

Data Replication Service

OpenAPI Reference

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1 Before You Start

- [1.1 Overview](#)
- [1.2 API Calling](#)
- [1.3 Endpoints](#)
- [1.4 Constraints](#)
- [1.5 Basic Concepts](#)

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 [2 API Overview](#).

Before calling DRS APIs, ensure that you have understood the concepts related to DRS. For more information, see **Product Introduction** in *Data Replication Service User Guide*.

1.2 API Calling

- DRS provides Representational State Transfer (REST) APIs.
- You can call APIs through HTTPS.
- For details, see [3 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](#).

1.4 Constraints

- The number of DRS tasks that you can create cannot exceed your quota.
- DRS APIs support only MySQL-to-MySQL migration and synchronization, MongoDB-to-DDS migration, MySQL-to-TaurusDB 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.

1.5 Basic Concepts

Account

An account is created upon successful registration. 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

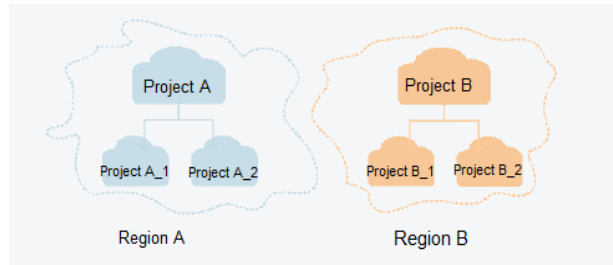
An AZ comprises one or multiple physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical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

Project

A project corresponds to a 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 APIs

Type	Subtype	Description
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.

3 Calling APIs

- 3.1 Making an API Request
- 3.2 Authentication
- 3.3 Returned Values

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 .
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.

 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.

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.

Name	Description	Mandatory	Example
Content-Length	Length of the request body. The unit is byte.	- 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://{Endpoint}/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** 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](#).

```
POST https://{endpoint}/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.

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.

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://{endpoint}/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 [A.8 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 3-1 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 3-1 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-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5
x-subject-token → MIBVXQYJKsZDhwCNAQcCdBTJCCGEsCAQcDOTALBglgHqg8ZOMEAgEwgharBglqghG9w08BwGggghac8IIMmHsIdG9ZW4fOnoZDhwXlk19hC1GjwMTM4MORMTNUMGfj3KJdRyglpYNNRbW2eZ5eb78SZOwqJcGkqQ1wAIGzrpd1BLGXK5xIdq4lqHCYb8P4NaY0NYejcAgzJVeFYlWT1GS00sxKZmkHQJ82HqHdgZCO9fuEbL5dMhdanj+33wBfjHRCF9I87o+k9-j+CMZSEB7bUgd5Uj6eRASX01jppPEGA270g1Fruol6jggfKkNPQuFSOU8+uSttVwRtnfsc+qTp22Rkd5MCqfGQ8LcuUxC3a+9CMBnOintWW7oeRUvhVpxk8psXlwTEboX-RzTGmUbpvGw-oPNFYxIECKnoH3HRozv0N--n5d6Nbvq==
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": "az-01",
            .....
          }
        ]
      }
    ]
  }
}
```

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 APIs

- 4.1 Public API Management
- 4.2 Real-Time Migration Management
- 4.3 Real-Time Synchronization Management
- 4.4 Real-Time Disaster Recovery Management

4.1 Public API Management

4.1.1 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.

URI

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

Table 4-1 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-2 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: • en-us • zh-cn

Table 4-3 Request body parameters

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

Table 4-4 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 and must start with a letter. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_). • Minimum length: 4 characters • Maximum length: 50 characters

Parameter	Mandatory	Type	Description
db_use_type	Yes	String	Migration scenario. Values: • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.
engine_type	Yes	String	Engine type of a DRS task. Values: • mysql: migration and synchronization from MySQL to MySQL • mongodb: migration from MongoDB to DDS • cloudDataGuard-mysql: DR from MySQL to MySQL • postgresql: synchronization from PostgreSQL to PostgreSQL • oracle-to-gaussdbv5: synchronization from Oracle to GaussDB Distributed • oracle-to-gaussdbv5ha: synchronization from Oracle to GaussDB Centralized • gaussdbv5-to-oracle: synchronization from GaussDB Distributed to Oracle • gaussdbv5ha-to-oracle: synchronization from GaussDB Centralized to Oracle • gaussdbv5-to-kafka: synchronization from GaussDB Distributed to Kafka

Parameter	Mandatory	Type	Description
job_direction	Yes	String	Task direction. Values: • up: to-the-cloud scenarios and DR scenarios where the current cloud is the standby. • down: out-of-cloud scenarios and DR scenarios where the current cloud is the active. • 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.
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: • vpn • vpc • eip The VPC network cannot be selected in the DR scenario.

