description of field **tables**

| Parameter         | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type         | String  | Type of the table in real-time synchronization. The value can be:<br><b>config</b> : This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><b>NOTE</b><br>To synchronize the table-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                     |
| type              | String  | Object type. The value can be:<br><ul style="list-style-type: none"> <li>● <b>table</b>: indicates a table.</li> <li>● <b>view</b>: indicates a view.</li> <li>● <b>procedure</b>: indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                       |
| name              | String  | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| all               | Boolean | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>● If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>● If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>● If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | String  | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| schema_alias_name | String  | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter         | Type                      | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered          | Boolean                   | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                        |
| filter_conditions | Array of strings          | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                              |
| config_conditions | Array of strings          | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | Boolean                   | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | Map<String, ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-535</a> . |

**Table 7-535** Data structure description of field **columns**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | String | Type of the column in real-time synchronization. The value can be:<br><b>config</b> : This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |

| Parameter                        | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| primary_key_for_data_filtering   | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| index_for_data_filtering         | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| name                             | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| type                             | String | Data type of the column. Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. The value can be: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int</b>, <b>long</b>, <b>varchar(256)</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>create_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>update_time:</b> The value can be <b>long</b>, <b>datetime</b>, or <b>timestamp</b>.</li> <li>• <b>Expression:</b> The value can be <b>varchar(256)</b>, and the column value must be <b>concat(__current_database, '@', __current_table)</b>.</li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256)</b>.</li> </ul> |
| primary_key_for_column_filtering | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | Boolean | Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. The value can be: <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | Boolean | Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.                                                                                                                                                                                                                                                                                                                                              |
| operation_type | String  | Operation type. The new column is filled with a specific operation type. The value can be: <ul style="list-style-type: none"> <li>• <b>Default</b>:<br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time</b>:<br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression</b>:<br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table</b>:<br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |
| value          | String  | Value of the additional column. Constraints: <ul style="list-style-type: none"> <li>• This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>• When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(__current_database, '@', __current_table)</b>.</li> </ul>                                                                                                                                                                                             |

**Status code: 400**

**Table 7-536** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Querying data processing rules

```
GET https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/data-processing-rules
```

## Example Response

**Status code: 200**

OK

```
{
 "data_process_info": [{
 "filter_conditions": [{
 "value": "id>1"
 }],
 "is_batch_process": false,
 "add_columns": [{
 "column_type": "ADDITIONALCOLUMN,create_time",
 "column_name": "id",
 "column_value": "__create_timestamp",
 "data_type": "long"
 }],
 "ddl_operation": {
 "table": "ct,at"
 },
 "dmL_operation": "i,u",
 "db_object_column_info": [{
 "db_name": "testDb",
 "schema_name": "testSchema",
 "table_name": "testTable",
 "column_infos": [{
 "column_name": "ID",
 "column_type": "NUMBER",
 "primary_key_or_unique_index": "P",
 "column_mapped_name": null,
 "is_filtered": false,
 "is_partition_key": true
 }, {
 "column_name": "C1",
 "column_type": "VARCHAR2",
 "primary_key_or_unique_index": null,
 "column_mapped_name": "t1",
 "is_filtered": false,
 "is_partition_key": false
 }, {
 "column_name": "C2",
```

```
"column_type" : "VARCHAR2",
"primary_key_or_unique_index" : null,
"column_mapped_name" : null,
"is_filtered" : true,
"is_partition_key" : false
}, {
"column_name" : "C1",
"column_type" : "VARCHAR2",
"primary_key_or_unique_index" : null,
"column_mapped_name" : null,
"is_filtered" : false,
"is_partition_key" : false
}
}],
"db_or_table_rename_rule" : {
"prefix_name" : "test"
},
"db_object" : {
"object_info" : {
"dyh4" : {
"name" : "dyh4",
"all" : false,
"tables" : {
"test1_table1" : {
"name" : "test1_table1",
"type" : "table",
"all" : true
},
"test1_table10" : {
"name" : "test1_table10",
"type" : "table",
"all" : true
},
"test1_table11" : {
"name" : "test1_table11",
"type" : "table",
"all" : true
}
}
}
}
},
"object_scope" : "table"
}
}],
"count" : 1
}
```

**Status code: 400**

Bad Request

```
{
"error_code" : "DRS.10000010",
"error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |



## Error Code

For details, see [Error Code](#).

## 7.9.4 Verifying Data Filtering Rules

### Function

This API is used to verify data filtering rules.

### URI

POST /v5/{project\_id}/job/{job\_id}/data-filtering/check

**Table 7-537** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

### Request Parameters

**Table 7-538** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .         |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 7-539** Request body parameters

| Parameter         | Mandatory | Type             | Description                                                                                                    |
|-------------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------|
| data_process_info | No        | Array of objects | Request body for data processing rules for a specified task.<br>For details, see <a href="#">Table 7-540</a> . |

**Table 7-540** Data structure description of field **data\_process\_info**

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                       |
|-------------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filter_conditions | No        | Array of objects | Request body for data processing rules for a specified task.<br>For details, see <a href="#">Table 7-541</a> .                                                                                                                                    |
| is_batch_process  | No        | Boolean          | The value is <b>true</b> for database-level and batch table-level data processing and <b>false</b> for single-table data processing.                                                                                                              |
| add_columns       | No        | Array of objects | Additional column. This parameter is mandatory when adding additional columns is required.<br><b>NOTE</b><br>You must use additional columns to avoid data conflicts in many-to-one operations.<br>For details, see <a href="#">Table 7-542</a> . |

| Parameter               | Mandatory | Type               | Description                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ddl_operation           | No        | Map<String,String> | DDL operations to be migrated or synchronized in an incremental task. The value can be:<br><br>If this parameter is set to <b>table</b> , DDL operations including CREATE TABLE, ALTER TABLE, DROP TABLE, and RENAME TABLE can be migrated or synchronized.<br><br>If this parameter is left blank, DDL operations cannot be migrated or synchronized. |
| dml_operation           | No        | String             | DML operations to be migrated or synchronized.<br><br><ul style="list-style-type: none"> <li>• <b>i</b>: INSERT</li> <li>• <b>u</b>: UPDATE</li> <li>• <b>d</b>: DELETE</li> </ul> If this parameter is left blank, DML operations cannot be migrated or synchronized in an incremental task.                                                          |
| db_object_column_info   | No        | Object             | Column mapping and filtering information. This parameter is mandatory when column mapping and filtering information is required.<br><br>For details, see <a href="#">Table 7-543</a> .                                                                                                                                                                 |
| db_or_table_rename_rule | No        | Object             | Database table mapping rule.<br><br>For details, see <a href="#">Table 7-545</a> .                                                                                                                                                                                                                                                                     |
| db_object               | No        | Object             | Data processing object information, which is mandatory when column mapping and data filtering conditions are verified.<br><br>For details, see <a href="#">Table 7-546</a> .                                                                                                                                                                           |
| is_synchronized         | No        | Boolean            | Whether the rule has been synchronized to the destination database.                                                                                                                                                                                                                                                                                    |

**Table 7-541** Data structure description of field **filter\_conditions**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Filtering criteria. If <b>filtering_type</b> is set to <b>configConditionalFilter</b> , <b>value</b> is set to <b>config</b> by default. When <b>filtering_type</b> is set to <b>contentConditionalFilter</b> , <b>value</b> is set to the filtering conditions by default. |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Each table has only one verification rule.</li> <li>• Up to 500 tables can be filtered at a time.</li> <li>• Standard SQL statements can be used to filter records. Each expression cannot contain packages, functions, variables, or constants specific to a database engine. Enter the part following WHERE in the SQL statement (excluding WHERE and semicolons), for example, sid &gt; 3 and sname like "G %". A maximum of 512 characters are allowed.</li> <li>• In SQL statements for setting filter criteria, keywords must be enclosed in backquotes, and the value of <b>datetime</b> (including date and time) must be enclosed in single quotation marks, for example, `update` &gt; '2022-07-13 00:00:00' and age &gt;10.</li> <li>• Filter criteria cannot be configured for large objects, such as CLOB, BLOB, and BYTEA.</li> <li>• Filtering rules cannot be set for objects whose database names and table names contain newline characters.</li> <li>• You are not advised to set filter criteria for fields of approximate numeric types, such as FLOAT, DECIMAL, and DOUBLE.</li> <li>• Do not use fields containing special characters as a filter condition.</li> <li>• You are not advised to use non-idempotent expressions or functions as data processing conditions, such as SYSTIMESTAMP and SYSDATE, because the returned result may be different each time the function is called.</li> </ul> |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                            |
|----------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtering_type | No        | String | Filter condition type. <ul style="list-style-type: none"> <li>• <b>contentConditionalFilter</b>: simple condition-based filtering.</li> <li>• <b>configConditionalFilter</b>: association table filtering.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>contentConditionalFilter</b></li> <li>• <b>configConditionalFilter</b></li> </ul> |

**Table 7-542** Data structure description of field **add\_columns**

| Parameter    | Mandatory | Type   | Description            |
|--------------|-----------|--------|------------------------|
| column_type  | No        | String | Column type.           |
| column_name  | No        | String | Column name.           |
| column_value | No        | String | Column value.          |
| data_type    | No        | String | Data type of a column. |

**Table 7-543** Data structure description of field **db\_object\_column\_info**

| Parameter    | Mandatory | Type             | Description                                                                                                             |
|--------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------|
| db_name      | No        | String           | Database name.                                                                                                          |
| schema_name  | No        | String           | Schema name.                                                                                                            |
| table_name   | No        | String           | Table name.                                                                                                             |
| column_infos | No        | Array of objects | Column information.<br>For details, see <a href="#">Table 7-544</a> .                                                   |
| total_count  | No        | Integer          | Total number of database column records, which is irrelevant to pagination and is used only as a return body parameter. |

**Table 7-544** Data structure description of field **column\_infos**

| Parameter   | Mandatory | Type   | Description  |
|-------------|-----------|--------|--------------|
| column_name | No        | String | Column name. |

| Parameter                   | Mandatory | Type    | Description                               |
|-----------------------------|-----------|---------|-------------------------------------------|
| column_type                 | No        | String  | Column type.                              |
| primary_key_or_unique_index | No        | String  | Primary key or unique index.              |
| column_mapped_name          | No        | String  | Mapped column name.                       |
| is_filtered                 | No        | Boolean | Whether the column is filtered.           |
| is_partition_key            | No        | Boolean | Whether the column is a partition column. |

**Table 7-545** Data structure description of field **db\_or\_table\_rename\_rule**

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| prefix_name | No        | String | Prefix name. When <b>type</b> is set to <b>prefixAndSuffix</b> , this parameter is mandatory, and only a prefix is added to the database table name. If <b>suffix_name</b> is also specified, both a prefix and a suffix are added to the database table name. |
| suffix_name | No        | String | Suffix name. When <b>type</b> is set to <b>prefixAndSuffix</b> , this parameter is mandatory, and only a suffix is added to the database table name. If <b>prefix_name</b> is also specified, both a prefix and a suffix are added to the database table name. |
| type        | No        | String | Database table mapping type.<br><b>prefixAndSuffix</b> : prefix, suffix, or prefix and suffix.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>prefixAndSuffix</b></li> <li>• <b>manyToOne</b></li> </ul>                                    |

**Table 7-546** Data structure description of field **db\_object**

| Parameter      | Mandatory | Type                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| object_scope   | Yes       | String                      | <p>Migration or synchronization object scope. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>all</b>: Migrate or synchronize all objects.</li> <li>• <b>database</b>: database-level migration or synchronization.</li> <li>• <b>table</b>: table-level migration or synchronization.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>all</b></li> <li>• <b>database</b></li> <li>• <b>table</b></li> </ul> |
| target_root_db | No        | Object                      | <p>Destination database for database object migration or synchronization. This parameter is mandatory for database synchronization from Layer 2 to Layer 3.</p> <p>For details, see <a href="#">Table 7-547</a>.</p>                                                                                                                                                                                                                                            |
| object_info    | No        | Map<String, DatabaseObject> | <p>Object information for migration or synchronization. If <b>object_scope</b> is set to <b>all</b>, leave this parameter blank. If <b>object_scope</b> is set to <b>database</b> or <b>table</b>, this parameter is mandatory.</p> <p>For details, see <a href="#">Table 7-548</a>.</p>                                                                                                                                                                        |

**Table 7-547** Data structure description of field **target\_root\_db**

| Parameter   | Mandatory | Type   | Description                                          |
|-------------|-----------|--------|------------------------------------------------------|
| db_name     | No        | String | Database name.                                       |
| db_encoding | No        | String | Encoding format. The default value is <b>UTF-8</b> . |



**Table 7-548** Data structure description of field **object\_info**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the database in real-time synchronization. The value can be:<br><b>config</b> : This parameter is mandatory only when the database is used as an association database in advanced settings for data filtering. In this case, the database and its schemas and tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>schemas</b> and <b>tables</b> .<br><b>NOTE</b><br>To synchronize the database-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.<br>Enumerated values:<br>• <b>config</b> |
| name      | No        | String | Name of the database in the destination database (database name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Parameter          | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all                | No        | Boolean                  | <p>Whether to migrate or synchronize the entire database.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If data filtering, column filtering, and column mapping are required for schemas, tables, and columns in the database, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>• If additional columns are required for tables in the database, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>• If the table columns in the database are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| schemas            | No        | Map<String,SchemaObject> | <p>Schema to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-549</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| tables             | No        | Map<String,TableObject>  | <p>Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b>.</p> <p>For details, see <a href="#">Table 7-550</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| total_table_number | No        | Integer                  | <p>Number of tables in the database. If the number of tables exceeds the threshold, this parameter is not displayed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| is_synchronized    | No        | Boolean                  | <p>Whether data has been synchronized.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Table 7-549** Data structure description of field **schemas**

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String  | Type of the schema in real-time synchronization. The value can be:<br><b>config</b> : This parameter is mandatory only when the schema is used as an association schema in advanced settings for data filtering. In this case, the schema and its tables will not be synchronized to the destination database. The <b>name</b> and <b>all</b> parameters do not take effect. Enter the associated objects in <b>tables</b> .<br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object.                                                                                                                                                                                                                                                                                   |
| name      | No        | String  | Name of the schema in the destination database (schema name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| all       | No        | Boolean | Whether to migrate or synchronize the entire schema.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If data filtering, column filtering, and column mapping are required for tables and columns in the schema, set this parameter to <b>false</b>. Otherwise, set this parameter to <b>true</b>.</li> <li>If additional columns are required for tables in the schema, set this parameter to <b>true</b> and enter additional column information in <b>columns</b> of table-level objects.</li> <li>If the table columns in the schema are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |

| Parameter | Mandatory | Type                                      | Description                                                                                                                                                  |
|-----------|-----------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tables    | No        | Map<String, <a href="#">TableObject</a> > | Table to be migrated or synchronized. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-550</a> . |

**Table 7-550** Data structure description of field **tables**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type | No        | String | Type of the table in real-time synchronization. The value can be:<br><br><b>config:</b> This parameter is mandatory only when the table is used as an association table in advanced settings for data filtering. In this case, the table and its columns will not be synchronized to the destination database. The <b>name</b> , <b>all</b> , <b>filtered</b> , and <b>filter_conditions</b> parameters do not take effect. Enter the associated objects in <b>columns</b> and the configuration criteria in advanced settings for data filtering in <b>config_conditions</b> .<br><br><b>NOTE</b><br>To synchronize the schema-level object, set <b>sync_type</b> to <b>config</b> for the lower-level object. |
| type      | No        | String | Object type. The value can be:<br><ul style="list-style-type: none"> <li>● <b>table:</b> indicates a table.</li> <li>● <b>view:</b> indicates a view.</li> <li>● <b>procedure:</b> indicates a stored procedure.</li> </ul> Enumerated values:<br><ul style="list-style-type: none"> <li>● <b>table</b></li> <li>● <b>view</b></li> <li>● <b>procedure</b></li> </ul>                                                                                                                                                                                                                                                                                                                                           |
| name      | No        | String | Name of the table in the destination database (table name mapping).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all               | No        | Boolean          | Whether to migrate or synchronize the entire table.<br><b>NOTE</b> <ul style="list-style-type: none"> <li>If column filtering and column mapping are not required for the table, set this parameter to <b>true</b>. Otherwise, set this parameter to <b>false</b>.</li> <li>If additional columns are required for the table, set this parameter to <b>true</b> and enter additional column information in <b>columns</b>.</li> <li>If the table columns are used as association columns in advanced settings for data filtering, set this parameter to <b>true</b>, enter the association column information in <b>columns</b>, and enter the configuration criteria in advanced settings for data filtering in <b>config_conditions</b>.</li> </ul> |
| db_alias_name     | No        | String           | Mapping of database names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| schema_alias_name | No        | String           | Mapping of schema names at the table level in the one-to-many scenario.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| filtered          | No        | Boolean          | Whether to filter data in the table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| filter_conditions | No        | Array of strings | Filtering criteria for the table data. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter         | Mandatory | Type                     | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_conditions | No        | Array of strings         | Configuration criteria in advanced settings for data filtering of the table. This parameter is mandatory when the table is used as an association table for query. The processing rule value is a SQL statement. The value contains a maximum of 512 characters.<br>Minimum length: <b>0</b><br>Maximum length: <b>512</b>                                  |
| is_synchronized   | No        | Boolean                  | Whether synchronization has been performed.                                                                                                                                                                                                                                                                                                                 |
| columns           | No        | Map<String,ColumnObject> | Columns to be synchronized, mapped, filtered, or added. This parameter is mandatory when column filtering, column mapping, and additional columns are required. This parameter takes effect only in real-time synchronization tasks. This parameter is mandatory when <b>all</b> is set to <b>false</b> .<br>For details, see <a href="#">Table 7-551</a> . |

**Table 7-551** Data structure description of field columns

| Parameter                      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sync_type                      | No        | String | Type of the column in real-time synchronization. The value can be:<br><br><b>config:</b> This parameter is mandatory only when the column is used as an association column in advanced settings for data filtering. If the column is a primary key column or index column required for optimizing the query, <b>primary_key_for_data_filtering</b> or <b>index_for_data_filtering</b> is mandatory.<br><br><b>NOTE</b><br>Whether to synchronize the column to the destination database depends on the <b>filtered</b> parameter, which is different from the database, schema, and table-level synchronization. |
| primary_key_for_data_filtering | No        | String | Whether the column is a primary key column in advanced settings for data filtering. If the column is a primary key column, set this parameter to the column name. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                         |
| index_for_data_filtering       | No        | String | Whether the column is an index column required for optimizing the query. The index is added to the cached data. It does not affect the source table. If the column is an index column in advanced settings for data filtering, this parameter is mandatory. Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                               |

| Parameter                        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                             | No        | String | Name of the column in the destination database (column name mapping). If the column is an additional column, the value must be the same as the column name in the table-level object.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| type                             | No        | String | Data type of the column.<br>Column filtering: Enter the data type of the source column. Additional column adding: Enter the data type of the new column. The values and constraints vary depending on the operation type. The value can be: <ul style="list-style-type: none"> <li>• <b>Default:</b> The value can be <b>int, long, varchar(256), datetime, or timestamp.</b></li> <li>• <b>create_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>update_time:</b> The value can be <b>long, datetime, or timestamp.</b></li> <li>• <b>Expression:</b> The value can be <b>varchar (256)</b>, and the column value must be <b>concat(_current_database, '@', _current_table).</b></li> <li>• <b>serverName@database@table:</b> The value can be <b>varchar(256).</b></li> </ul> |
| primary_key_for_column_filtering | No        | String | Whether the column is a primary key column in column mapping. If the column is a primary key column, set this parameter to <b>PRI</b> . Otherwise, leave this parameter blank.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filtered       | No        | Boolean | <p>Whether the column is filtered out. This parameter cannot be used together with the <b>additional</b> parameter. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the column will be synchronized.</li> <li>• <b>false</b>: indicates that the column is filtered out and will not be synchronized.</li> </ul>                                                                                                                                                                                                                                   |
| additional     | No        | Boolean | <p>Whether the column is an additional column. If the column is an additional column, the value of <b>name</b> must be the same as the column name in the table-level object and cannot be used together with the <b>filtered</b> parameter.</p>                                                                                                                                                                                                                                                                                                                                              |
| operation_type | No        | String  | <p>Operation type. The new column is filled with a specific operation type. The value can be:</p> <ul style="list-style-type: none"> <li>• <b>Default:</b><br/>"operation_type":"ADDITIONALCOLUMN,default_value"</li> <li>• <b>create_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,create_time"</li> <li>• <b>update_time:</b><br/>"operation_type":"ADDITIONALCOLUMN,update_time"</li> <li>• <b>Expression:</b><br/>"operation_type":"ADDITIONALCOLUMN,expression"</li> <li>• <b>serverName@database@table:</b><br/>"operation_type":"ADDITIONALCOLUMN,server_database_table"</li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Value of the additional column. Constraints: <ul style="list-style-type: none"> <li>This parameter is mandatory only when <b>operation type</b> is set to <b>Default</b> or <b>serverName@database@table</b>.</li> <li>When <b>operation type</b> is set to <b>Expression</b>, this parameter has a fixed value of <b>concat(_current_database, '@', _current_table)</b>.</li> </ul> |

## Response Parameters

**Status code: 202**

**Table 7-552** Response body parameters

| Parameter | Type   | Description                                                                                                                                         |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Query result ID.                                                                                                                                    |
| job_id    | String | Task ID.                                                                                                                                            |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li><b>pending</b></li> <li><b>failed</b></li> <li><b>success</b></li> </ul> |

**Status code: 400**

**Table 7-553** Response body parameters

| Parameter  | Type   | Description                                                           |
|------------|--------|-----------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b> |

| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| error_msg | String | Error message.<br>Minimum length: 1<br>Maximum length: 512 |

## Example Request

### Verifying data filtering rules

POST https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/job/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/data-filtering/check