Parameter	Mandatory	Type	Description
node_type	Yes	String	Specifications. Values: • micro: minimum specifications. • small: small specifications. • medium: medium specifications. • high: large specifications. • xlarge: ultra-large specifications. • 2xlarge: maximum specifications.
node_num	No	Integer	The number of nodes. 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. 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.
source_endpoint	Yes	Object	The source database information. For details, see Table 4-5.
target_endpoint	Yes	Object	The destination database information. For details, see Table 4-5.

Parameter	Mandatory	Type	Description
task_type	Yes	String	Task mode. The default value is FULL_INCR_TRANS. Values: • FULL_TRANS: full migration • FULL_INCR_TRANS: full +incremental migration • INCR_TRANS: incremental migration In the single-active DR scenario, only FULL_INCR_TRANS is available.
tags	No	Array of object	Tag information. Up to 20 tags can be added. For details, see Table 4-7.
description	No	String	Task description. The task description can contain a maximum of 256 characters and cannot contain the following special characters: ! <>'&"\
multi_write	No	Boolean	• This parameter is mandatory when db_use_type is set to cloudDataGuard. • 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 4-7.

Parameter	Mandatory	Type	Description
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 .
public_ip_list	No	Array of objects	Information about a specified EIP. For details, see Table 4-8 .
is_open_fast_clean	No	Boolean	Specifies whether to enable binlog clearing for RDS for MySQL or RDS for MariaDB. If this parameter is not transferred, the default value false is used, indicating that quick binlog clearing is disabled.

Table 4-5 Data structure description of fields **source_endpoint** and **target_endpoint**

Parameter	Mandatory	Type	Description
db_type	No	String	Database type. Values: • mysql: MySQL • mongodb: MongoDB • postgresql: PostgreSQL • oracle: Oracle
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 .

Parameter	Mandatory	Type	Description
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.
project_id	No	String	If the database is a cloud DB instance, set this parameter to the project ID in the region where the DB instance is located. Otherwise, set this parameter to the project ID in the region where the current task is located. For details, see A.5 Obtaining a Project ID .
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: ● 0: Normal cluster ● 1: Security cluster

Parameter	Mandatory	Type	Description
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.
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+
kafka_security_config	No	Object	This parameter is only for Kafka security authentication. For details, see Table 4-6 .

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

Parameter	Mandatory	Type	Description
type	No	String	Security protocol. This parameter is mandatory for security authentication. The corresponding field for Kafka is security.protocol. • PLAINTEXT: No security authentication mode is available. You only need to enter an IP address and a port number. • SASL_PLAINTEXT: The SASL mechanism is used to connect to Kafka, and you need to configure SASL parameters. • SSL: The SSL encryption is used to connect to Kafka, and you need to configure SSL parameters. • SASL_SSL: The SASL and SSL encryption authentication modes are used. You need to configure SSL and SASL parameters. Enumerated values: • PLAINTEXT • SASL_PLAINTEXT • SASL_SSL • SSL
trust_store_key_name	No	String	Certificate name. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL.
trust_store_key	No	String	Value of the security certificate after Base64 transcoding. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL.
trust_store_password	No	String	Certificate password. This parameter is mandatory when a password is set for the certificate.

Parameter	Mandatory	Type	Description
endpoint_algorithm	No	String	Host name endpoint identification algorithm, which specifies the endpoint identification algorithm for verifying the server host name using the server certificate. If this parameter is left blank, host name verification is disabled. The corresponding field for Kafka is ssl.endpoint.identification.algorithm .
sasl_mechanism	No	String	SASL mechanism used for client connection. The corresponding field for Kafka is sasl.mechanism . The values are as follows: • GSSAPI • PLAIN • SCRAM-SHA-256 • SCRAM-SHA-512
delegation_to_kens	No	Boolean	Whether to use token authentication. This parameter is valid only when the security protocol is set to SASL_SSL or SASL_PLAINTEXT and the SASL mechanism is set to SCRAM-SHA-256 or SCRAM-SHA-512 .
enable_key_store	No	Boolean	Whether to enable two-way SSL authentication.
key_store_key	No	String	Keystore certificate. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_key_name	No	String	Keystore certificate name. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_password	No	String	Keystore certificate password. This parameter is mandatory when a password is set for the certificate. The corresponding field for Kafka is ssl.keystore.password .

Parameter	Mandatory	Type	Description
set_private_key_password	No	Boolean	Whether to set the keystore private key password. The default value is false .
key_password	No	String	Keystore private key password. This parameter is mandatory when two-way SSL authentication is enabled and set_private_key_password is set to true . The corresponding field for Kafka is ssl.key.password .

Table 4-7 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 4-8 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. • 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: • master • slave

Response Parameters

Status code: 202

Table 4-9 Response body parameters

Parameter	Type	Description
results	Array of objects	The response body for creating tasks in batches. For details, see Table 4-10 .
count	Integer	Total number of records.

Table 4-10 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": "region-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": "region-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": "region-1",
    "db_type": "mongodb",
    "inst_id": "3cadd5a0ef724f55ac7fa5bcb5f4fc5fin02"
  },
  "bind_eip": true
}]
}
```

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
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.2 Testing Connections in Batches

Function

This API is used to test connections in batches.

Constraints

- After the task is created, you can test the connection only when the task status is **CONFIGURATION**.

URI

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

Table 4-11 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-12 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: • en-us • zh-cn

Table 4-13 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of requests for testing connections in batches. For details, see Table 4-14 .

Table 4-14 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.

Parameter	Mandatory	Type	Description
net_type	Yes	String	Network type. Value: • vpn • vpc • eip
db_type	Yes	String	Database type. Value: • mysql: MySQL • mongodb: MongoDB • postgresql: PostgreSQL • oracle: Oracle
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 .
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 .

Parameter	Mandatory	Type	Description
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 database is located. This parameter is mandatory when the network type is set to VPC.
subnet_id	No	String	ID of the subnet where the database is located. This parameter is mandatory when the network type is set to VPC.
end_point_type	Yes	String	Source database: so . Destination database: ta . Default value: so Values: • 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.

Response Parameters

Status code: 200

Table 4-15 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for the batch test connection. For details, see Table 4-16 .
count	Integer	Total number of records.

Table 4-16 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Test result. Value: • 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": "region-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": "region-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"
  } ]
}
```

- Creating a real-time synchronization task from MySQL to Kafka and setting the Kafka authentication mode to PLAINTEXT

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

```
{
  "jobs": [
    {
      "id": "3bc38fe4-da50-4aad-903e-5db76d8jb20i",
      "ip": "xxxxxxx:xxxx",
      "net_type": "eip",
      "db_type": "kafka",
      "project_id": "5237e10fe9aa4ad5b16b6a5245248314",
      "end_point_type": "ta",
      "kafka_security_config": {
        "type": "PLAINTEXT"
      }
    }
  ]
}
```

- Creating a real-time synchronization task from MySQL to Kafka and setting the Kafka authentication mode to SASL_PLAINTEXT

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

```
{
  "jobs": [
    {
      "id": "3bc38fe4-da50-4aad-903e-5db76d8jb20i",
      "ip": "xxxxxxx:xxxx",
      "net_type": "eip",
      "db_type": "kafka",
      "db_user": "xxxxxxx",
      "db_password": "xxxxxxx",
      "project_id": "5237e10fe9aa4ad5b16b6a5245248314",
      "end_point_type": "ta",
      "kafka_security_config": {
        "type": "SASL_PLAINTEXT",
        "sasl_mechanism": "PLAIN"
      }
    }
  ]
}
```

- Creating a real-time synchronization task from MySQL to Kafka and setting the Kafka authentication mode to SSL

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

```
{
  "jobs": [
    {
      "id": "3bc38fe4-da50-4aad-903e-5db76d8jb20i",
      "ip": "xxxxxxx:xxxx",
      "net_type": "eip",

```

```
"db_type": "kafka",
"project_id": "5237e10fe9aa4ad5b16b6a5245248314",
"end_point_type": "ta",
"kafka_security_config": {
  "type": "SSL",
  "trust_store_key_name": "client.truststore.jks",
  "trust_store_key": "xxxxxx",
  "trust_store_password": "xxxxxx",
  "endpoint_algorithm": "",
  "enable_key_store": false
}
}
```

- Creating a real-time synchronization task from MySQL to Kafka and setting the Kafka authentication mode to SASL_SSL

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

```
{
  "jobs": [
    {
      "id": "3bc38fe4-da50-4aad-903e-5db76d8jb20i",
      "ip": "xxxxxxx:xxxx",
      "net_type": "eip",
      "db_type": "kafka",
      "db_user": "xxxxxxx",
      "db_password": "xxxxxxx",
      "project_id": "5237e10fe9aa4ad5b16b6a5245248314",
      "end_point_type": "ta",
      "kafka_security_config": {
        "type": "SSL",
        "trust_store_key_name": "client.truststore.jks",
        "trust_store_key": "xxxxxx",
        "trust_store_password": "xxxxxx",
        "endpoint_algorithm": "",
        "enable_key_store": false
      }
    }
  ]
}
```

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 [A.3 Error Code](#).

4.1.3 Testing Connections in Batches (Cluster Mode)

Function

- This API is used to test connections in cluster mode.

Constraints

- After the task is created, you can test the connection only when the task status is **CONFIGURATION**.

URI

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

Table 4-17 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-18 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: en-us zh-cn

Table 4-19 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Requests for testing cluster connections in batches. For details, see Table 4-20 .

Table 4-20 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. NOTE Combine the parameters in Table 4-21 into a JSON file and escape the JSON file.