```
{
 "data_process_info": [{
 "filter_conditions": [{
 "filtering_type": "contentConditionalFilter",
 "value": "id>1"
 }],
 "db_object": {
 "object_info": {
 "dyh4": {
 "name": "dyh4",
 "all": false,
 "tables": {
 "test1_table1": {
 "name": "test1_table1",
 "type": "table",
 "all": true
 },
 "test1_table10": {
 "name": "test1_table10",
 "type": "table",
 "all": true
 },
 "test1_table11": {
 "name": "test1_table11",
 "type": "table",
 "all": true
 }
 }
 }
 }
 },
 "object_scope": "table"
 }]
}
```

## Example Response

**Status code: 202**

Accept

```
{
 "id": "0eacda0b-9422-4535-8b62-537d1833638b",
 "job_id": "177738d1-4eee-4fcb-a4e1-09aea79jb20i",
 "status": "pending"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | Accept      |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.9.5 Obtaining the Data Filtering Verification Result

### Function

This API is used to obtain the data filtering verification result.

### URI

GET /v5/{project\_id}/job/{job\_id}/data-filtering/result

**Table 7-554** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-555** Query parameters

| Parameter | Mandatory | Type   | Description                                   |
|-----------|-----------|--------|-----------------------------------------------|
| query_id  | Yes       | String | ID of the data filtering verification request |

## Request Parameters

**Table 7-556** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .         |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                          |

## Response Parameters

Status code: 200

**Table 7-557** Response body parameters

| Parameter                  | Type             | Description                                                                                                  |
|----------------------------|------------------|--------------------------------------------------------------------------------------------------------------|
| success_count              | Long             | Number of data filtering rules that are successfully verified.                                               |
| failed_count               | Long             | Number of data filtering rules that fail to be verified.                                                     |
| db_object_filtering_result | Array of objects | Verification result of the database table filtering rules.<br>For details, see <a href="#">Table 7-558</a> . |

**Table 7-558** Data structure description of field **db\_object\_filtering\_result**

| Parameter   | Type    | Description                                                                                                     |
|-------------|---------|-----------------------------------------------------------------------------------------------------------------|
| db_name     | String  | Database name.                                                                                                  |
| schema_name | String  | Schema name.                                                                                                    |
| table_name  | String  | Table name.                                                                                                     |
| is_success  | Boolean | Data filtering verification result.                                                                             |
| message     | String  | If <b>is_success</b> is set to <b>false</b> , a message is returned, indicating the verification failure cause. |

**Status code: 400**

**Table 7-559** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Obtaining the data filtering verification result

```
GET https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/job/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/data-filtering/result?query_id=0eacda0b-9422-4535-8b62-537d1833638b
```

## Example Response

**Status code: 200**

OK

```
{
 "db_object_filtering_result": [{
 "db_name": "testDb",
 "schema_name": "testSchema",
 "table_name": "testTable",
 "is_success": true,
 "message": null
 }, {
 "db_name": "testDb",
 "schema_name": "testSchema",
 "table_name": "testTable",
 "is_success": false,
```

```

 "message" : "DATA_TRANSFORMATION_ALREADY_EXISTED"
 }],
 "success_count" : 1,
 "failed_count" : 1
}

```

**Status code: 400**

Bad Request

```

{
 "error_code" : "DRS.10000010",
 "error_msg" : "Job does not exist, please check job ID."
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.9.6 Collecting Column Information About a Specified Database Table

### Function

This API is used to collect the column information about a specified database table.

### URI

POST /v5/{project\_id}/job/{job\_id}/columns/collect

**Table 7-560** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-561** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .         |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                          |

**Table 7-562** Request body parameters

| Parameter        | Mandatory | Type             | Description                                                                                     |
|------------------|-----------|------------------|-------------------------------------------------------------------------------------------------|
| is_force_refresh | No        | Boolean          | Whether to obtain the latest column information from the Node.                                  |
| db_object_info   | Yes       | Array of objects | Information about a specified database table.<br>For details, see <a href="#">Table 7-563</a> . |

**Table 7-563** Data structure description of field **db\_object\_infos**

| Parameter   | Mandatory | Type   | Description    |
|-------------|-----------|--------|----------------|
| db_name     | Yes       | String | Database name. |
| schema_name | No        | String | Schema name.   |



| Parameter  | Mandatory | Type   | Description |
|------------|-----------|--------|-------------|
| table_name | Yes       | String | Table name. |

## Response Parameters

**Status code: 202**

**Table 7-564** Response body parameters

| Parameter | Type   | Description                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Query result ID.                                                                                                                                          |
| job_id    | String | Task ID.                                                                                                                                                  |
| status    | String | Query status.<br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>failed</b></li> <li>• <b>success</b></li> </ul> |

**Status code: 400**

**Table 7-565** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Collecting the column information about a specified database table

```
POST https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/job/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/columns/collect
```

```
{
 "is_force_refresh" : false,
 "db_object_infos" : [{
 "db_name" : "testDb",
 "schema_name" : "testSchema",
 "table_name" : "testTable"
 }]
}
```

```
 }]
}
```

## Example Response

**Status code: 202**

Accept

```
{
 "id" : "0eacda0b-9422-4535-8b62-537d1833638b",
 "job_id" : "177738d1-4eee-4fcb-a4e1-09aea79jb20i",
 "status" : "pending"
}
```

**Status code: 400**

Bad Request

```
{
 "error_code" : "DRS.10030016",
 "error_msg" : "Query column info failed"
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 202         | Accept      |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

## 7.9.7 Obtaining Column Information About a Specified Database Table

### Function

This API is used to obtain the column information about a specified database table.

### URI

GET /v5/{project\_id}/job/{job\_id}/columns

**Table 7-566** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-567** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                  |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| query_id  | Yes       | String  | ID of the column information collection request for a specified database table, which is returned by the API for submitting the column information collection of a specified database table. |
| offset    | No        | Integer | Offset. The records after this offset will be queried.                                                                                                                                       |
| limit     | No        | Integer | Maximum number of records that can be returned.                                                                                                                                              |

## Request Parameters

**Table 7-568** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                          |

## Response Parameters

Status code: 200

**Table 7-569** Response body parameters

| Parameter   | Type             | Description                                                                                            |
|-------------|------------------|--------------------------------------------------------------------------------------------------------|
| results     | Array of objects | Column information about a specified database table.<br>For details, see <a href="#">Table 7-570</a> . |
| total_count | Integer          | Total number of records in the list, which is irrelevant to pagination.                                |

**Table 7-570** Data structure description of field **results**

| Parameter    | Type             | Description                                                                                                             |
|--------------|------------------|-------------------------------------------------------------------------------------------------------------------------|
| db_name      | String           | Database name.                                                                                                          |
| schema_name  | String           | Schema name.                                                                                                            |
| table_name   | String           | Table name.                                                                                                             |
| column_infos | Array of objects | Column information.<br>For details, see <a href="#">Table 7-571</a> .                                                   |
| total_count  | Integer          | Total number of database column records, which is irrelevant to pagination and is used only as a return body parameter. |

**Table 7-571** Data structure description of field **column\_infos**

| Parameter                   | Type    | Description                               |
|-----------------------------|---------|-------------------------------------------|
| column_name                 | String  | Column name.                              |
| column_type                 | String  | Column type.                              |
| primary_key_or_unique_index | String  | Primary key or unique index.              |
| column_mapped_name          | String  | Mapped column name.                       |
| is_filtered                 | Boolean | Whether the column is filtered.           |
| is_partition_key            | Boolean | Whether the column is a partition column. |

**Status code: 400**

**Table 7-572** Response body parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| error_code | String | Error code.<br>Minimum length: <b>12</b><br>Maximum length: <b>12</b>    |
| error_msg  | String | Error message.<br>Minimum length: <b>1</b><br>Maximum length: <b>512</b> |

## Example Request

Obtaining the column information about a specified database table

```
GET https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/job/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/columns?query_id=0eacda0b-9422-4535-8b62-537d1833638b
```

## Example Response

**Status code: 200**

OK

```
{
 "results": [{
 "db_name": "testdb02",
 "table_name": "test5",
 "column_infos": [{
 "column_name": "id",
 "column_type": "NUMBER",
```

```

"primary_key_or_unique_index" : "PRI",
"column_mapped_name" : null,
"is_filtered" : false,
"is_partition_key" : false
}, {
"column_name" : "C1",
"column_type" : "VARCHAR2",
"primary_key_or_unique_index" : "",
"column_mapped_name" : null,
"is_filtered" : false,
"is_partition_key" : false
}, {
"column_name" : "C2",
"column_type" : "VARCHAR2",
"primary_key_or_unique_index" : "",
"column_mapped_name" : null,
"is_filtered" : false,
"is_partition_key" : false
}
}],
"total_count" : 3
}],
"total_count" : 1
}

```

**Status code: 400**

Bad Request

```

{
"error_code" : "DRS.10000010",
"error_msg" : "Job does not exist, please check job ID."
}

```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |
| 400         | Bad Request |

## Error Code

For details, see [Error Code](#).

# 7.10 Parameter Management

## 7.10.1 Updating Task Parameters

### Function

This API is used to update task parameters.

### Constraints

- This API is available only for real-time synchronization tasks from MySQL to MySQL, MySQL to PostgreSQL, MySQL to GaussDB Distributed, MySQL to

GaussDB Primary/Standby, MySQL to GaussDB(DWS), MySQL to GaussDB(for MySQL), MySQL to Kafka, MySQL to CSS/ES, and MySQL to Oracle.

- This API is used for real-time synchronization tasks in the **Configuration, Full, Incremental, Full failed, Incremental failed, or Paused** state.

## URI

PUT /v5/{project\_id}/jobs/{job\_id}/modify-configuration

**Table 7-573** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

## Request Parameters

**Table 7-574** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                             |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                  |

**Table 7-575** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                                             |
|-----------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------|
| values    | Yes       | Array of objects | Parameter values initialized based on the default parameter template.<br>For details, see <a href="#">Table 7-576</a> . |

**Table 7-576** Data structure description of field values

| Parameter       | Mandatory | Type   | Description                                                                                                                                                |
|-----------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| parameter_name  | Yes       | String | Parameter name, for example, <b>applier_thread_num</b> and <b>read_task_num</b> . If this parameter is not specified, no parameter value is to be changed. |
| parameter_value | Yes       | String | Value of a parameter, for example, <b>20</b> or <b>false</b> . If <b>parameter_name</b> is not empty, <b>parameter_value</b> cannot be empty, either.      |

## Response Parameters

None

## Example Request

Updating the number of threads for writing data to the destination database during the full migration phase and number of threads for reading data from the source database during the full migration phase

`https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/modify-configuration`

```
{
 "values": [{
 "parameter_name": "applier_thread_num",
 "parameter_value": "20"
 }, {
 "parameter_name": "read_task_num",
 "parameter_value": "3"
 }]
}
```

## Example Response

**Status code: 204**



No Content

## Status Code

| Status Code | Description |
|-------------|-------------|
| 204         | No Content  |

## Error Code

For details, see [Error Code](#).

## 7.10.2 Querying Task Parameter Configuration List

### Function

This API is used to query task parameter configuration list.

### Constraints

- This API is available only for real-time synchronization tasks from MySQL to MySQL, MySQL to PostgreSQL, MySQL to GaussDB Distributed, MySQL to GaussDB Primary/Standby, MySQL to GaussDB(DWS), MySQL to GaussDB(for MySQL), MySQL to Kafka, MySQL to CSS/ES, and MySQL to Oracle.
- This API is used for real-time synchronization tasks in the **Configuration**, **Full**, **Incremental**, **Full failed**, **Incremental failed**, or **Paused** state.