Table 4-21 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: • true • false
nettype	Yes	String	Network type. Valid values: • vpn • vpc • eip

Name	Mandatory	Type	Description
endpointtype	Yes	String	Endpoint type. Valid values: • 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.
dbName	Yes	String	Database name.
instid	No	String	DB instance ID. This parameter is mandatory for cloud DB instances.
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.
kafkaSecurityConfig	No	Object	This parameter is mandatory when the Kafka authentication mode is set to a security authentication mode. For details, see Table 4-22 .

Table 4-22 Data structure description of field **kafkaSecurityConfig**

Parameter	Mandatory	Type	Description
type	No	String	Security protocol. This parameter is mandatory for security authentication. The corresponding field for Kafka is security.protocol. • PLAINTEXT: No security authentication mode is available. You only need to enter an IP address and a port number. • SASL_PLAINTEXT: The SASL mechanism is used to connect to Kafka, and you need to configure SASL parameters. • SSL: The SSL encryption is used to connect to Kafka, and you need to configure SSL parameters. • SASL_SSL: The SASL and SSL encryption authentication modes are used. You need to configure SSL and SASL parameters. Enumerated values: • PLAINTEXT • SASL_PLAINTEXT • SASL_SSL • SSL
trust_store_key_name	No	String	Certificate name. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL.
trust_store_key	No	String	Value of the security certificate after Base64 transcoding. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL.
trust_store_password	No	String	Certificate password. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL.

Parameter	Mandatory	Type	Description
endpoint_algorithm	No	String	Host name endpoint identification algorithm, which specifies the endpoint identification algorithm for verifying the server host name using the server certificate. If this parameter is left blank, host name verification is disabled. The corresponding field for Kafka is ssl.endpoint.identification.algorithm .
sasl_mechanism	No	String	SASL mechanism used for client connection. The corresponding field for Kafka is sasl.mechanism . The values are as follows: • GSSAPI • PLAIN • SCRAM-SHA-256 • SCRAM-SHA-512
delegation_to_kens	No	Boolean	Whether to use token authentication. This parameter is valid only when the security protocol is set to SASL_SSL or SASL_PLAINTEXT and the SASL mechanism is set to SCRAM-SHA-256 or SCRAM-SHA-512 .
enable_key_store	No	Boolean	Whether to enable two-way SSL authentication.
key_store_key	No	String	Keystore certificate. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_key_name	No	String	Keystore certificate name. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_password	No	String	Keystore certificate password. This parameter is mandatory when two-way SSL authentication is enabled. The corresponding field for Kafka is ssl.keystore.password .

Parameter	Mandatory	Type	Description
set_private_key_password	No	Boolean	Whether to set the keystore private key password. The default value is false .
key_password	No	String	Keystore private key password. This parameter is mandatory when two-way SSL authentication is enabled and set_private_key_password is set to true . The corresponding field for Kafka is ssl.key.password .

Response Parameters

Status code: 200

Table 4-23 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for the batch test connection. For details, see Table 4-24 .
count	Integer	Total number of records.

Table 4-24 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Test result. Value: • true: indicates that the connection test is successful. • false: 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 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\"}]"]
  } ]
}
```

- Creating a real-time primary/standby synchronization task from MySQL to Kafka and setting the Kafka authentication mode to SASL_PLAINTEXT
<https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/cluster/batch-connection>

```
{
  "jobs": [
    {
      "action": "testConnection",
      "job_id": "f85c660b-c4d0-4571-ac53-629d906jb20i",
      "property": "[{"ip":"xxxxxx:xxxx","dbtype":"kafka","dbuser":"xxxxxx","dbpassword",
      "\", \"xxxxxx\", \"ssllink\":false, \"projectId\":\"5237e10fe9aa4ad5b16b6a5245248314\", \"region",
      "\", \"region-1\", \"vpcid\":\"f7ea6af9-dee8-456f-b3d7-0cc34b4c9cbf\", \"subnetid",
      "\", \"b04c1704-5bd9-4195-9bda-ea2a14e0537e\", \"kafkaSecurityConfig\":{\"type\":\"SASL_PLAINTEXT",
      "\", \"sas_mechanism\":\"PLAIN\"}, \"nettype\":\"vpc\", \"dbUseType\":\"sync\", \"endpointtype\":\"ta\"}]"]
    }
  ]
}
```

Example Response

Status code: 200

OK

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.4 Modifying Tasks in Batches

Function

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

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.

URI

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

Table 4-25 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-26 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.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type Default value: en-us Values: • en-us • zh-cn

Table 4-27 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Request body for modifying tasks. For details, see Table 4-28 .

Table 4-28 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 4-29 .

Parameter	Mandatory	Type	Description
task_type	No	String	Task mode. Values: ● FULL_TRANS: full migration ● INCR_TRANS: incremental migration ● FULL_INCR_TRANS: full +incremental migration NOTE This parameter can be modified only for MySQL-to-TaurusDB synchronization tasks in the configuring or incremental state.
source_endpoint	No	Object	Source database information. This parameter is mandatory for calling the API after the connection test. For details, see Table 4-31 .
target_endpoint	No	Object	Destination database information. This parameter is mandatory for calling the API after the connection test. For details, see Table 4-31 .
node_type	No	String	Specifications. Values: ● micro: minimum specifications. ● small: small specifications. ● medium: medium specifications. ● high: large specifications. ● xlarge: ultra-large specifications. ● 2xlarge: maximum specifications.

Parameter	Mandatory	Type	Description
engine_type	No	String	Engine type of a DRS task. This parameter is mandatory when this API is invoked to modify a task after the connection test. Values: • mysql: migration and synchronization from MySQL to MySQL • mongodb: migration from MongoDB to DDS • cloudDataGuard-mysql: DR from MySQL to MySQL • postgresql: synchronization from PostgreSQL to PostgreSQL • oracle-to-gaussdbv5: synchronization from Oracle to GaussDB Distributed • oracle-to-gaussdbv5ha: synchronization from Oracle to GaussDB Centralized • gaussdbv5-to-oracle: synchronization from GaussDB Distributed to Oracle • gaussdbv5ha-to-oracle: synchronization from GaussDB Centralized to Oracle • gaussdbv5-to-kafka: synchronization from GaussDB Distributed to Kafka
net_type	No	String	Network type. This parameter is mandatory after the connection test. Values: • vpn • vpc • eip

Parameter	Mandatory	Type	Description
store_db_info	No	Boolean	Whether to save the database information. This parameter is mandatory when the API is called after the connection test.
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: • 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: • 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 4-33 .

Parameter	Mandatory	Type	Description
db_use_type	No	String	Migration type. Values: • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.

Table 4-29 Data structure description of field **alarm_notify**

Parameter	Mandatory	Type	Description
delay_time	No	Long	Subscription delay, in seconds. • Minimum value: 1 • Maximum value: 3600 • Default value: 0
rto_delay	No	Long	Recovery Time Objective (RTO) delay, in seconds. • Minimum value: 1 • Maximum value: 3600 • Default value: 0
rpo_delay	No	Long	Recovery Point Objective (RPO) delay, in seconds. • 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 4-30 .

Table 4-30 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: • sms: SMS message • email: email.

Table 4-31 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: • mysql: MySQL • mongodb: MongoDB • postgresql: PostgreSQL • oracle: Oracle
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	If the database is a cloud DB instance, set this parameter to the project ID in the region where the DB instance is located. Otherwise, set this parameter to the project ID in the region where the current task is located. For details, see A.5 Obtaining a Project ID .
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: ! <> & ' \"

Parameter	Mandatory	Type	Description
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.
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: • 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.

Parameter	Mandatory	Type	Description
ssl_link	No	Boolean	Whether SSL is enabled.
topic	No	String	Kafka topic name.
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+
kafka_security_config	No	Object	This parameter is only for Kafka security authentication. For details, see Table 4-32 .

Table 4-32 Data structure description of field **kafka_security_config**

Parameter	Mandatory	Type	Description
type	No	String	Security protocol. This parameter is mandatory for security authentication. The corresponding field for Kafka is security.protocol. • PLAINTEXT: No security authentication mode is available. You only need to enter an IP address and a port number. • SASL_PLAINTEXT: The SASL mechanism is used to connect to Kafka, and you need to configure SASL parameters. • SSL: The SSL encryption is used to connect to Kafka, and you need to configure SSL parameters. • SASL_SSL: The SASL and SSL encryption authentication modes are used. You need to configure SSL and SASL parameters. Enumerated values: • PLAINTEXT • SASL_PLAINTEXT • SASL_SSL • SSL
trust_store_key_name	No	String	Certificate name. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL.
trust_store_key	No	String	Value of the security certificate after Base64 transcoding. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL.
trust_store_password	No	String	Certificate password. This parameter is mandatory when a password is set for the certificate.

Parameter	Mandatory	Type	Description
endpoint_algorithm	No	String	Host name endpoint identification algorithm, which specifies the endpoint identification algorithm for verifying the server host name using the server certificate. If this parameter is left blank, host name verification is disabled. The corresponding field for Kafka is ssl.endpoint.identification.algorithm .
sasl_mechanism	No	String	SASL mechanism used for client connection. The corresponding field for Kafka is sasl.mechanism . The values are as follows: • GSSAPI • PLAIN • SCRAM-SHA-256 • SCRAM-SHA-512
delegation_to_kens	No	Boolean	Whether to use token authentication. This parameter is valid only when the security protocol is set to SASL_SSL or SASL_PLAINTEXT and the SASL mechanism is set to SCRAM-SHA-256 or SCRAM-SHA-512 .
enable_key_store	No	Boolean	Whether to enable two-way SSL authentication.
key_store_key	No	String	Keystore certificate. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_key_name	No	String	Keystore certificate name. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_password	No	String	Keystore certificate password. This parameter is mandatory when a password is set for the certificate. The corresponding field for Kafka is ssl.keystore.password .

Parameter	Mandatory	Type	Description
set_private_key_password	No	Boolean	Whether to set the keystore private key password. The default value is false .
key_password	No	String	Keystore private key password. This parameter is mandatory when two-way SSL authentication is enabled and set_private_key_password is set to true . The corresponding field for Kafka is ssl.key.password .

Table 4-33 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 4-34 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 4-35 .

Table 4-35 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: ● 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@123.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": "region-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": "region-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
  }
]}
```

- Changing the synchronization mode of specified tasks in batches

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

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

```
    "task_type": "FULL_INCR_TRANS"  
  }  
]  
}
```

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 [A.3 Error Code](#).