### URI

GET /v5/{project\_id}/jobs/{job\_id}/configurations

**Table 7-577** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

**Table 7-578** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                         |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | String | Offset, which is the position where the query starts. The value must be greater than or equal to 0. The default value is <b>0</b> . |
| limit     | No        | String | Number of items displayed per page. The default value is <b>10</b> . The value ranges from 1 to 1000.                               |
| name      | No        | String | Query by parameter name.                                                                                                            |

## Request Parameters

**Table 7-579** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                              |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> .                                    |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"><li>• <b>en-us</b></li><li>• <b>zh-cn</b></li></ul>                                                                                        |

## Response Parameters

Status code: 200

**Table 7-580** Response body parameters

| Parameter             | Type             | Description                                                            |
|-----------------------|------------------|------------------------------------------------------------------------|
| count                 | Integer          | Total number.                                                          |
| parameter_config_list | Array of objects | Task parameter list.<br>For details, see <a href="#">Table 7-581</a> . |

**Table 7-581** Data structure description of field `parameter_config_list`

| Parameter       | Type    | Description                                                                                                                                                                                    |
|-----------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name            | String  | Parameter name.                                                                                                                                                                                |
| value           | String  | Parameter value.                                                                                                                                                                               |
| default_value   | String  | Default parameter value.                                                                                                                                                                       |
| value_range     | String  | Parameter value range. If the parameter type is <b>Integer</b> , the value is <b>0</b> or <b>1</b> . If the parameter type is <b>Boolean</b> , the value is <b>true</b> or <b>false</b> .      |
| is_need_restart | Boolean | Whether a restart is required. The default value is <b>true</b> . The value <b>false</b> indicates that a restart is not required. The value <b>true</b> indicates that a restart is required. |
| description     | String  | Parameter description. Only the parameter description in English is supported.                                                                                                                 |
| created_at      | String  | Creation time, for example, <b>2023-01-20T07:18:26Z</b> .                                                                                                                                      |
| updated_at      | String  | Update time, for example, <b>2023-03-01T09:42:02Z</b> .                                                                                                                                        |

## Example Request

Querying task parameter configuration list

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/configurations?offset={offset}&limit={limit}
```

## Example Response

Status code: 200

Task parameter configuration list

```
{
 "count" : 0,
 "parameter_config_list" : [{
 "name" : "applier_thread_num",
 "value" : "20",
 "default_value" : "10",
 "value_range" : "1-512",
 "is_need_restart" : true,
 "description" : "The number of threads that write data to the target database during the full stage",
 "created_at" : "2020-09-01T18:50:20Z",
 "updated_at" : "2020-09-01T18:50:20Z"
 }, {
 "name" : "read_task_num",
 "value" : "20",
 "default_value" : "10",
 "value_range" : "1-512",
 "is_need_restart" : true,
 "description" : "The number of threads reading data from the source database during the full volume stage",
 "created_at" : "2020-09-01T18:50:20Z",
 "updated_at" : "2020-09-01T18:50:20Z"
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.10.3 Querying Task Parameter Change History

### Function

This API is used to query the parameter change history of a task.

### Constraints

- This API is available only for real-time synchronization tasks from MySQL to MySQL, MySQL to PostgreSQL, MySQL to GaussDB Distributed, MySQL to GaussDB Primary/Standby, MySQL to GaussDB(DWS), MySQL to GaussDB(for MySQL), MySQL to Kafka, MySQL to CSS/ES, and MySQL to Oracle.
- This API is used for real-time synchronization tasks in the **Configuration**, **Full**, **Incremental**, **Full failed**, **Incremental failed**, or **Paused** state.

### URI

GET /v5/{project\_id}/jobs/{job\_id}/configuration-histories

**Table 7-582** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |
| job_id     | Yes       | String | Task ID.                                                                                         |

Query parameters

| Parameter  | Mandatory | Type    | Description                                                                                                                            |
|------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------|
| offset     | No        | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0.<br>The default value is <b>0</b> . |
| limit      | No        | Integer | Number of items displayed per page. The default value is <b>10</b> . The value ranges from 1 to 1000.                                  |
| begin_time | No        | String  | Start time in UTC format, for example, <b>2020-09-01T18:50:20Z</b> .                                                                   |
| end_time   | No        | String  | End time in UTC format, for example, <b>2020-09-01T19:50:20Z</b> .                                                                     |
| name       | No        | String  | Parameter name.                                                                                                                        |

## Request Parameters

**Table 7-583** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                              |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                                                     |

## Response Parameters

Status code: 200

**Table 7-584** Response body parameters

| Parameter                     | Type             | Description                                                                            |
|-------------------------------|------------------|----------------------------------------------------------------------------------------|
| count                         | Integer          | Total number of historical records.                                                    |
| parameter_history_config_list | Array of objects | Change history list of task parameters. For details, see <a href="#">Table 7-585</a> . |

**Table 7-585** Data structure description of field **parameter\_history\_config\_list**

| Parameter         | Type    | Description                                                                                                                              |
|-------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------|
| name              | String  | Parameter name.                                                                                                                          |
| old_value         | String  | Old parameter value.                                                                                                                     |
| new_value         | String  | New parameter value.                                                                                                                     |
| is_update_success | Boolean | Update result. <b>true</b> : The operation is successful. <b>false</b> : The operation failed.                                           |
| is_applied        | Boolean | Whether the new value has been applied. <b>true</b> : The new value has been applied. <b>false</b> : The new value has not been applied. |
| update_time       | String  | Time when a parameter is changed.                                                                                                        |

| Parameter  | Type   | Description                         |
|------------|--------|-------------------------------------|
| apply_time | String | Time when the new value is applied. |

## Example Request

Querying the parameter change history of a task.

```
https://{endpoint}/v5/054ba152d480d55b2f5dc0069e7ddef0/jobs/c7debc9c-8e09-4a5d-8dd6-cc44f78jb20r/
configuration-histories?offset={offset}&limit={limit}&begin_time={begin_time}&end_time={end_time}
```

## Example Response

**Status code: 200**

Task parameter change history list

```
{
 "count" : 0,
 "parameter_history_config_list" : [{
 "name" : "strapplier_thread_numing",
 "old_value" : "10",
 "new_value" : "20",
 "is_update_success" : true,
 "is_applied" : "true",
 "update_time" : "2020-09-01T18:50:20Z",
 "apply_time" : "2020-09-01T18:50:20Z"
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

# 7.11 Tag Management

## 7.11.1 Batch Adding or Deleting Tags

### Function

This API is used to add or delete tags in batches.

### URI

POST /v5/{project\_id}/jobs/{resource\_type}/{job\_id}/tags/action

**Table 7-586** Path parameters

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                               |
|---------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id    | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                          |
| resource_type | Yes       | String | Resource type. <ul style="list-style-type: none"><li>• <b>migration</b>: real-time migration.</li><li>• <b>sync</b>: real-time synchronization.</li><li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li><li>• <b>subscription</b>: data subscription.</li><li>• <b>backupMigration</b>: backup migration.</li><li>• <b>replay</b>: simulation replay.</li></ul> |
| job_id        | Yes       | String | Task ID.                                                                                                                                                                                                                                                                                                                                                                  |

## Request Parameters

**Table 7-587** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                              |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type.<br>The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                                |



| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 7-588** Request body parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String           | Specifies the operation ID. The value is case-sensitive and can be any of the following: <ul style="list-style-type: none"> <li>• <b>create</b>: creation operation.</li> <li>• <b>delete</b>: deletion operation.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>create</b></li> <li>• <b>delete</b></li> </ul> |
| tags      | Yes       | Array of objects | Tag list. A maximum of 20 tags can be added.<br>For details, see <a href="#">Table 7-589</a> .                                                                                                                                                                                                                                              |

**Table 7-589** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | Tag key. <ul style="list-style-type: none"> <li>• It must consist of 1 to 128 Unicode characters,</li> <li>• including letters, digits, spaces, and special characters <code>_.:=+@</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</li> </ul> Minimum length: <b>1</b><br>Maximum length: <b>128</b> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Tag value. This parameter is optional for deleting a tag. <ul style="list-style-type: none"><li>Each tag value can contain a maximum of 255 Unicode characters.</li><li>The value can contain letters of any language, digits, spaces, and special characters <code>._:=+~@</code></li></ul> Maximum length: <b>255</b> |

## Response Parameters

None

## Example Request

- Adding tags in batches  
`https://{endpoint}/v5/246765b9f59445c3919fce121ea801f4/jobs/sync/ada96925-ceb7-4fa7-8b6f-a344f84jb201/tags/action`

```
{
 "action": "create",
 "tags": [{
 "key": "aaa",
 "value": "bbb"
 }, {
 "key": "test",
 "value": "test111"
 }]
}
```
- Deleting tags in batches  
`https://{endpoint}/v5/246765b9f59445c3919fce121ea801f4/jobs/sync/ada96925-ceb7-4fa7-8b6f-a344f84jb201/tags/action`

```
{
 "action": "delete",
 "tags": [{
 "key": "aaa",
 "value": "bbb"
 }, {
 "key": "test",
 "value": "test111"
 }]
}
```

## Example Response

Status code: **204**

No Content

## Status Code

| Status Code | Description |
|-------------|-------------|
| 204         | No Content  |

## Error Code

For details, see [Error Code](#).

## 7.11.2 Querying Tags of a Specified Project

### Function

This API is used to query all tags of different tasks in a specified project.

### URI

GET /v5/{project\_id}/jobs/{resource\_type}/tags

**Table 7-590** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resource_type | Yes       | String | <p>Resource type.</p> <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> <li>• <b>subscription</b>: data subscription.</li> <li>• <b>backupMigration</b>: backup migration.</li> <li>• <b>replay</b>: simulation replay.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> <li>• <b>subscription</b></li> <li>• <b>backupMigration</b></li> <li>• <b>replay</b></li> </ul> |

## Request Parameters

**Table 7-591** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | <p>MIME type of the request body. Use the default value <b>application/json</b>. For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b>.</p> |
| X-Auth-Token | Yes       | String | <p>User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.</p>                           |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

## Response Parameters

Status code: 200

Table 7-592 Response body parameters

| Parameter | Type             | Description                                                 |
|-----------|------------------|-------------------------------------------------------------|
| tags      | Array of objects | Tag list.<br>For details, see <a href="#">Table 7-593</a> . |

Table 7-593 Data structure description of field tags

| Parameter | Type             | Description |
|-----------|------------------|-------------|
| key       | String           | Tag key.    |
| values    | Array of strings | Tag value.  |

## Example Request

Querying data subscription task tags

```
https://{endpoint}/v5/246765b9f59445c3919fce121ea801f4/jobs/subscription/tags
```

## Example Response

Status code: 200

OK

```
{
 "tags": [{
 "key": "aaa",
 "values": ["bbb"]
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.11.3 Querying Tags of a Task

### Function

This API is used to query tags of a specified task.

### URI

GET /v5/{project\_id}/jobs/{resource\_type}/{job\_id}/tags

**Table 7-594** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resource_type | Yes       | String | Resource type. <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> <li>• <b>subscription</b>: data subscription.</li> <li>• <b>backupMigration</b>: backup migration.</li> <li>• <b>replay</b>: simulation replay.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> <li>• <b>subscription</b></li> <li>• <b>backupMigration</b></li> <li>• <b>replay</b></li> </ul> |
| job_id        | Yes       | String | Task ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Request Parameters

Table 7-595 Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                             |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

## Response Parameters

Status code: 200

Table 7-596 Response body parameters

| Parameter | Type             | Description                                                 |
|-----------|------------------|-------------------------------------------------------------|
| tags      | Array of objects | Tag list.<br>For details, see <a href="#">Table 7-597</a> . |

Table 7-597 Data structure description of field **tags**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | Tag key. <ul style="list-style-type: none"> <li>• It must consist of 1 to 128 Unicode characters,</li> <li>• including letters, digits, spaces, and special characters <code>_:=+@</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</li> </ul> Minimum length: <b>1</b><br>Maximum length: <b>128</b> |
| value     | String | Tag value. This parameter is optional for deleting a tag. <ul style="list-style-type: none"> <li>• Each tag value can contain a maximum of 255 Unicode characters.</li> <li>• The value can contain letters of any language, digits, spaces, and special characters <code>_:=+@</code></li> </ul> Maximum length: <b>255</b>                 |

## Example Request

Querying real-time synchronization task tags



```
https://{endpoint}/v5/246765b9f59445c3919fce121ea801f4/jobs/sync/e6842695-3ade-4937-827b-ff92776jb20a/tags
```

## Example Response

**Status code: 200**

OK

```
{
 "tags": [
 {
 "key": "aaa",
 "value": "bbbb"
 }
]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.11.4 Adding Resource Tags in Batches

### Function

This API is used to add resource tags in batches.

### URI

POST /v5/{project\_id}/{resource\_type}/{resource\_id}/tags/create

**Table 7-598** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resource_type | Yes       | String | Resource type. <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> <li>• <b>subscription</b>: data subscription.</li> <li>• <b>backupMigration</b>: backup migration.</li> <li>• <b>replay</b>: traffic replay.</li> </ul> Enumerated values: <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> <li>• <b>subscription</b></li> <li>• <b>backupMigration</b></li> <li>• <b>replay</b></li> </ul> |
| resource_id   | Yes       | String | Resource ID, that is, the DRS task ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Request Parameters

Table 7-599 Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                               |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value. |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                      |

**Table 7-600** Request body parameters

| Parameter | Mandatory | Type             | Description                                                 |
|-----------|-----------|------------------|-------------------------------------------------------------|
| tags      | Yes       | Array of objects | Tag list.<br>For details, see <a href="#">Table 7-601</a> . |

**Table 7-601** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | Tag key. <ul style="list-style-type: none"> <li>• It must consist of 1 to 128 Unicode characters,</li> <li>• including letters, digits, spaces, and special characters <code>._:=-@</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</li> </ul> Minimum length: <b>1</b><br>Maximum length: <b>128</b> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | No        | String | Tag value. This parameter is optional for deleting a tag. <ul style="list-style-type: none"><li>Each tag value can contain a maximum of 255 Unicode characters.</li><li>The value can contain letters of any language, digits, spaces, and special characters <code>._:=-+@</code></li></ul> Maximum length: <b>255</b> |

## Response Parameters

None

## Example Request

Adding resource tags in batches for a synchronization task

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/sync/2f4af282-d13e-4b10-
a1eb-609b47fjb201/tags/create

{
 "tags": [{
 "key": "key1",
 "value": "value1"
 }, {
 "key": "key2",
 "value": "value2"
 }]
}
```

## Example Response

None

## Status Code

| Status Code | Description |
|-------------|-------------|
| 204         | No Content  |

## Error Code

For details, see [Error Code](#).

## 7.11.5 Deleting Resource Tags in Batches

### Function

This API is used to batch delete tags from a specified instance.

### URI

POST /v5/{project\_id}/{resource\_type}/{resource\_id}/tags/delete

**Table 7-602** Path parameters

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id    | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| resource_type | Yes       | String | Resource type. <ul style="list-style-type: none"><li>• <b>migration</b>: real-time migration.</li><li>• <b>sync</b>: real-time synchronization.</li><li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li><li>• <b>subscription</b>: data subscription.</li><li>• <b>backupMigration</b>: backup migration.</li><li>• <b>replay</b>: traffic replay.</li></ul> Enumerated values: <ul style="list-style-type: none"><li>• <b>migration</b></li><li>• <b>sync</b></li><li>• <b>cloudDataGuard</b></li><li>• <b>subscription</b></li><li>• <b>backupMigration</b></li><li>• <b>replay</b></li></ul> |
| resource_id   | Yes       | String | Resource ID, that is, the DRS task ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Request Parameters

**Table 7-603** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                             |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                  |

**Table 7-604** Request body parameters

| Parameter | Mandatory | Type             | Description                                                 |
|-----------|-----------|------------------|-------------------------------------------------------------|
| tags      | Yes       | Array of objects | Tag list.<br>For details, see <a href="#">Table 7-605</a> . |

**Table 7-605** Data structure description of field **tags**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | <p>Tag key.</p> <ul style="list-style-type: none"> <li>It must consist of 1 to 128 Unicode characters,</li> <li>including letters, digits, spaces, and special characters <code>_:=+@</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</li> </ul> <p>Minimum length: <b>1</b><br/>Maximum length: <b>128</b></p> |
| value     | No        | String | <p>Tag value. This parameter is optional for deleting a tag.</p> <ul style="list-style-type: none"> <li>Each tag value can contain a maximum of 255 Unicode characters.</li> <li>The value can contain letters of any language, digits, spaces, and special characters <code>_:=+@</code>.</li> </ul> <p>Maximum length: <b>255</b></p>                 |

## Response Parameters

None

## Example Request

Deleting tags in batches from a synchronization task

```

https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/sync/2f4af282-d13e-4b10-a1eb-609b47fjb201/
tags/delete

{
 "tags": [{
 "key": "key1",
 "value": "value1"
 }, {
 "key": "key2",
 "value": "value2"
 }]
}

```

## Example Response

None

## Status Code

| Status Code | Description |
|-------------|-------------|
| 204         | No Content  |

## Error Code

For details, see [Error Code](#).

## 7.11.6 Querying the Resource Instance List

### Function

This API is used to query the resource instance list.