4.1.5 Selecting Database Objects in Batches

Function

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

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.

URI

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

Table 4-36 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-37 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: • en-us • zh-cn

Table 4-38 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 4-39 .

Table 4-39 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 4-40 .

Table 4-40 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: • 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 4-41 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 4-42 .

Table 4-42 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 [A.3 Error Code](#).

4.1.6 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.

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.

URI

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

Table 4-43 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-44 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: • en-us • zh-cn

Table 4-45 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	The list of batch pre-check requests. For details, see Table 4-46 .

Table 4-46 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
precheck_mode	Yes	String	Pre-check mode. Values: • 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. NOTE Specify the value based on the task status. Otherwise, the pre-check may fail, affecting task startup.

Response Parameters

Status code: 200

Table 4-47 Response body parameters

Parameter	Type	Description
results	Array of objects	Pre-check response body. For details, see Table 4-48 .
count	Integer	Total number.

Table 4-48 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: • 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 [A.3 Error Code](#).

4.1.7 Querying Pre-check Results in Batches

Function

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

Constraints

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

URI

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

Table 4-49 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-50 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: • en-us • zh-cn

Table 4-51 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 4-52 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for querying pre-check results in batches. For details, see Table 4-53 .
count	Integer	Total number of records.

Table 4-53 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.

Parameter	Type	Description
total_passed_rate	String	Percentage of passed pre-checks.
rds_instance_id	String	RDS DB instance ID.
job_direction	String	Task direction. Values: • 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 4-54 .
error_msg	String	Error message.
error_code	String	Error code.

Table 4-54 Data structure description of field **precheck_result**

Parameter	Type	Description
item	String	Check item.
result	String	Check results. Values: • PASSED • ALARM • FAILED
failed_reason	String	Failure cause.
data	String	Encrypted data.
raw_error_msg	String	Row error message.
group	String	Check item group.
failed_sub_jobs	Array of objects	Information about failed subtasks. For details, see Table 4-55 .

Table 4-55 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\":\"37660000000\",\"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.mycollection3,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 eiysuoyin,fastunit.testSpecial\\\\u4E2D\\\\u6587~!@#%^&*()_+=[\\\":?`,`fastunit.log,fastunit.twoD,fastunit.lianhesuoyin,fastunit.xishusuoyin,fastunit.quanwensuoyin,fastunit.ttlsuoyin,fastunit.putongsuoyin,fastunit.collcount,fastunit.shuzusuoyin,fastunit.twodsphere,fastunit.qiantaowendangsuoyin,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 [A.3 Error Code](#).

4.1.8 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.

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 ten 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.
- This API cannot be used when the task mode is **INCR_TRANS**.

URI

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

Table 4-56 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-57 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: • en-us • zh-cn

Table 4-58 Request body parameters

Parameter	Mandatory	Type	Description
speed_limits	Yes	Array of objects	Speed limit in DR. For details, see Table 4-59 .

Table 4-59 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 4-60 .

Table 4-60 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 4-61 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 4-62 .

Table 4-62 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: ● 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 [A.3 Error Code](#).

4.1.9 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.

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**.

URI

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

Table 4-63 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-64 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: • en-us • zh-cn

Table 4-65 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 4-66 Response body parameters

Parameter	Type	Description
params_list	Array of objects	Response body for querying database parameters. For details, see Table 4-67 .
count	Integer	Total number.

Table 4-67 Data structure description of field **params_list**

Parameter	Type	Description
params	Array of objects	Data parameter information body. For details, see Table 4-68 .

Table 4-68 Data structure description of field **params**

Parameter	Type	Description
compare_result	String	Parameter comparison result. Values: • true • false
data_type	String	Type
group	String	Metric Type Values: • common: common parameter. • performance: performance parameter.
key	String	Parameter name
need_restart	String	Whether the instance needs to be restarted. Values: • 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.

Parameter	Type	Description
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"
}, {
  "group" : "performance",
  "key" : "innodb_buffer_pool_size",
  "source_value" : "536870912",
  "target_value" : "536870912",
  "compare_result" : "true",
  "data_type" : "figure",
  "value_range" : "5242880-2147483648",
  "need_restart" : "true"
}, {
  "group" : "common",
  "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"
}, {
  "group" : "common",
  "key" : "innodb_lock_wait_timeout",
  "source_value" : "50",
  "target_value" : "50",
  "compare_result" : "true",
  "data_type" : null,
  "value_range" : "1-1073741824",
  "need_restart" : "false"
}, {
  "group" : "performance",
  "key" : "key_buffer_size",
  "source_value" : "16777216",
  "target_value" : "16777216",
  "compare_result" : "true",
  "data_type" : "figure",
  "value_range" : "8-9223372036854771712",
  "need_restart" : "false"
}
```

```
}, {
  "group": "performance",
  "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"
}, {
  "group": "common",
  "key": "max_connections",
  "source_value": "800",
  "target_value": "800",
  "compare_result": "true",
  "data_type": null,
  "value_range": "1-100000",
  "need_restart": "false"
}, {
  "group": "common",
  "key": "net_read_timeout",
  "source_value": "30",
  "target_value": "30",
  "compare_result": "true",
  "data_type": null,
  "value_range": "1-31536000",
  "need_restart": "false"
}, {
  "group": "common",
  "key": "net_write_timeout",
  "source_value": "60",
  "target_value": "60",
  "compare_result": "true",
  "data_type": null,
  "value_range": "1-31536000",
  "need_restart": "false"
}, {
  "group": "performance",
  "key": "read_buffer_size",
  "source_value": "262144",
  "target_value": "262144",
  "compare_result": "true",
  "data_type": "figure",
  "value_range": "8192-2147479552",
  "need_restart": "false"
}, {
  "group": "performance",
  "key": "read_rnd_buffer_size",
  "source_value": "524288",
  "target_value": "524288",
  "compare_result": "true",
  "data_type": "figure",
  "value_range": "1-2147483647",
  "need_restart": "false"
}, {
  "group": "performance",
  "key": "sort_buffer_size",
  "source_value": "262144",
  "target_value": "262144",
  "compare_result": "true",
  "data_type": "figure",
  "value_range": "32768-18446744073709551615",
  "need_restart": "false"
}, {
  "group": "performance",
  "key": "sync_binlog",
  "source_value": "1",
  "target_value": "1",
  "compare_result": "true",
```