### URI

POST /v5/{project\_id}/{resource\_type}/resource-instances/filter

**Table 7-606** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |



| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resource_type | Yes       | String | <p>Resource type.</p> <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> <li>• <b>subscription</b>: data subscription.</li> <li>• <b>backupMigration</b>: backup migration.</li> <li>• <b>replay</b>: traffic replay.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> <li>• <b>subscription</b></li> <li>• <b>backupMigration</b></li> <li>• <b>replay</b></li> </ul> |

**Table 7-607** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                      |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Number of records to be queried, which ranges from 1 to 1000. The default value is 1000.                                                                                                                                                         |
| offset    | No        | Integer | Index position. If <b>offset</b> is set to $N$ , the resource query starts from the $N+1$ piece of data. The value is <b>0</b> by default, indicating that the query starts from the first piece of data. The value cannot be a negative number. |

## Request Parameters

**Table 7-608** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                             |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                  |

**Table 7-609** Request body parameters

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                    |
|-----------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| without_any_tag | No        | Boolean          | If this parameter is set to <b>true</b> , all resources without tags are queried. In this case, the <b>tags</b> field is ignored. If this parameter is set to <b>false</b> or not specified, it does not take effect, which means that all resources are returned or resources are filtered by <b>tags</b> or <b>matches</b> . |
| tags            | No        | Array of objects | Included tags. A maximum of 20 keys are included. Each key can have a maximum of 20 values.<br>For details, see <a href="#">Table 7-610</a> .                                                                                                                                                                                  |

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                  |
|-----------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| matches   | No        | Array of objects | Search field. The tag key is the field to be matched, for example, <b>resource_name</b> . The tag value indicates the value to be matched.<br>For details, see <a href="#">Table 7-611</a> . |

**Table 7-610** Data structure description of field **tags**

| Parameter | Mandatory | Type             | Description |
|-----------|-----------|------------------|-------------|
| key       | Yes       | String           | Tag key.    |
| values    | Yes       | Array of strings | Tag value.  |

**Table 7-611** Data structure description of field **matches**

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| key       | Yes       | String | Key.        |
| value     | Yes       | String | Value.      |

## Response Parameters

Status code: 200

**Table 7-612** Response body parameters

| Parameter   | Type             | Description                                                      |
|-------------|------------------|------------------------------------------------------------------|
| total_count | Integer          | Total number.                                                    |
| resources   | Array of objects | Resource list.<br>For details, see <a href="#">Table 7-613</a> . |

**Table 7-613** Data structure description of parameter **resources**

| Parameter   | Type   | Description  |
|-------------|--------|--------------|
| resource_id | String | Resource ID. |

| Parameter       | Type             | Description                                                                                                    |
|-----------------|------------------|----------------------------------------------------------------------------------------------------------------|
| resource_detail | String           | Resource details. The value is a resource object, used for extension. This parameter is left blank by default. |
| resource_name   | String           | Resource name.                                                                                                 |
| tags            | Array of objects | Tag list.<br>For details, see <a href="#">Table 7-614</a> .                                                    |

**Table 7-614** Data structure description of field **tags**

| Parameter | Type   | Description |
|-----------|--------|-------------|
| key       | String | Tag key.    |
| value     | String | Tag value.  |

## Example Request

Querying the instance list of a synchronization task

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/sync/resource-instances/filter?
limit=1000&offset=0

{
 "tags": [{
 "key": "key1",
 "values": ["value1", "value2"]
 }, {
 "key": "key2",
 "values": ["value1", "value2"]
 }],
 "matches": [{
 "key": "resource_name",
 "value": "resource1"
 }],
 "without_any_tag": false
}
```

## Example Response

**Status code: 200**

OK

```
{
 "resources": [{
 "tags": [{
 "key": "aaaaa",
 "value": "bbbbbb"
 }, {
 "key": "zzzz",
 "value": ""
 }],
 "resource_id": "2f4af282-d13e-4b10-a1eb-609b47fjb201",
 }],
}
```

```
"resource_detail": "",
"resource_name": "DRS-5634"
}],
"total_count": 1
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.11.7 Querying the Number of Resource Instances

### Function

This API is used to query the number of resource instances.

### URI

POST /v5/{project\_id}/{resource\_type}/resource-instances/count

**Table 7-615** Path parameters

| Parameter  | Mandatory | Type   | Description                                                                                      |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> . |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resource_type | Yes       | String | <p>Resource type.</p> <ul style="list-style-type: none"> <li>• <b>migration</b>: real-time migration.</li> <li>• <b>sync</b>: real-time synchronization.</li> <li>• <b>cloudDataGuard</b>: real-time disaster recovery.</li> <li>• <b>subscription</b>: data subscription.</li> <li>• <b>backupMigration</b>: backup migration.</li> <li>• <b>replay</b>: traffic replay.</li> </ul> <p>Enumerated values:</p> <ul style="list-style-type: none"> <li>• <b>migration</b></li> <li>• <b>sync</b></li> <li>• <b>cloudDataGuard</b></li> <li>• <b>subscription</b></li> <li>• <b>backupMigration</b></li> <li>• <b>replay</b></li> </ul> |

## Request Parameters

**Table 7-616** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | <p>MIME type of the request body. Use the default value <b>application/json</b>. For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b>.</p> |
| X-Auth-Token | Yes       | String | <p>User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.</p>                           |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X-Language | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul> |

**Table 7-617** Request body parameters

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                    |
|-----------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| without_any_tag | No        | Boolean          | If this parameter is set to <b>true</b> , all resources without tags are queried. In this case, the <b>tags</b> field is ignored. If this parameter is set to <b>false</b> or not specified, it does not take effect, which means that all resources are returned or resources are filtered by <b>tags</b> or <b>matches</b> . |
| tags            | No        | Array of objects | Included tags. A maximum of 20 keys are included. Each key can have a maximum of 20 values.<br>For details, see <a href="#">Table 7-618</a> .                                                                                                                                                                                  |
| matches         | No        | Array of objects | Search field. The tag key is the field to be matched, for example, <b>resource_name</b> . The tag value indicates the value to be matched.<br>For details, see <a href="#">Table 7-619</a> .                                                                                                                                   |

**Table 7-618** Data structure description of field **tags**

| Parameter | Mandatory | Type             | Description |
|-----------|-----------|------------------|-------------|
| key       | Yes       | String           | Tag key.    |
| values    | Yes       | Array of strings | Tag value.  |

**Table 7-619** Data structure description of field **matches**

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| key       | Yes       | String | Key.        |
| value     | Yes       | String | Value.      |

## Response Parameters

Status code: 200

**Table 7-620** Response body parameters

| Parameter   | Type    | Description   |
|-------------|---------|---------------|
| total_count | Integer | Total number. |

## Example Request

Querying the number of synchronization task resource instances

```
https://{endpoint}/v5/5237e10fe9aa4ad5b16b6a5245248314/sync/resource-instances/count
{
 "tags" : [{
 "key" : "key1",
 "values" : ["value1", "value2"]
 }, {
 "key" : "key2",
 "values" : ["value1", "value2"]
 }],
 "matches" : [{
 "key" : "resource_name",
 "value" : "resource1"
 }],
 "without_any_tag" : false
}
```

## Example Response

Status code: 200

OK

```
{
 "total_count" : 1
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |



## Error Code

For details, see [Error Code](#).

## 7.11.8 Querying Tags of a Task

### Function

This API is used to query tags of a specified task.

### URI

GET /v5/{project\_id}/{resource\_type}/{resource\_id}/tags

**Table 7-621** Path parameters

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id    | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| resource_type | Yes       | String | Resource type. <ul style="list-style-type: none"><li>● <b>migration</b>: real-time migration.</li><li>● <b>sync</b>: real-time synchronization.</li><li>● <b>cloudDataGuard</b>: real-time disaster recovery.</li><li>● <b>subscription</b>: data subscription.</li><li>● <b>backupMigration</b>: backup migration.</li><li>● <b>replay</b>: traffic replay.</li></ul> Enumerated values: <ul style="list-style-type: none"><li>● <b>migration</b></li><li>● <b>sync</b></li><li>● <b>cloudDataGuard</b></li><li>● <b>subscription</b></li><li>● <b>backupMigration</b></li><li>● <b>replay</b></li></ul> |
| resource_id   | Yes       | String | Resource ID, that is, the DRS task ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Request Parameters

**Table 7-622** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                             |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                  |

## Response Parameters

Status code: 200

**Table 7-623** Response body parameters

| Parameter | Type             | Description                                                 |
|-----------|------------------|-------------------------------------------------------------|
| tags      | Array of objects | Tag list.<br>For details, see <a href="#">Table 7-624</a> . |

**Table 7-624** Data structure description of field **tags**

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                              |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | <p>Tag key.</p> <ul style="list-style-type: none"> <li>It must consist of 1 to 128 Unicode characters,</li> <li>including letters, digits, spaces, and special characters <code>_.:=+@</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</li> </ul> <p>Minimum length: <b>1</b><br/>Maximum length: <b>128</b></p> |
| value     | String | <p>Tag value. This parameter is optional for deleting a tag.</p> <ul style="list-style-type: none"> <li>Each tag value can contain a maximum of 255 Unicode characters.</li> <li>The value can contain letters of any language, digits, spaces, and special characters <code>_.:=+@</code></li> </ul> <p>Maximum length: <b>255</b></p>                  |

## Example Request

Querying tags of a real-time synchronization task

```
https://{endpoint}/v5/246765b9f59445c3919fce121ea801f4/jobs/sync/e6842695-3ade-4937-827b-ff92776jb20a/tags
```

## Example Response

**Status code: 200**

OK

```
{
 "tags": [{
 "key": "key1",
 "value": "value1"
 }, {
 "key": "key2",
 "value": "value3"
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

## 7.11.9 Querying Tags of a Specified Project

### Function

This API is used to query the tags of all resources owned by a tenant in a specified project.

### URI

GET /v5/{project\_id}/{resource\_type}/tags

**Table 7-625** Path parameters

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id    | Yes       | String | Project ID of a tenant in a region.<br>For details, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| resource_type | Yes       | String | Resource type. <ul style="list-style-type: none"><li>● <b>migration</b>: real-time migration.</li><li>● <b>sync</b>: real-time synchronization.</li><li>● <b>cloudDataGuard</b>: real-time disaster recovery.</li><li>● <b>subscription</b>: data subscription.</li><li>● <b>backupMigration</b>: backup migration.</li><li>● <b>replay</b>: traffic replay.</li></ul> Enumerated values: <ul style="list-style-type: none"><li>● <b>migration</b></li><li>● <b>sync</b></li><li>● <b>cloudDataGuard</b></li><li>● <b>subscription</b></li><li>● <b>backupMigration</b></li><li>● <b>replay</b></li></ul> |

## Request Parameters

**Table 7-626** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                           |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Type | Yes       | String | MIME type of the request body. Use the default value <b>application/json</b> . For APIs used to upload objects or images, the value varies depending on the flow type. The default value is <b>application/json</b> . |
| X-Auth-Token | Yes       | String | User token obtained from IAM. It is a response to the API for obtaining a user token. After a request is processed, the value of <b>X-Subject-Token</b> in the header is the token value.                             |
| X-Language   | No        | String | Request language type.<br>Default value: <b>en-us</b><br>Enumerated values: <ul style="list-style-type: none"> <li>• <b>en-us</b></li> <li>• <b>zh-cn</b></li> </ul>                                                  |

## Response Parameters

Status code: 200

**Table 7-627** Response body parameters

| Parameter | Type             | Description                                                 |
|-----------|------------------|-------------------------------------------------------------|
| tags      | Array of objects | Tag list.<br>For details, see <a href="#">Table 7-628</a> . |

**Table 7-628** Data structure description of field **tags**

| Parameter | Type             | Description |
|-----------|------------------|-------------|
| key       | String           | Tag key.    |
| values    | Array of strings | Tag value.  |

## Example Request

Querying all tags of a real-time synchronization task

```
https://{endpoint}/v5/246765b9f59445c3919fce121ea801f4/sync/tags
```

## Example Response

**Status code: 200**

OK

```
{
 "tags": [{
 "key": "key1",
 "values": ["value1", "value2"]
 }, {
 "key": "key2",
 "values": ["value1", "value2"]
 }]
}
```

## Status Code

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

## Error Code

For details, see [Error Code](#).

# 8 Application Examples

## 8.1 Scenario 1: Querying Task Statuses in Batches

### Scenarios

This section describes how to query the status of all tasks of a tenant by calling the API described in [Querying Task Statuses in Batches](#).

### Procedure

- Step 1** Call an IAM API to obtain a user token by referring to [Authentication](#).
- Step 2** Obtain the ID of the task to be queried by referring to [Obtaining a Task ID](#).
- Step 3** URI format: `/v3/{project_id}/jobs/batch-status`

- Example request:

```
POST: https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-status
```

Obtain the endpoint from Regions and Endpoints.

- Request example:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-status
```

```
{
 "jobs": ["9a470239-2308-4bb5-a6bc-1040402fjb21", "dc67695a-ee3e-49b8-a022-a099bd81jb21"],
 "page_req": {
 "cur_page": 1,
 "per_page": 10
 }
}
```

- Example Response:

```
{
 "results": [{
 "id": "9a470239-2308-4bb5-a6bc-1040402fjb21",
 "status": "INCRE_TRANSFER_STARTED"
 }, {
 "id": "dc67695a-ee3e-49b8-a022-a099bd81jb21",
 "status": "INCRE_TRANSFER_FAILED"
 }
],
}
```

```
"count" : 2
}
```

----End

## 8.2 Scenario 2: Querying Task Details in Batches

### Scenarios

This section describes how to query task details of a tenant by calling the API described in [Querying Task Details in Batches](#).

### Procedure

- Step 1** Call an IAM API to obtain a user token by referring to [Authentication](#).
- Step 2** Obtain the ID of the task to be queried by referring to [Obtaining a Task ID](#).
- Step 3** URI format: `/v3/{project_id}/jobs/batch-detail`

- Example request:

```
POST: https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/
batch-detail
```

Obtain the endpoint from Regions and Endpoints.

- Request example:

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-detail
```

```
{
 "jobs" : ["24834eb6-be30-464e-a299-f7aa730jb101", "140b5236-88ad-43c8-811c-1268453jb101"],
 "page_req" : {
 "cur_page" : 1,
 "per_page" : 10
 }
}
```

- Example Response:

```
{
 "count" : 2,
 "results" : [{
 "id" : "24834eb6-be30-464e-a299-f7aa730jb101",
 "name" : "DRS-3999-lws",
 "status" : "STARTJOBING",
 "description" : "",
 "create_time" : "1608519469412",
 "task_type" : "FULL_INCR_TRANS",
 "source_endpoint" : {
 "ip" : "172.22.74.56",
 "region" : "cn-xianhz-1",
 "db_type" : "mysql",
 "db_port" : 3306,
 "ssl_link" : false,
 "project_id" : "054ba152d480d55b2f5dc0069e7ddef0",
 "db_user" : "root"
 },
 "target_endpoint" : {
 "ip" : "172.21.176.219",
 "region" : "cn-xianhz-1",
 "db_type" : "mysql",
 "db_port" : 3306,
 "ssl_link" : false,
 "inst_id" : "3ef57dbcc8db478a9e346d26ef2575bfin01",
 "project_id" : "054ba152d480d55b2f5dc0069e7ddef0",

```



```
"inst_name" : "rds-lws-target",
"db_user" : "root",
"vpc_id" : "0ff8df7b-f0e9-4b16-ac16-1db3dadb69e4",
"subnet_id" : "f857d371-2f03-4622-85f6-2b7d42d0d82c"
},
"inst_info" : {
 "ip" : "172.16.213.101",
 "inst_type" : "high",
 "engine_type" : "mysql",
 "volume_size" : 100,
 "public_ip" : "10.154.219.202",
 "start_time" : "0"
},
"actual_start_time" : "1608520069393",
"update_time" : "1608520068979",
"job_direction" : "up",
"db_use_type" : "migration",
"need_restart" : false,
"is_target_readonly" : true,
"speed_limit" : [],
"schema_type" : "Tungsten",
"object_switch" : true,
"replace_definer" : true,
"migrate_user" : false,
"az_code" : "az2xahz",
"vpc_id" : "0ff8df7b-f0e9-4b16-ac16-1db3dadb69e4",
"subnet_id" : "f857d371-2f03-4622-85f6-2b7d42d0d82c",
"security_group_id" : "d90c971b-4b9d-402c-9c59-5c239389b8dd",
"support_ip_v6" : false,
"original_job_direction" : "up"
"object_infos":[{
 "id":"test",
 "type":"database",
 "name":"test",
 "select":"true"
},{
 "id":"test-*.table01",
 "type":"table",
 "name":"table01",
 "select":"true",
 "parent_id":"test"
}]
}, {
 "id" : "140b5236-88ad-43c8-811c-1268453jb101",
 "name" : "DRS-0042-linxiaolu",
 "status" : "CONFIGURATION",
 "description" : "",
 "create_time" : "1608366204171",
 "task_type" : "FULL_INCR_TRANS",
 "source_endpoint" : {
 "ip" : "192.168.0.27",
 "region" : "cn-xianhz-1",
 "db_type" : "mysql",
 "db_port" : 3306,
 "ssl_link" : false,
 "project_id" : "054ba152d480d55b2f5dc0069e7ddef0",
 "db_user" : "root"
 },
 "target_endpoint" : {
 "ip" : "192.168.0.131",
 "region" : "cn-xianhz-1",
 "db_type" : "mysql",
 "db_port" : 3306,
 "ssl_link" : false,
 "inst_id" : "e05a3679efe241d8b5dee80b17c1a863in01",
 "project_id" : "054ba152d480d55b2f5dc0069e7ddef0",
 "inst_name" : "rds-1417-lxl",
 "db_user" : "root",
 "vpc_id" : "65f0391c-0582-44a6-aa50-248f97ed82e1",
```

```
"subnet_id" : "352ad828-3467-4f03-987a-c55a5a9dd417"
},
"inst_info" : {
 "ip" : "192.168.0.229",
 "status" : "ACTIVE",
 "inst_type" : "high",
 "engine_type" : "mysql",
 "volume_size" : 100,
 "public_ip" : "10.154.219.72",
 "start_time" : "0"
},
"actual_start_time" : "1608369232412",
"full_transfer_complete_time" : "1608369510202",
"update_time" : "1608517066434",
"job_direction" : "up",
"db_use_type" : "migration",
"need_restart" : false,
"is_target_readonly" : true,
"speed_limit" : [],
"schema_type" : "Tungsten",
"object_switch" : false,
"replace_definer" : true,
"migrate_user" : false,
"tags": [{
 "key1" : "value1",
 "key2" : "value2"
}],
"az_code" : "az2xahz",
"vpc_id" : "65f0391c-0582-44a6-aa50-248f97ed82e1",
"subnet_id" : "352ad828-3467-4f03-987a-c55a5a9dd417",
"security_group_id" : "d90c971b-4b9d-402c-9c59-5c239389b8dd",
"support_ip_v6" : false,
"original_job_direction": "up"
"object_infos": [{
 "id": "test2",
 "type": "database",
 "name": "test2",
 "select": "true",
}, {
 "id": "test2-**-table02",
 "type": "table",
 "name": "table02",
 "select": "true",
 "parent_id": "test2"
}]
}],
"data_transformation": {
 "total_count": 2,
 "filter_conditions": [
 {
 "data_transformation_object_infos": [
 {
 "id": "test02-**-table02-**-conditionFilter--",
 "db_name": "test02",
 "table_name": "table02",
 "data_transformation_type": "contentConditionalFilter"
 }
],
 "transformation_info": {
 "value": "id1<1",
 "transformation_type": "contentConditionalFilter"
 }
 },
 {
 "data_transformation_object_infos": [
 {
 "id": "test02-**-table01-**-configConditionFilter--",
 "db_name": "test02",
 "table_name": "test01",
```

```
 "data_transformation_type": "configConditionalFilter"
 }
],
 "transformation_info": {
 "value": "config",
 "transformation_type": "configConditionalFilter"
 },
 "config_transformation": {
 "indexes": "id",
 "values": "id <= 6",
 "db_table_name": "test02.table01",
 "db_name": "test02",
 "table_name": "table01",
 "col_names": "id",
 "prim_key_or_index": "id"
 }
 }
}
]
```

----End

## 8.3 Scenario 3: Starting Tasks in Batches

### Scenarios

This section describes how to **start multiple configuration tasks** by calling an API.

### Procedure

- Step 1** Call an IAM API to obtain a user token by referring to [Authentication](#).
- Step 2** Obtain the ID of the task to be queried by referring to [Obtaining a Task ID](#).
- Step 3** URI format: `/v3/{project_id}/jobs/batch-starting`

- Example request:

POST: `https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-starting`

Obtain the endpoint from Regions and Endpoints.

- Request example:

`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/batch-starting`

```
{
 "jobs": [{
 "job_id": "140b5236-88ad-43c8-811c-1268453jb101"
 }]
}
```

- Example Response:

```
{
 "count": 1,
 "results": [{
 "id": "140b5236-88ad-43c8-811c-1268453jb101",
 "status": "success"
 }]
}
```

```
}]
}
```

----End

# 9 Permissions Policies and Supported Actions

---

## 9.1 Permissions Policies and Supported Actions

You can use Identity and Access Management (IAM) for fine-grained permissions management of your DRS. If your Huawei account does not need individual IAM users, you can skip this section.

A policy is a set of permissions defined in JSON format. By default, new IAM users do not have any permissions. You need to add a user to one or more groups and assign permission policies to these groups. The user then inherits permissions from the groups it is a member of. This process is called authorization. After authorization, the user can perform specified operations on Anti-DDoS based on the permissions. For details about the syntax structure and example of a policy, see "Permissions Management" in the *Data Replication Service*.

There are fine-grained policies and role-based access control (RBAC) policies. An RBAC policy consists of permissions for an entire service. Users in a group with such a policy assigned are granted all of the permissions required for that service. A fine-grained policy consists of API-based permissions for operations on specific resource types. Fine-grained policies, as the name suggests, allow for more fine-grained control than RBAC policies.

### NOTE

Policy-based authorization is useful if you want to allow or deny the access to an API.

An account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. The permissions required for calling an API are determined by the actions supported by the API. Only users who have been granted permissions allowing the actions can call the API successfully. For example, if an IAM user queries the task list using an API, the user must have been granted permissions that allow the **drs:migrationJob:list** action.

## Supported Actions

Operations supported by a fine-grained policy are specific to APIs. The following describes the headers of the actions provided in this section:

- Permissions: defined by actions in a custom policy.
- APIs: REST APIs that can be called in a custom policy.
- Action: Specific operations that are allowed or denied.
- Related actions: Actions on which a specific action depends to take effect. When assigning permissions for the action to a user, you also need to assign permissions for the dependent actions.
- IAM projects or enterprise projects: Type of projects in which policies can be used to grant permissions. A policy can be applied to IAM projects, enterprise projects, or both. Policies that contain actions for both IAM and enterprise projects can be used and take effect for both IAM and Enterprise Management. Policies that only contain actions for IAM projects can be used and only take effect for IAM. For details about the differences between IAM and enterprise projects, see [Differences Between IAM and Enterprise Management](#).

## 9.2 DRS Actions

### NOTE

The check mark (√) indicates that an action takes effect. The cross mark (x) indicates that an action does not take effect.

**Table 9-1** Service function

| Permission                             | API                                       | Action                                                                                                                                                                 | IAM Project | Enterprise Project |
|----------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Creating tasks in batches              | POST /v3/{project_id}/jobs/batch-creation | drs:migrationJobs:create (To create an instance, you need to configure the RDS ReadOnlyAccess, VPC FullAccess, and SMN FullAccess permissions in the project.)         | √           | √                  |
| Stopping and deleting tasks in batches | DELETE /v3/{project_id}/jobs/batch-jobs   | drs:migrationJobs:delete (To stop or delete an instance, you need to configure the RDS ReadOnlyAccess, VPC FullAccess, and SMN FullAccess permissions in the project.) | √           | √                  |

| Permission                                        | API                                                 | Action                                                                                                                                                     | IAM Project | Enterprise Project |
|---------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Testing connections in batches                    | POST /v3/{project_id}/jobs/batch-connection         | drs:migrationJobs:connect (To test the connection, you need to configure the VPC FullAccess permission in the project.)                                    | √           | √                  |
| Querying objects selected in batches              | PUT /v3/{project_id}/jobs/batch-select-objects      | drs:migrationJobs:select (To obtain object selection information, you need to configure the RDS FullAccess and DAS FullAccess permissions in the project.) | √           | √                  |
| Querying RPO and RTO information in batches       | POST /v3/{project_id}/jobs/batch-rpo-and-rto        | drs:dataGuardJob:list                                                                                                                                      | √           | √                  |
| Performing primary/standby switchovers in batches | POST /v3/{project_id}/jobs/batch-switchover         | drs:disasterRecoveryJob:switchover                                                                                                                         | √           | √                  |
| Testing connections in batches (cluster mode)     | POST /v3/{project_id}/jobs/cluster/batch-connection | drs:migrationJobs:connect (To test the connection, you need to configure the VPC FullAccess permission in the project.)                                    | √           | √                  |
| Performing a batch pre-check                      | POST /v3/{project_id}/jobs/batch-precheck           | drs:migrationJob:action                                                                                                                                    | √           | √                  |
| Querying pre-check results in batches             | POST /v3/{project_id}/jobs/batch-precheck-result    | drs:migrationJob:get                                                                                                                                       | √           | √                  |

| Permission                                                                | API                                              | Action                           | IAM Project | Enterprise Project |
|---------------------------------------------------------------------------|--------------------------------------------------|----------------------------------|-------------|--------------------|
| Setting flow control for tasks                                            | PUT /v3/{project_id}/jobs/batch-limit-speed      | drs:migrationJobs:update         | √           | √                  |
| Obtaining database parameters in batches                                  | POST /v3/{project_id}/jobs/batch-get-params      | drs:databaseParameters:get       | √           | √                  |
| Resuming or retrying tasks in batches                                     | POST /v3/{project_id}/jobs/batch-retry-task      | drs:migrationJob:action          | √           | √                  |
| Pausing tasks in batches                                                  | POST /v3/{project_id}/jobs/batch-starting        | drs:migrationJob:action          | √           | √                  |
| Modifying tasks in batches                                                | PUT /v3/{project_id}/jobs/batch-modification     | drs:migrationJob:modify          | √           | √                  |
| Changing the passwords of the source and destination databases in batches | PUT /v3/{project_id}/jobs/batch-modify-pwd       | drs:migrationJobs:update         | √           | √                  |
| Setting definers in batches                                               | POST /v3/{project_id}/jobs/batch-replace-definer | drs:migrationJob:updateJobConfig | √           | √                  |
| Creating comparison tasks in batches                                      | POST /v3/{project_id}/jobs/batch-create-compar   | drs:migrationCompareJob:create   | √           | √                  |
| Querying comparison results in batches                                    | POST /v3/{project_id}/jobs/batch-compare-result  | drs:CompareJob:getResult         | √           | √                  |
| Querying task progress in batches                                         | POST /v3/{project_id}/jobs/batch-progress        | drs:migrationJobs:getProgress    | √           | √                  |



| Permission                                           | API                                                          | Action                                                                                                                       | IAM Project | Enterprise Project |
|------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Querying tasks of a tenant                           | POST /v3/{project_id}/jobs                                   | DRS<br>ReadOnlyAccess                                                                                                        | √           | √                  |
| Querying DR monitoring data                          | POST /v3/{project_id}/jobs/disaster-recovery-monitoring-data | drs:disasterRecoveryJob:get                                                                                                  | √           | √                  |
| Querying the DR initialization progress in batches   | POST /v3/{project_id}/jobs/batch-struct-process              | drs:disasterRecoveryJob:get                                                                                                  | √           | √                  |
| Querying DR initialization object details in batches | POST /v3/{project_id}/jobs/{type}/batch-struct-detail        | drs:disasterRecoveryJob:get                                                                                                  | √           | √                  |
| Updating migrated user information in batches        | PUT /v3/{project_id}/jobs/batch-update-user                  | drs:migrationJob:modifyUserInfo                                                                                              | √           | √                  |
| Modifying database parameters                        | POST /v1.0/{projectId}/jobs/{jobId}/params                   | drs:dataBaseParams:modify (Configure the RDS ReadOnlyAccess, VPC FullAccess, SMN FullAccess and DAS FullAccess permissions.) | √           | √                  |
| Processing data in batches                           | POST /v3/{project_id}/jobs/batch-transformation              | drs:migrationJob:action                                                                                                      | √           | √                  |
| Starting tasks in batches                            | POST /v3/{project_id}/jobs/batch-starting                    | drs:migrationJob:action                                                                                                      | √           | √                  |
| Querying task details in batches                     | POST /v3/{project_id}/jobs/batch-detail                      | drs:migrationJob:get                                                                                                         | √           | √                  |
| Querying task statuses in batches                    | POST /v3/{project_id}/jobs/batch-status                      | drs:migrationJob:get                                                                                                         | √           | √                  |

# A Appendix

## A.1 Abnormal Request Results

- Abnormal response description

**Table A-1** Abnormal response description

| Name       | Type   | Description                                                                                                                |
|------------|--------|----------------------------------------------------------------------------------------------------------------------------|
| error_code | String | Specifies the error code returned when the API response is abnormal. For details, see section <a href="#">Error Code</a> . |
| error_msg  | String | Specifies the description of the error returned when the API response is abnormal.                                         |

- Example Response:

```
{
 "error_code": "DRS.M00201",
 "error_msg": "The %s parameter is empty."
}
{
 "error_code": "DRS.M00202",
 "error_msg": "The value of %s is invalid."
}
```

## A.2 HTTP Status Codes for General Requests

- Normal

**Table A-2** Return codes for successful requests

| Status Code | Description                                                                   |
|-------------|-------------------------------------------------------------------------------|
| 200         | Request succeeded.                                                            |
| 202         | Asynchronous requests (such as performing a task) are submitted successfully. |

- Abnormal

**Table A-3** Return codes for failed requests

| Status Code                  | Description                                                                          |
|------------------------------|--------------------------------------------------------------------------------------|
| 400 Bad Request              | The server fails to process the request.                                             |
| 401 Unauthorized             | You must enter the username and password to access the requested page.               |
| 403 Forbidden                | You are forbidden to access the page requested.                                      |
| 404 Not Found                | The server could not find the requested page.                                        |
| 405 Method Not Allowed       | The method specified in the request is not allowed.                                  |
| 409 Conflict                 | The request cannot be processed due to conflicts.                                    |
| 413 Request Entity Too Large | The request exceeds the resource quota.                                              |
| 415 Unsupported Media Type   | <b>Content-Type</b> contained in the request header is not <b>application/json</b> . |
| 422 Unprocessable Entity     | Parameter or object in the request cannot be identified.                             |
| 500 Internal Server Error    | Failed to complete the request. The server is abnormal.                              |
| 501 Not Implemented          | Failed to complete the request. The server does not support the requested function.  |
| 503 Service Unavailable      | Failed to complete the request. The system is currently unavailable.                 |

## A.3 Error Code

If an error occurs during API calling, no results will be returned. You can locate the error cause based on error codes of each API. If an error occurs, an HTTP status

code is returned. The returned message body contains a specific error code and error message.

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to [Error Codes](#).

**Table A-4** Error codes of v3 APIs

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                            | Description                                              | Troubleshooting                                        |
|--------------------|----------------|--------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| 422                | DRS.M0<br>0002 | The returned result is empty.                                            | The returned result is empty.                            | Check the request parameters or task status.           |
| 422                | DRS.M0<br>0004 | Service is abnormal. Check logs.                                         | Service is abnormal. Check logs.                         | If the service is abnormal, contact technical support. |
| 400                | DRS.M0<br>0007 | Invalid request parameter.                                               | Invalid request parameter.                               | Check the request parameters.                          |
| 403                | DRS.M0<br>0100 | Invalid token.                                                           | Failed to pass IAM authentication.                       | Check the user token information.                      |
| 404                | DRS.M0<br>0101 | The user role is empty.                                                  | The user role is empty.                                  | Check the role information of the user.                |
| 403                | DRS.M0<br>0102 | You do not have sufficient permissions.                                  | Insufficient permissions.                                | Check the DRS permissions of the current user.         |
| 401                | DRS.M0<br>0103 | You do not have operation permissions. Check account permissions on IAM. | Operation denied. Check your account permissions on IAM. | Check the DRS permissions of the current user.         |
| 400                | DRS.M0<br>0105 | User restricted.                                                         | User restricted.                                         | Check the DRS permissions of the current user.         |
| 400                | DRS.M0<br>0200 | Parameter error.                                                         | Invalid parameters.                                      | Check the request parameters.                          |
| 400                | DRS.M0<br>0201 | The parameter %s is empty.                                               | The parameter %s is empty.                               | Check the request parameters.                          |
| 400                | DRS.M0<br>0202 | The value of parameter %s is invalid.                                    | The value of parameter %s is invalid.                    | Check the request parameters.                          |
| 400                | DRS.M0<br>0210 | The value of Page is invalid, %s                                         | Invalid page value, %s.                                  | Check the request page parameters.                     |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                              | Description                                              | Troubleshooting                                          |
|--------------------|----------------|----------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| 400                | DRS.M0<br>0211 | The value of Page exceeds the upper limit.                                 | The number of pages exceeds the upper limit.             | Check the request page parameters.                       |
| 403                | DRS.M0<br>0261 | Invalid project ID.                                                        | Invalid project ID.                                      | Check the value of <b>project ID</b> in the request.     |
| 400                | DRS.M0<br>0269 | The tag key must be unique.                                                | The tag key cannot be duplicated.                        | Check whether the tag key is unique.                     |
| 400                | DRS.M0<br>0270 | The tag key or value is too long.                                          | The tag key or value exceeds the maximum length allowed. | Check the length of the tag key or value in the request. |
| 400                | DRS.M0<br>0271 | The number of tags exceeds the limit.                                      | The maximum number of tags has been reached.             | Check the number of tags in the request.                 |
| 400                | DRS.M0<br>0273 | Invalid parameter. The parameter contains %s.                              | Invalid parameter. %s exists in the parameter.           | Check the request parameters.                            |
| 422                | DRS.M0<br>0277 | The task name already exists.                                              | The task name already exists.                            | Change the task name.                                    |
| 400                | DRS.M0<br>0298 | Job does not exist, please check job id.                                   | The job does not exist. Check the job ID.                | Check the request parameters.                            |
| 400                | DRS.M0<br>0299 | Only one jobId is allowed.                                                 | Only one job ID can be transferred.                      | Check the request parameters.                            |
| 400                | DRS.M0<br>0300 | Invalid request, %s                                                        | Invalid request. %s.                                     | Check the request parameters.                            |
| 400                | DRS.M0<br>0301 | There are duplicate %s in request.                                         | The request contains duplicate task IDs.                 | Check the request parameters.                            |
| 400                | DRS.M0<br>0302 | The transfer schema is invalid, please refer to supported transfer schema. | Invalid migration scheme.                                | Check the request parameters.                            |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                               | Description                                                                       | Troubleshooting                                                 |
|--------------------|----------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------|
| 400                | DRS.M0<br>0303 | The corresponding parameter is not obtained from the cache.                 | Failed to obtain corresponding parameters from the cache.                         | Check the request parameters.                                   |
| 400                | DRS.M0<br>0304 | This API cannot be called in the current task status.                       | API cannot be invoked in current state of the task.                               | Check the current task status.                                  |
| 400                | DRS.M0<br>0305 | Parameter error:%s                                                          | Parameter error:<br>%s.                                                           | Check the request parameters.                                   |
| 400                | DRS.M0<br>0306 | Start time cannot be the same as end time.                                  | The start time cannot be the same as the end time.                                | Check the request parameters.                                   |
| 400                | DRS.M0<br>0307 | Only subtasks can invoke this interface.                                    | Only subtasks can use this API.                                                   | Change the task ID.                                             |
| 400                | DRS.M0<br>0308 | Only parent tasks can invoke this interface.                                | Only parent tasks can use this API.                                               | Change the task ID.                                             |
| 400                | DRS.M0<br>0401 | %s is not support re-editing of synchronization tasks.                      | %s does not support re-editing synchronization tasks.                             | Change the task ID.                                             |
| 400                | DRS.M0<br>0402 | The subtask already exists.                                                 | The subtask already exists.                                                       | Change the task ID.                                             |
| 400                | DRS.M0<br>0403 | This task does not support flow control.                                    | This task does not support flow control.                                          | Change the task ID.                                             |
| 422                | DRS.M0<br>0414 | The value for Logical Copy Slot Advance Interval must be between 1 and 999. | The interval for advancing the logical replication slot must range from 1 to 999. | Change the interval for advancing the logical replication slot. |
| 422                | DRS.M0<br>1501 | Service error.                                                              | The server is abnormal.                                                           | If the service is abnormal, contact technical support.          |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                             | Description                                                                                                      | Troubleshooting                           |
|--------------------|----------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 202                | DRS.M0<br>1504 | Another operation is being performed on the migration task or the migration task is abnormal.             | Other operations are being performed on the migration task or the migration task is faulty. Try again later.     | Check the current task status.            |
| 400                | DRS.M0<br>5003 | Task information not found.                                                                               | Task information cannot be queried.                                                                              | Check the task ID in the request.         |
| 400                | DRS.M0<br>5004 | The task has been deleted or the resource has been released.                                              | The task has been deleted or resources have been released.                                                       | Check the current task status.            |
| 422                | DRS.M0<br>5006 | Invalid RDS DB instance.                                                                                  | Invalid RDS DB instance.                                                                                         | Check the RDS instance ID in the request. |
| 200                | DRS.M0<br>5066 | Failed to create instance!                                                                                | Failed to create an instance.                                                                                    | Contact technical support.                |
| 400                | DRS.M0<br>6007 | The DB instance cannot be left blank.                                                                     | The DB instance is null or "".                                                                                   | Check the RDS instance ID in the request. |
| 422                | DRS.M0<br>6011 | Failed to obtain RDS information.                                                                         | Obtain RDS DB instance information failed.                                                                       | Check the RDS instance ID in the request. |
| 422                | DRS.M0<br>6020 | The destination DB instance has been set to read/write by the migration task %s and cannot be used.       | The destination DB instance cannot be used because it has been set to read/write by the migration task %s.       | Check the RDS instance ID in the request. |
| 422                | DRS.M0<br>6021 | The destination DB instance has been set to read/write by the synchronization task %s and cannot be used. | The destination DB instance cannot be used because it has been set to read/write by the synchronization task %s. | Check the RDS instance ID in the request. |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                      | Description                                      | Troubleshooting                                                                                                                                                |
|--------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400                | DRS.MO<br>7000 | Data processing rule already exists.                                                                                                                                                                               | Data processing rule already exists.             | Modify the data processing rule in the request.                                                                                                                |
| 200                | DRS.KE0<br>001 | Failed to connect to the database network.                                                                                                                                                                         | Database connection failed.                      | Check the network configuration between the database and the replication instance.                                                                             |
| 200                | DRS.KE0<br>002 | The username or password is incorrect.                                                                                                                                                                             | The username or password is incorrect.           | Check the username and password.                                                                                                                               |
| 200                | DRS.KE0<br>003 | The port cannot be accessed.                                                                                                                                                                                       | The port cannot be accessed.                     | Check the database port.                                                                                                                                       |
| 200                | DRS.KE0<br>004 | Connection failed.Handling suggestion: Please check the security group/firewall/SSL configuration of the database.                                                                                                 | Connection failed.                               | Check the security group, firewall, and SSL configuration of the database.                                                                                     |
| 200                | DRS.KE0<br>005 | The database user must allow remote connections.Handling suggestion: Run CREATE USER 'Account'@%' IDENTIFIED BY 'Password' to create a user that allows remote connections. After the migration, delete this user. | The database user must allow remote connections. | Run <b>CREATE USER'Account'@%' IDENTIFIED BY 'Password'</b> to create a user that allows remote connections. After the migration is complete, delete the user. |



| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                                                                                                                                                                                                    | Description                                                                                                              | Troubleshooting                                                                                                                                                                                                                                                            |
|--------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0006     | The remote connection permission is not configured in pg_hba.conf for the replication instance and database user. Handling suggestion: Add \"host all ***(dbuser) 0.0.0.0/0 password\" to the pg_hba.conf configuration file to grant the remote connection permission to the user and restart the database. After the migration is complete, delete this record and restart the database again. | The remote connection permission is not configured in <b>pg_hba.conf</b> for the replication instance and database user. | Add \" <b>host all ***(dbuser) 0.0.0.0/0 password</b> \" to the <b>pg_hba.conf</b> configuration file to grant the remote connection permission to the user, and restart the database. After the migration is complete, delete this record and restart the database again. |
| 200                | DRS.KE0007     | The database user does not have the login permission. Handling suggestion: Run <code>alter role ***(dbuser) login</code> to grant the login permission.                                                                                                                                                                                                                                          | The database user does not have the login permission.                                                                    | Run <code><b>alter role ***(dbuser) login</b></code> to grant the login permission.                                                                                                                                                                                        |
| 200                | DRS.KE0008     | The specified source database does not exist. Handling suggestion: Create a database or enter an existing database name.                                                                                                                                                                                                                                                                         | The specified source database was not found.                                                                             | Create a database or enter an existing database name.                                                                                                                                                                                                                      |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                           | Description                                                                                 | Troubleshooting                                          |
|--------------------|----------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 200                | DRS.KE0009     | The SSL CA certificate does not exist.Handling suggestion: Contact technical support.                                   | The SSL CA certificate was not found.                                                       | Contact technical support.                               |
| 200                | DRS.KE0010     | SSL is not enabled or the certificate is invalid. Handling suggestion: Enable SSL or upload a valid SSL CA certificate. | SSL is disabled or the certificate is invalid.                                              | Enable SSL or upload a valid SSL CA certificate.         |
| 200                | DRS.KE0011     | The source database does not have the Microsoft SQL Server replication component installed.                             | The source database does not have the Microsoft SQL Server replication component installed. | Install the Microsoft SQL Server replication component.  |
| 200                | DRS.KE0012     | The user does not have the permission to access the database.                                                           | The user does not have the permission to access the database.                               | Grant the permission to access the database to the user. |
| 200                | DRS.KE0013     | Insufficient permissions.                                                                                               | Insufficient permissions.                                                                   | Grant the permission to access the database to the user. |
| 200                | DRS.KE0014     | Internal error.                                                                                                         | Internal error.                                                                             | Contact technical support.                               |
| 200                | DRS.KE0015     | The network connection between the replication instance and database is faulty.                                         | The network connection between the replication instance and the database is faulty.         | Contact technical support.                               |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                                                                                                                     | Description                                                                                                                                          | Troubleshooting                                                                                                                                            |
|--------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0<br>016 | Failed to connect to the database. In the postgresql.conf file, the listen_addresses parameter value or port number is incorrect.Handling suggestion: In postgres.conf, set listen_addresses to * or change the port number to the correct value. Then, restart the database for the modification to take effect. | Failed to connect to the database. In the <b>postgresql.conf</b> file, the <b>listen_addresses</b> parameter value or port number is incorrect.      | In <b>postgres.conf</b> , set <b>listen_addresses</b> to * or change the port number to the correct value. Then, restart the database to apply the change. |
| 200                | DRS.KE0<br>017 | The IP address cannot be pinged.Handling suggestion: See migration preparations in the DRS Best Practices.                                                                                                                                                                                                        | The IP address cannot be pinged.                                                                                                                     | See migration preparations in the <i>DRS Best Practices</i> .                                                                                              |
| 200                | DRS.KE0<br>018 | Failed to resolve the domain name.                                                                                                                                                                                                                                                                                | Failed to resolve the domain name.                                                                                                                   | See migration preparations in the <i>DRS Best Practices</i> .                                                                                              |
| 200                | DRS.KE0<br>019 | Failure cause: The subnets of any of the source, destination, or replication (synchronization or disaster recovery) instances in different VPCs overlap.                                                                                                                                                          | The subnet CIDR blocks of any of the source, destination, or replication (synchronization or disaster recovery) instances in different VPCs overlap. | See migration preparations in the <i>DRS Best Practices</i> .                                                                                              |
| 200                | DRS.KE0<br>020 | Incorrect replica set name.                                                                                                                                                                                                                                                                                       | The replica set name is incorrect.                                                                                                                   | Contact technical support.                                                                                                                                 |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                                                                                                                                         | Description                                                                       | Troubleshooting                                                                                                                                                                                                                               |
|--------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0<br>021 | The source database cannot connect to the port of the replication instance.Handling suggestion: Modify the firewall and security group configurations of the source and destination databases to enable the source database to connect to the port of the replication instance. See migration preparations in the DRS Best Practices. | The source database cannot connect to the port of the replication instance.       | Modify the firewall and security group configurations of the source and destination databases to enable the source database to connect to the port of the replication instance. See migration preparations in the <i>DRS Best Practices</i> . |
| 200                | DRS.KE0<br>022 | The SSL certificate is incorrect.Handling suggestion: Upload a correct SSL certificate.                                                                                                                                                                                                                                               | The SSL certificate is incorrect.                                                 | Upload a correct SSL certificate.                                                                                                                                                                                                             |
| 200                | DRS.KE0<br>023 | The DRS EIP is not in the whitelist of the source database.Handling suggestion: Add the DRS EIP to the whitelist of the source database.                                                                                                                                                                                              | The EIP of the DRS instance is not added to the whitelist of the source database. | Add the EIP of the DRS instance to the whitelist of the source database.                                                                                                                                                                      |
| 200                | DRS.KE0<br>030 | The service name is incorrect.Handling suggestion: Check whether the service name is correct before the connection test.                                                                                                                                                                                                              | The database service name is incorrect.                                           | Check whether the database service name specified in the connection test is correct.                                                                                                                                                          |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                              | Description                                                                                  | Troubleshooting                                                                                                |
|--------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0031     | Query failed.Handling suggestion: Check whether the migration account has sufficient permissions.                                                                                                                          | Query failed.                                                                                | Check whether the migration account has sufficient permissions.                                                |
| 200                | DRS.KE0032     | The Oracle certificate is incorrect.Handling suggestion: Upload a correct Oracle certificate.                                                                                                                              | The Oracle certificate is incorrect.                                                         | Upload a correct Oracle certificate.                                                                           |
| 200                | DRS.KE0033     | The username, password, or authentication database of the source database is incorrect.Handling suggestion: Check that the input username, password, and authentication database for the connection test are correct.      | The username, password, or authentication database of the source database is incorrect.      | Check whether the username, password, and authentication database entered for the connection test are correct. |
| 200                | DRS.KE0034     | The username, password, or authentication database of the destination database is incorrect.Handling suggestion: Check that the input username, password, and authentication database for the connection test are correct. | The username, password, or authentication database of the destination database is incorrect. | Check whether the username, password, and authentication database entered for the connection test are correct. |
| 200                | DRS.KE0035     | The database middleware is not a MySQL sharding middleware.                                                                                                                                                                | The database middleware is not a MySQL sharding middleware.                                  | Contact technical support.                                                                                     |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                                                                                      | Description                                                                             | Troubleshooting                                                                                                                                                                                |
|--------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0<br>036 | SSL must be enabled when the database password plugin caching_sha2_password is verified.Handling suggestion: Enable SSL or create a user.                                                                                                                                          | SSL must be enabled when the database password plugin cache_sha2_password is verified.  | Enable SSL or create a user.                                                                                                                                                                   |
| 200                | DRS.KE0<br>037 | The username or password is incorrect.Handling suggestion: Check that the input username and password for the connection test are correct.                                                                                                                                         | The username or password is incorrect.                                                  | Check whether the username and password for the connection test are correct.                                                                                                                   |
| 200                | DRS.KE0<br>038 | The account is locked.Handling suggestion: Contact technical support to unlock the account.                                                                                                                                                                                        | The account is locked.                                                                  | Contact technical support to unlock the account.                                                                                                                                               |
| 200                | DRS.KE0<br>039 | The database cannot be connected because the client IP address is not in the whitelist.Handling suggestion: Use an account with the ALTER SYSTEM permission and execute the following SQL statement: alter system add hba entry (hostssl [Username] [Subnet of the RDS instance]); | The database cannot be connected because the client IP address is not in the whitelist. | Use an account with the <b>ALTER SYSTEM</b> permission to run the following SQL statement:<br><b>alter system add hba entry (hostssl [username] [subnet CIDR block where RDS is located]).</b> |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                 | Description                                                                                         | Troubleshooting                                                                                                        |
|--------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0<br>040 | The kafka brokers is not available.                                                                                                                                                           | The Kafka node is unavailable.                                                                      | Contact technical support.                                                                                             |
| 200                | DRS.KE0<br>041 | The kafka is not available.                                                                                                                                                                   | Kafka is unavailable.                                                                               | Contact technical support.                                                                                             |
| 200                | DRS.KE0<br>042 | The kafka topic is not existed.                                                                                                                                                               | The Kafka topic does not exist.                                                                     | Contact technical support.                                                                                             |
| 200                | DRS.KE0<br>043 | The user does not have the permission to create connections.Grant the required permission to the user and try again.                                                                          | The user does not have the permission to create connections..                                       | Grant the required permissions to the user and try again.                                                              |
| 200                | DRS.KE0<br>044 | The parameters for test connection contains non-ascii character. Handling suggestion: Please check test connection parameters, use user info without NON-ASCII characters to test connection. | The parameters for testing the connection contain non-ASCII characters.                             | Check the connection test parameters and use the user information without non-ASCII characters to test the connection. |
| 200                | DRS.KE0<br>045 | The user account is locked.                                                                                                                                                                   | The user account is locked.                                                                         | Contact technical support.                                                                                             |
| 200                | DRS.KE0<br>046 | The IP address that the user requested to establish a connection is not monitored by the database.                                                                                            | The IP address used by the user to request to set up a connection is not monitored by the database. | Contact technical support.                                                                                             |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                         | Description                                                   | Troubleshooting                                                                                                                                |
|--------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0<br>047 | The queue name is not exist.Handling suggestion: Check that the input queue name for the connection test are correct.                                                                 | The queue name does not exist.                                | Check whether the name of the queue entered for the connection test is correct.                                                                |
| 200                | DRS.KE0<br>048 | Failed to connect to the database.                                                                                                                                                    | Failed to connect to the database.                            | Contact technical support.                                                                                                                     |
| 200                | DRS.KE0<br>049 | Database user privilege is not enough.                                                                                                                                                | The database user does not have sufficient permissions.       | Contact technical support.                                                                                                                     |
| 200                | DRS.KE0<br>050 | The PDB database is not open.                                                                                                                                                         | Failed to open the PDB database.                              | Open the PDB database.                                                                                                                         |
| 200                | DRS.KE0<br>051 | The PDB database does not exist.                                                                                                                                                      | The PDB database does not exist.                              | Contact technical support.                                                                                                                     |
| 200                | DRS.KE0<br>052 | Versions earlier than Oracle 12c do not support PDB.                                                                                                                                  | Versions earlier than Oracle 12c do not support PDB.          | Contact technical support.                                                                                                                     |
| 200                | DRS.KE0<br>053 | Entered Oracle user has insufficient permissions.                                                                                                                                     | The entered Oracle user does not have sufficient permissions. | Contact technical support.                                                                                                                     |
| 200                | DRS.KE0<br>054 | Agent Connection Failed.Handling suggestion: Please check whether the logical replication agent is enabled or IP address and port number of the logical replication agent is correct. | Failed to connect to the agent.                               | Check whether the logical replication agent is enabled or whether the IP address and port number of the logical replication agent are correct. |
| 200                | DRS.KE0<br>055 | Password has expired.Handling suggestion: Please reset the password.                                                                                                                  | The password has expired.                                     | Reset the password.                                                                                                                            |



| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                                                                                                                                                               | Description                                                                                   | Troubleshooting                                                                                          |
|--------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0<br>056 | The current instance does not support connections on multiple IP addresses during synchronization. Possible cause: The current instance is connected to a node through multiple IP addresses, which can cause a task to fail. Handling suggestion: Select a stable node, enter the single IP address of the node, and try to connect to the instance again. | Data synchronization does not allow the instance to be connected using multiple IP addresses. | Select a stable node, enter the single IP address of the node, and try to connect to the instance again. |
| 200                | DRS.KE0<br>057 | The Kafka user name or password is incorrect.                                                                                                                                                                                                                                                                                                               | The Kafka username or password is incorrect.                                                  | Check the username and password.                                                                         |
| 200                | DRS.KE0<br>058 | The Kafka encryption certificate or certificate password is incorrect.                                                                                                                                                                                                                                                                                      | The Kafka encryption certificate or certificate password is incorrect.                        | Check the username, password, or certificate.                                                            |
| 200                | DRS.KE0<br>059 | The connected DB engine does not match the DB engine supported by the task.                                                                                                                                                                                                                                                                                 | The connected DB engine does not match the DB engine supported by the task.                   | Contact technical support.                                                                               |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                     | Description                                                                                                                                                                                                               | Troubleshooting                                                                                      |
|--------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0060     | Test connection is succeeded.Handling suggestion:<br>The Oracle database is a RAC cluster. You are advised to use the SCAN IP address as the connection. For details, see here.   | The connection test is successful.                                                                                                                                                                                        | The Oracle database is a RAC cluster. You are advised to use the SCAN IP address for the connection. |
| 200                | DRS.KE0061     | Possible reasons are:1. The node status is abnormal.2. The primary node information is not specified.3. The whitelist of pg_hba.conf is not configured.4.The network is abnormal. | Failed to test the connection. The possible causes are as follows: 1. The node is abnormal. 2. The primary node information is not specified. 3. The pg_hba.conf whitelist is not configured. 4. The network is abnormal. | Contact technical support.                                                                           |
| 200                | DRS.KE0062     | The archived space is full, need to release.                                                                                                                                      | The archive space is full and resources need to be released.                                                                                                                                                              | Clear the archive space.                                                                             |
| 200                | DRS.KE0063     | The database query result is empty. The database does not have a table or does not have the SELECT permission on the table.                                                       | The database query result is empty because the database has no tables or you do not have the SELECT permissions on the tables.                                                                                            | Contact technical support.                                                                           |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                                                                                                                                                                         | Description                                                                                 | Troubleshooting                                                                                                                                                                                                                             |
|--------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0<br>064 | The account password has expired.Handling suggestion:<br>Changing the Expired Status of a User to OPEN.Refer to the modification statement:<br>UPDATE SYS.USER \$ SET ASTATUS = 0 WHERE NAME = 'user_name'.                                                                           | The account password has expired.                                                           | Change the expiration status of the user to <b>OPEN</b> . For details, see the following statement: UPDATE SYS.USER\$ SET ASTATUS = 0 WHERE NAME = 'user_name'                                                                              |
| 200                | DRS.KE0<br>065 | Database access denied. Handling suggestion:<br>1.Check whether the database name is correct before the connection test.<br>2.Check whether the DB2 database listening port number is correct.<br>3.Check whether the DB2 server is stopped. 4.Check whether the Firewall is stopped. | Access to the database is denied.                                                           | 1. Check whether the database name is correct before the connection test. 2. Check whether the listening port number of the DB2 database is correct. 3. Check whether the DB2 server is stopped. 4. Check whether the firewall is disabled. |
| 200                | DRS.KE0<br>066 | The number of DRS task shards must be the same as the actual number of GaussDB shard nodes.                                                                                                                                                                                           | The number of DRS task shards must be the same as the actual number of GaussDB shard nodes. | Contact technical support.                                                                                                                                                                                                                  |
| 200                | DRS.KE0<br>067 | Cannot open user default database.                                                                                                                                                                                                                                                    | Failed to open the default database of the account.                                         | Contact technical support.                                                                                                                                                                                                                  |
| 200                | DRS.KE0<br>068 | The GTID format is incorrect.                                                                                                                                                                                                                                                         | The GTID format is incorrect.                                                               | Contact technical support.                                                                                                                                                                                                                  |

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                                                                                                            | Description                                                                                                         | Troubleshooting                                                                                   |
|--------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 200                | DRS.KE0069     | The specified point is unavailable, the specified point must be between the task start point and the current point.                      | The specified point is unavailable. The specified point must be between the task start point and the current point. | Contact technical support.                                                                        |
| 200                | DRS.KE0070     | Connection failed.Handling suggestion: Please check the security group/firewall/SSL configuration/pg_hba.conf whitelist of the database. | Connection failed.                                                                                                  | Check the security group, firewall, SSL configuration, and pg_hba.conf whitelist of the database. |

**Table A-5** Error codes of v5 APIs

| Statu<br>s<br>Code | Error<br>Codes | Error Message                                      | Description                                        | Troubleshooting                 |
|--------------------|----------------|----------------------------------------------------|----------------------------------------------------|---------------------------------|
| 400                | DRS.10000001   | Failed                                             | Failed to process the request.                     | Contact technical support.      |
| 400                | DRS.10020000   | Parameter error:%s                                 | Parameter error: %s.                               | Check the request parameters.   |
| 400                | DRS.10020001   | Parameter %s is null                               | The parameter %s is empty.                         | Check the request parameters.   |
| 400                | DRS.10020002   | The value of parameter %s is invalid.              | The parameter %s has an invalid value.             | Check the request parameters.   |
| 400                | DRS.10000010   | The task does not exist. Check the task ID.        | The task does not exist. Check the task ID.        | Check the task ID.              |
| 400                | DRS.10000011   | The database is abnormal.                          | A database error occurred.                         | Contact technical support.      |
| 400                | DRS.10000012   | The start time cannot be the same as the end time. | The start time cannot be the same as the end time. | Change the time in the request. |

| Statu<br>s<br>Code | Error<br>Codes   | Error Message                                                            | Description                                                                                                                         | Troubleshooting                                               |
|--------------------|------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 400                | DRS.100<br>10000 | The start time cannot be the same as the end time.                       | The start time cannot be the same as the end time.                                                                                  | Change the time in the request.                               |
| 400                | DRS.100<br>10002 | Async job param checking, Please wait param check complete and resubmit. | The parameters of the task created asynchronously are being verified. Submit the task after the parameter verification is complete. | Submit the task after the parameter verification is complete. |
| 400                | DRS.100<br>10004 | Submit job failed.                                                       | Failed to submit the task.                                                                                                          | Contact technical support.                                    |
| 400                | DRS.100<br>10006 | Create job failed.                                                       | Failed to create the task.                                                                                                          | Contact technical support.                                    |
| 400                | DRS.100<br>10007 | Test connection failed.                                                  | Failed to test the connection.                                                                                                      | Contact technical support.                                    |
| 400                | DRS.100<br>10009 | Set policy config failed,%s                                              | Failed to set the task policy, %s.                                                                                                  | Check the task policy.                                        |
| 400                | DRS.100<br>10010 | Set progressing data failed,%s                                           | Failed to set data processing rules, %s.                                                                                            | Check the data processing rules.                              |
| 400                | DRS.100<br>10011 | Set user migration data failed,%s                                        | Failed to set user migration, %s.                                                                                                   | Check the user migration settings.                            |
| 400                | DRS.100<br>10012 | Precheck failed,%s                                                       | Pre-check failed, %s.                                                                                                               | Contact technical support.                                    |
| 400                | DRS.100<br>10013 | Database param modify success, please restart the database.              | Parameters of the DB instance are modified. Restart the database.                                                                   | Restart the database.                                         |
| 400                | DRS.100<br>10014 | Start job failed,%s                                                      | Failed to start the task, %s.                                                                                                       | Contact technical support.                                    |
| 400                | DRS.100<br>10016 | %s is an EPS system tag and cannot be added manually.                    | %s is an EPS system tag and cannot be manually added.                                                                               | Check the tag parameter.                                      |

| Statu<br>s<br>Code | Error<br>Codes   | Error Message                                             | Description                                                         | Troubleshooting                   |
|--------------------|------------------|-----------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------|
| 400                | DRS.100<br>10024 | Param check failed,%s                                     | Parameter verification failed, %s.                                  | Check the parameter.              |
| 400                | DRS.100<br>10025 | The current API does not support this %s engine type now. | The current APIs do not support this type of engine.                | Modify the request parameters.    |
| 400                | DRS.100<br>10026 | Reset job failed,%s.                                      | Failed to reset the task, %s.                                       | Contact technical support.        |
| 400                | DRS.100<br>10027 | Restart job failed,%s.                                    | Failed to retry the task, %s.                                       | Contact technical support.        |
| 400                | DRS.100<br>10028 | Pause job failed,%s.                                      | Failed to pause the task, %s.                                       | Contact technical support.        |
| 400                | DRS.100<br>10029 | Teminate job failed,%s.                                   | Failed to stop the task, %s.                                        | Contact technical support.        |
| 400                | DRS.100<br>10030 | Delete job failed,%s.                                     | Failed to delete the task, %s.                                      | Contact technical support.        |
| 400                | DRS.100<br>10031 | Test connection timeout.                                  | Connection testing timed out.                                       | Contact technical support.        |
| 400                | DRS.100<br>10032 | Failed to create the comparison task,%s.                  | Failed to create the comparison task, %s.                           | Contact technical support.        |
| 400                | DRS.100<br>10033 | Query progress failed,%s.                                 | Failed to query the task progress, %s.                              | Contact technical support.        |
| 400                | DRS.100<br>20072 | Invalid projectId.                                        | Invalid project ID.                                                 | Check the project ID.             |
| 400                | DRS.100<br>20077 | Duplicate task name.                                      | Duplicate task name.                                                | Check the task name.              |
| 400                | DRS.100<br>30000 | Excel content is empty.                                   | The Excel file to be uploaded is empty.                             | Check the Excel file.             |
| 400                | DRS.100<br>30001 | Excel file size is too large, exceeds the threshold %s.   | The size of the Excel file to be uploaded exceeds the threshold %s. | Check the size of the Excel file. |

| Statu<br>s<br>Code | Error<br>Codes   | Error Message                                                                                                            | Description                                                                                                                  | Troubleshooting                         |
|--------------------|------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 400                | DRS.100<br>30002 | Excel has more than one sheet.                                                                                           | The Excel file to be uploaded contains more than one sheet.                                                                  | Check the number of files in the Excel. |
| 400                | DRS.100<br>30003 | The object name is invalid.                                                                                              | The object name is invalid.                                                                                                  | Check the object name.                  |
| 400                | DRS.100<br>30004 | Support the file name extension can be ZIP, JSON, TXT, or Excel 2007 or later (with the file name extension .xlsx/.xls). | Files in the format of ZIP, JSON, TXT, and Excel 2007 or later (with the file name extension .xlsx or .xls) can be imported. | Check the format of the Excel file.     |
| 400                | DRS.100<br>30005 | Export excel fail.                                                                                                       | Failed to export the Excel file.                                                                                             | Contact technical support.              |
| 400                | DRS.100<br>30006 | The file name format is %s.                                                                                              | The file name can contain only %s.                                                                                           | Check the file name.                    |
| 400                | DRS.100<br>30007 | The supported file format is .xls or .xlsx. Please check.                                                                | The file format must be <b>.xls</b> or <b>.xlsx</b> .                                                                        | Check the file format.                  |
| 400                | DRS.100<br>30008 | Failed to download the file.                                                                                             | Failed to download the file.                                                                                                 | Contact technical support.              |
| 400                | DRS.100<br>30009 | Failed to export data, because %s.                                                                                       | Failed to export data due to %s.                                                                                             | Contact technical support.              |
| 400                | DRS.100<br>30010 | The information of imported database is empty. Please check.                                                             | The database information is empty.                                                                                           | Check the imported file.                |
| 400                | DRS.100<br>30011 | The number of selection database exceeds the limit of 5000.                                                              | More than 5000 databases are selected.                                                                                       | Check the imported file.                |
| 400                | DRS.100<br>30012 | Failed to import the Excel file.                                                                                         | Failed to import the Excel file.                                                                                             | Contact technical support.              |
| 400                | DRS.100<br>20111 | The length exceeds %s.                                                                                                   | The length exceeds %s.                                                                                                       | Check the parameter length.             |

| Status Code | Error Codes      | Error Message                | Description                      | Troubleshooting             |
|-------------|------------------|------------------------------|----------------------------------|-----------------------------|
| 400         | DRS.100<br>60015 | Task is waiting for running. | The task is waiting for running. | Check the parameter length. |

## A.4 Task Statuses

**Table A-6** Task Statuses

| Status                    | Description                                                                        |
|---------------------------|------------------------------------------------------------------------------------|
| CREATING                  | The schema is being created.                                                       |
| CREATE_FAILED             | Creation failed                                                                    |
| CONFIGURATION             | Configuring                                                                        |
| STARTJOBING               | Starting                                                                           |
| WAITING_FOR_START         | The task is being started.                                                         |
| START_JOB_FAILED          | Failed to start one or more tasks.                                                 |
| PAUSING                   | The task is being paused.                                                          |
| FULL_TRANSFER_STARTED     | Full migration is in progress, and the DR scenario is initialized.                 |
| FULL_TRANSFER_FAILED      | Full migration failed. Initialization failed in the DR scenario.                   |
| FULL_TRANSFER_COMPLETE    | Full migration is complete, and the initialization is complete in the DR scenario. |
| INCRE_TRANSFER_STARTED    | Incremental migration is being performed, and the DR task is in progress.          |
| INCRE_TRANSFER_FAILED     | Incremental migration fails and a DR exception occurs.                             |
| RELEASE_RESOURCE_STARTED  | Completing                                                                         |
| RELEASE_RESOURCE_FAILED   | Stopping task failed                                                               |
| RELEASE_RESOURCE_COMPLETE | Completed                                                                          |
| CHANGE_JOB_STARTED        | The task is being modified.                                                        |
| CHANGE_JOB_FAILED         | Modifying task failed                                                              |



| Status                          | Description                        |
|---------------------------------|------------------------------------|
| CHILD_TRANSFER_STARTING         | The subtask is being started.      |
| CHILD_TRANSFER_STARTED          | The subtask is being migrated.     |
| CHILD_TRANSFER_COMPLETE         | The subtask migration is complete. |
| CHILD_TRANSFER_FAILED           | Failed to migrate the subtask.     |
| RELEASE_CHILD_TRANSFER_STARTED  | The subtask is being completed.    |
| RELEASE_CHILD_TRANSFER_COMPLETE | The subtask is complete.           |

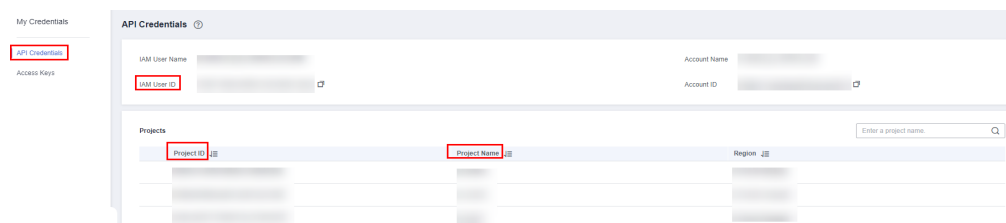
## A.5 Obtaining a Project ID

### Obtaining a Project ID from the Console

A project ID needs to be specified in the URLs of some APIs. Therefore, you need to obtain a project ID before calling such APIs. To do so, perform the following operations:

- Step 1** Sign up and log in to the management console.
- Step 2** Click the username and choose **My Credentials** from the drop-down list.
- Step 3** On the **API Credentials** page, view the project ID in the project list.

**Figure A-1** Obtaining the Project ID



If there are multiple projects in one region, expand **Region** and view subproject IDs in the **Project ID** column.

----End

### Obtaining the Project ID by Calling an API

You can also obtain the project ID by calling the API used to [query project information based on the specified criteria](#).

The API used to obtain a project ID is **GET https://{endpoint}/v3/projects/**, where *{endpoint}* indicates the IAM endpoint. You can obtain the IAM endpoint from [Regions and Endpoints](#). For details about API authentication, see [Authentication](#).

The following is an example response. The value of **id** is the project ID.

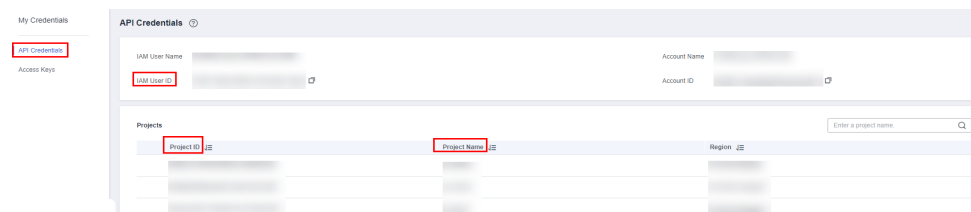
```
{
 "projects": [
 {
 "domain_id": "65382450e8f64ac0870cd180d14e684b",
 "is_domain": false,
 "parent_id": "65382450e8f64ac0870cd180d14e684b",
 "name": "cn-xianhz-1",
 "description": "",
 "links": {
 "next": null,
 "previous": null,
 "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
 },
 "id": "a4a5d4098fb4474fa22cd05f897d6b99",
 "enabled": true
 }
],
 "links": {
 "next": null,
 "previous": null,
 "self": "https://www.example.com/v3/projects"
 }
}
```

## A.6 Obtaining an Account ID

An account ID is required for some URLs when an API is called. To obtain an account ID, perform the following operations:

- Step 1** Sign up and log in to the management console.
- Step 2** Click the username and choose **My Credentials** from the drop-down list.  
On the **API Credentials** page, view **Account ID**.

Figure A-2 Obtaining the account ID



----End

## A.7 Obtaining a Task ID

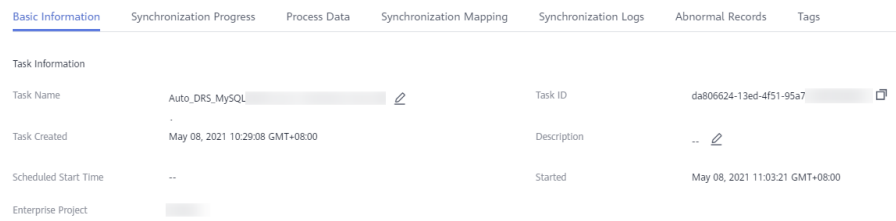
A task ID is required for some URLs when an API is called. This section describes how to obtain a task ID.

### Obtaining a Task ID from the Console

- Step 1** You have logged in to the DRS management console.
- Step 2** In the task list, view the task ID.

Alternatively, click the task name and view the task ID on the **Basic Information** tab.

**Figure A-3** Basic information



----End

## Obtaining a Task ID Through an API

You can also obtain the task ID by calling the API in [Creating Tasks in Batches](#).

The following is an example response after a task is successfully created. In the response, **id** indicates the task ID.

```
{
 "results": [{
 "id": "e11eaf8f-71ef-4fad-8890-aed7572ajb11",
 "name": "DRS-9228",
 "status": "CREATING",
 "create_time": "1599188556112"
 }],
 "count": 1
}
```

## A.8 Engine Types

For details about the value of each engine type, see [Engine Types](#).

**Table A-7** Engine type description

| Engine Type (engine_type)  | Description                                                           | Source Database Value (db_type) | Destination Database Value (db_type) |
|----------------------------|-----------------------------------------------------------------------|---------------------------------|--------------------------------------|
| mysql                      | Used for data migration and data synchronization from MySQL to MySQL. | mysql                           | mysql                                |
| mongodb                    | Used for data migration from MongoDB to DDS.                          | mongodb                         | mongodb                              |
| redis-to-gaussredis        | Used for data migration from Redis to GeminiDB Redis.                 | redis                           | gaussredis                           |
| rediscluster-to-gaussredis | Used for data migration from cluster Redis to GeminiDB Redis.         | rediscluster                    | gaussredis                           |

| Engine Type (engine_type) | Description                                                                    | Source Database Value (db_type) | Destination Database Value (db_type) |
|---------------------------|--------------------------------------------------------------------------------|---------------------------------|--------------------------------------|
| cloudDataGuard-mysql      | Used for disaster recovery from MySQL to MySQL.                                | mysql                           | mysql                                |
| gaussdbv5                 | Used for data synchronization from GaussDB Distributed to GaussDB Distributed. | gaussdbv5                       | gaussdbv5                            |
| mysql-to-kafka            | Used from data synchronization from MySQL to Kafka.                            | mysql                           | kafka                                |
| taurus-to-kafka           | Used from data synchronization from GaussDB(for MySQL) to Kafka.               | taurus                          | kafka                                |
| gaussdbv5ha-to-kafka      | Used from data synchronization from GaussDB Primary/Standby to Kafka.          | gaussdbv5ha                     | kafka                                |
| postgresql                | Used from data synchronization from PostgreSQL to PostgreSQL.                  | postgresql                      | postgresql                           |
| oracle-to-gaussdbv5       | Used for data synchronization from Oracle to GaussDB Distributed.              | oracle                          | gaussdbv5                            |

## A.9 Status Code

[Table A-8](#) describes status codes.

**Table A-8** Status code

| Status Code | Code     | Description                                                                                                                                                                                         |
|-------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 100         | Continue | The client should continue with its request. This interim response is used to inform the client that the initial part of the request has been received and has not yet been rejected by the server. |

| Status Code | Code                          | Description                                                                                                                                                                                                                              |
|-------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 101         | Switching Protocols           | The protocol should be switched. The protocol can only be switched to a more advanced protocol.<br>For example, the current HTTP protocol is switched to a later version.                                                                |
| 200         | OK                            | Request succeeded.                                                                                                                                                                                                                       |
| 201         | Created                       | The request for creating a resource or task has been fulfilled.                                                                                                                                                                          |
| 202         | Accepted                      | The request has been accepted, but the processing has not been completed.                                                                                                                                                                |
| 203         | Non-Authoritative Information | Unauthorized information. The request is successful.                                                                                                                                                                                     |
| 204         | NoContent                     | The server has successfully processed the request, but has not returned any content.<br>The status code is returned in response to an HTTP OPTIONS request.                                                                              |
| 205         | Reset Content                 | The server has fulfilled the request, but the requester is required to reset the content.                                                                                                                                                |
| 206         | Partial Content               | The server has processed certain GET requests.                                                                                                                                                                                           |
| 300         | Multiple Choices              | There are multiple options for the location of the requested resource. The response contains a list of resource characteristics and addresses from which the user or user agent (such as a browser) can choose the most appropriate one. |
| 301         | Moved Permanently             | The requested resource has been assigned a new permanent URI, and the new URI is contained in the response.                                                                                                                              |
| 302         | Found                         | The requested resource was temporarily moved.                                                                                                                                                                                            |
| 303         | See Other                     | Retrieve a location.<br>The response to the request can be found under a different URI and should be retrieved using a GET or POST method.                                                                                               |
| 304         | Not Modified                  | The requested resource has not been modified. In such a case, there is no need to retransmit the resource since the client still has a previously-downloaded copy.                                                                       |
| 305         | Use Proxy                     | The requested resource must be accessed through a proxy.                                                                                                                                                                                 |

| Status Code | Code                          | Description                                                                                                                                                                                                                                  |
|-------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 306         | Unused                        | The HTTP status code is no longer used.                                                                                                                                                                                                      |
| 400         | BadRequest                    | Invalid request.<br>The client should not repeat the request without modifications.                                                                                                                                                          |
| 401         | Unauthorized                  | The status code is returned after the client provides the authentication information, indicating that the authentication information is incorrect or invalid.                                                                                |
| 402         | Payment Required              | This status code is reserved for future use.                                                                                                                                                                                                 |
| 403         | Forbidden                     | The request is rejected.<br>The server has received and understood the request; yet it refused to respond, because the request is set to deny access. Do not retry the request before modification.                                          |
| 404         | NotFound                      | The requested resource cannot be found.<br>The client should not repeat the request without modifications.                                                                                                                                   |
| 405         | MethodNotAllowed              | The method specified in the request is not supported for the requested resource.<br>The client should not repeat the request without modifications.                                                                                          |
| 406         | Not Acceptable                | The server cannot fulfill the request according to the content characteristics of the request.                                                                                                                                               |
| 407         | Proxy Authentication Required | This status code is similar to 401, but indicates that the client must first authenticate itself with the proxy.                                                                                                                             |
| 408         | Request Time-out              | The server timed out waiting for the request.<br>The client may repeat the request without modifications at any later time.                                                                                                                  |
| 409         | Conflict                      | The request could not be processed due to a conflict.<br>This status code indicates that the resource that the client attempts to create already exists, or the request fails to be processed because of the update of the conflict request. |
| 410         | Gone                          | The requested resource is no longer available.<br>The requested resource has been deleted permanently.                                                                                                                                       |

| Status Code | Code                            | Description                                                                                                                                                                                                                                                                                                                                         |
|-------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 411         | Length Required                 | The server refuses to process the request without a defined Content-Length.                                                                                                                                                                                                                                                                         |
| 412         | Precondition Failed             | The server does not meet one of the preconditions that the requester puts on the request.                                                                                                                                                                                                                                                           |
| 413         | Request Entity Too Large        | The request is larger than that a server is able to process. The server may close the connection to prevent the client from continuing the request. If the server temporarily cannot process the request, the response will contain a Retry-After header field.                                                                                     |
| 414         | Request-URI Too Large           | The URI provided was too long for the server to process.                                                                                                                                                                                                                                                                                            |
| 415         | Unsupported Media Type          | The server is unable to process the media format in the request.                                                                                                                                                                                                                                                                                    |
| 416         | Requested range not satisfiable | The requested range is invalid.                                                                                                                                                                                                                                                                                                                     |
| 417         | Expectation Failed              | The server fails to meet the requirements of the Expect request-header field.                                                                                                                                                                                                                                                                       |
| 422         | UnprocessableEntity             | The request is well-formed but is unable to be processed due to semantic errors.                                                                                                                                                                                                                                                                    |
| 429         | TooManyRequests                 | The client has sent more requests than its rate limit is allowed within a given amount of time, or the server has received more requests than it is able to process within a given amount of time. In this case, it is advisable for the client to re-initiate requests after the time specified in the Retry-After header of the response expires. |
| 500         | InternalServerError             | The server is able to receive the request but it could not understand the request.                                                                                                                                                                                                                                                                  |
| 501         | Not Implemented                 | The server does not support the requested function.                                                                                                                                                                                                                                                                                                 |
| 502         | Bad Gateway                     | The server acting as a gateway or proxy receives an invalid response from a remote server.                                                                                                                                                                                                                                                          |
| 503         | ServiceUnavailable              | The requested service is invalid.<br>The client should not repeat the request without modifications.                                                                                                                                                                                                                                                |
| 504         | ServerTimeout                   | The request cannot be fulfilled within a given time. The response will reach the client only if the request carries a timeout parameter.                                                                                                                                                                                                            |

| Status Code | Code                       | Description                                                                |
|-------------|----------------------------|----------------------------------------------------------------------------|
| 505         | HTTP Version not supported | The server does not support the HTTP protocol version used in the request. |



# B Change History

| Released On | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2024-03-14  | <p>This issue is the tenth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added the <b>public_ip_config</b> field in <a href="#">Creating Tasks in Batches</a>, <a href="#">Creating a Task, Asynchronously</a>, <a href="#">Creating Tasks in Batches</a>, and <a href="#">Performing Operations on a Task with a Specified ID</a>.</li><li>• Added the <b>ddl_topic</b> field in <a href="#">Configuring Synchronization Policies in Batches</a>.</li><li>• Added <a href="#">Querying Available Node Specifications</a>.</li><li>• Added <a href="#">Adding Resource Tags in Batches</a>.</li><li>• Added <a href="#">Deleting Resource Tags in Batches</a>.</li><li>• Added <a href="#">Querying the Resource Instance List</a>.</li><li>• Added <a href="#">Querying the Number of Resource Instances</a>.</li><li>• Added <a href="#">Querying Tags of a Task</a>.</li><li>• Added <a href="#">Querying Tags of a Specified Project</a>.</li></ul> |
| 2024-01-11  | <p>This issue is the ninth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added <a href="#">Updating Task Parameters</a>.</li><li>• Added <a href="#">Querying Task Parameter Configuration List</a>.</li><li>• Added <a href="#">Querying Task Parameter Change History</a>.</li><li>• Supported the creation of migration tasks from Redis to GeminiDB Redis and from cluster Redis to GeminiDB Redis using v5 APIs.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Released On | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023-11-23  | <p>This issue is the eighth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"> <li>• Added the <b>is_show_breakpoint_position</b> field in <a href="#">Stopping or Deleting Tasks in Batches</a>.</li> <li>• Added the <b>incre_trans_delay_millis</b> field in <a href="#">Querying Task Progress in Batches</a>.</li> <li>• Added the <b>file_and_position</b> and <b>gtid_set</b> fields in <a href="#">Configuring Synchronization Policies in Batches</a>.</li> <li>• Added the <b>dml_types</b> field in <a href="#">Updating Details About a Task with a Specified ID</a>.</li> <li>• Added the <b>dml_types</b> field in <a href="#">Asynchronously Creating Tasks in Batches</a>.</li> <li>• Added the <b>dml_types</b> field in <a href="#">Updating Details About Tasks Created Asynchronously in Batches with a Specified ID</a>.</li> <li>• Added the <b>dml_types</b> field in <a href="#">Querying Task Details</a>.</li> <li>• Added the <b>connection_management</b> and <b>dml_types</b> fields in <a href="#">Querying Details About Tasks Created Asynchronously in Batches with a Specified ID</a>.</li> <li>• Added the <b>connection_management</b> field in <a href="#">Querying Task Details</a>.</li> <li>• Added <a href="#">Uploading a Driver File</a>.</li> <li>• Added <a href="#">Deleting a Driver File</a>.</li> <li>• Added <a href="#">Synchronizing a Driver File</a>.</li> <li>• Added <a href="#">Querying the Driver File List</a>.</li> </ul> |
| 2023-11-02  | <p>This issue is the seventh official release, which incorporates the following changes:</p> <ul style="list-style-type: none"> <li>• Added <a href="#">Collecting Database Position Information</a>.</li> <li>• Added <a href="#">Obtaining the Result for Querying Database Position</a>.</li> <li>• Added request examples in section <a href="#">Updating Details About a Task with a Specified ID</a>.</li> <li>• Added request examples in section <a href="#">Performing Operations on a Task with a Specified ID</a>.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2023-08-30  | <p>This issue is the sixth official release, which incorporates the following change:</p> <ul style="list-style-type: none"> <li>• Added the <b>v5 APIs</b> for DRS.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Released On | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023-05-11  | <p>This issue is the fifth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"> <li>• Added the <b>data_transformation</b> and <b>tags</b> fields to "Response Parameters" of <a href="#">Querying Task Details in Batches</a>.</li> <li>• Added the <b>apply_bytes_rate</b> field to "Response Parameters" of <a href="#">Querying DR Monitoring Data</a>.</li> <li>• Added <b>Error Code</b> related to the connection test.</li> </ul> |
| 2023-04-21  | <p>This issue is the fourth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"> <li>• Allowed users to create MySQL-to-Kafka and GaussDB(for MySQL)-to-Kafka synchronization tasks using v3 APIs.</li> <li>• Added the <b>job_action</b> field in <a href="#">Querying Tasks of a Tenant</a>.</li> <li>• Added the <b>original_job_direction</b> field in <a href="#">Querying Task Details in Batches</a>.</li> </ul>                   |
| 2022-12-29  | <p>This issue is the third official release, which incorporates the following changes:</p> <ul style="list-style-type: none"> <li>• Yearly/Monthly tasks can be created using v3 APIs.</li> <li>• Added the <b>object_infos</b> field in <a href="#">Querying Task Details in Batches</a>.</li> </ul>                                                                                                                                                                                   |
| 2022-12-01  | <p>This issue is the second official release, which incorporates the following changes:</p> <ul style="list-style-type: none"> <li>• Adjusted v3 APIs to <a href="#">APIs V3.0 (Recommended)</a> and <a href="#">APIs V3.0 (Deprecated)</a>.</li> </ul>                                                                                                                                                                                                                                 |
| 2022-10-15  | <p>This is the first official release.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                              |