```
{
  "data_type": "figure",
  "value_range": "0-4294967295",
  "need_restart": "false"
}, {
  "group": "common",
  "key": "tx_isolation",
  "source_value": "REPEATABLE-READ",
  "target_value": "REPEATABLE-READ",
  "compare_result": "true",
  "data_type": null,
  "value_range": "READ-UNCOMMITTED|READ-COMMITTED|REPEATABLE-READ|SERIALIZABLE",
  "need_restart": "false"
}]
}]
}
```

Status Code

Status Code	Description
202	Accepted
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.10 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 [4.1.9 Obtaining Database Parameters in Batches](#) is successfully called.

URI

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

Table 4-69 Path parameters

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.

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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-70 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: • en-us • zh-cn

Table 4-71 Request body parameters

Parameter	Mandatory	Type	Description
group	Yes	String	Parameter Groups Values: • common • performance
params	Yes	Array of objects	Information about the parameters to be modified. For details, see Table 4-72 .

Table 4-72 Data structure description of field **params**

Parameter	Mandatory	Type	Description
key	Yes	String	Database parameter name.

Parameter	Mandatory	Type	Description
target_value	Yes	String	Parameter value of the destination database.

Response Parameters

Status code: 202

Table 4-73 Response body parameters

Parameter	Type	Description
success	Boolean	Whether the parameters are modified.
should_restart	String	Whether the instance needs to be restarted. Values: • true • false
error_code	String	Error code.
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 [A.3 Error Code](#).

4.1.11 Starting Tasks in Batches

Function

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

Constraints

- This API can be called only after all tasks are configured.

URI

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

Table 4-74 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-75 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type Default value: en-us Values: • en-us • zh-cn

Table 4-76 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Request list for starting tasks in batches. For details, see Table 4-77 .

Table 4-77 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 4-78 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 4-79 StartJobResp

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: • success • failed
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 [A.3 Error Code](#).

4.1.12 Resuming or Retrying Tasks in Batches

Function

- This API is used to retry failed tasks.
- You can resume a suspended task.

URI

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

Table 4-80 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-81 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: • en-us • zh-cn

Table 4-82 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 4-83 .

Table 4-83 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 4-84 Response body parameters

Parameter	Type	Description
results	Array of objects	List of tasks that can be resumed in batches. For details, see Table 4-85 .
count	Integer	Total number.

Table 4-85 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 [A.3 Error Code](#).

4.1.13 Pausing Tasks in Batches

Function

This API is used to pause tasks in batches.

Constraints

- You can pause a task that is being migrated, being synchronized, or being used for disaster recovery.

URI

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

Table 4-86 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-87 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: • en-us • zh-cn

Table 4-88 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 4-89 .

Table 4-89 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: • target • all

Response Parameters

Status code: 200

Table 4-90 Response body parameters

Parameter	Type	Description
results	Array of objects	List of tasks to be suspended in batches. For details, see Table 4-91 .
count	Integer	Total number.

Table 4-91 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 [A.3 Error Code](#).

4.1.14 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.

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.

URI

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

Table 4-92 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-93 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: • en-us • zh-cn

Table 4-94 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 4-95 .

Table 4-95 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: • terminate • force_terminate • delete
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 4-96 Response body parameters

Parameter	Type	Description
results	Array of objects	Response body set for stopping or deleting tasks in batches. For details, see Table 4-97 .
count	Integer	Total number.

Table 4-97 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: • 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 [A.3 Error Code](#).

4.1.15 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.

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.

URI

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

Table 4-98 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-99 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: en-us zh-cn

Table 4-100 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 4-101 .

Table 4-101 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
db_password	Yes	String	Database password.
end_point_type	Yes	String	Type. so indicates the source database. ta indicates the destination database. Values: • so • ta
job_id	Yes	String	Task ID.
kerberos	No	Object	Information required for Kerberos authentication. For details, see Table 4-102 .

Table 4-102 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 4-103 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 4-104 .

Table 4-104 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.

Parameter	Type	Description
status	String	Status Values: ● 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 [A.3 Error Code](#).

4.1.16 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.

Constraints

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

URI

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

Table 4-105 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-106 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: • en-us • zh-cn

Table 4-107 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of requests for setting replaceDefiners in batches. For details, see Table 4-108 .

Table 4-108 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 4-109 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 4-110 .

Table 4-110 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: ● 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 [A.3 Error Code](#).

4.1.17 Creating a Comparison Task

Function

This API is used to create a comparison task

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 4-111 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-112 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: • en-us • zh-cn

Table 4-113 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 4-114 .

Table 4-114 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: • cancel • keep
compare_type	Yes	String	Data-level comparison type. lines : indicates row comparison. contents : indicates value comparison. Values: • 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 4-115 .
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 4-116 .

Table 4-115 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 4-116 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 4-117 .

Table 4-117 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 4-118 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 4-119 .
data_level_compare_create_result	Object	Result of creating a data-level comparison task. For details, see Table 4-119 .
error_code	String	Error code.
error_msg	String	Error message.

Table 4-119 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 [A.3 Error Code](#).

4.1.18 Querying Comparison Results

Function

This API is used to query the comparison result.

Constraints

This API can be called only after the API in [4.1.17 Creating a Comparison Task](#) is successfully called.

URI

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

Table 4-120 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-121 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: • en-us • zh-cn

Table 4-122 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 4-123 Response body parameters

Parameter	Type	Description
job_id	String	Task ID
object_level_compare_results	Object	Object-level comparison result. For details, see Table 4-124 .
line_compare_results	Object	Row comparison result. For details, see Table 4-127 .
content_compare_results	Object	Value comparison result. For details, see Table 4-131 .
compare_task_list_results	Object	List of comparison tasks. For details, see Table 4-137 .
error_code	String	Error code.
error_msg	String	Error message.

Table 4-124 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 4-125 .

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 4-126 .
error_code	String	Error code.
error_msg	String	Error message.

Table 4-125 Data structure description of field **object_compare_overview**

Parameter	Type	Description
object_type	String	Object type. Values: • 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: • 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
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 4-126 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 4-127 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 4-128 .
line_compare_overview_count	Integer	Row comparison result overview.
line_compare_details	Array of objects	Row comparison result details. For details, see Table 4-129 .
error_code	String	Error code.
error_msg	String	Error message.

Table 4-128 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: • 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 4-129 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 4-130 .

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

Table 4-130 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: • 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 4-131 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 4-132 .

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 4-133 .
content_compare_diffs	Array of objects	The value comparison results are different. For details, see Table 4-135 .
error_code	String	Error code.
error_msg	String	Error message.

Table 4-132 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: • 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 4-133 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 4-134 .

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 4-134 .
content_uncompare_detail_count	Integer	Total number of value comparison results (tables that cannot be compared).

Table 4-134 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: ● 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

Parameter	Type	Description
content_compare_result	String	Value comparison result. Values: • 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 4-135 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 4-136 .
content_compare_diff_count	Integer	Total number of differences in the value comparison result.

Table 4-136 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 4-137 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 4-138 .
compare_task_list_count	Integer	Total number of comparison tasks.
error_msg	String	Error message.
error_code	String	Error code.

Table 4-138 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: ● 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-da2a3bcd9b7",
    "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 [A.3 Error Code](#).

4.1.19 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.

URI

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

Table 4-139 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-140 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: • en-us • zh-cn

Table 4-141 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 4-142 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 4-143 .

Table 4-143 Data structure description of field **results**

Parameter	Type	Description
job_id	String	Task ID.
progress	String	Migration percentage.

Parameter	Type	Description
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: • 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_status	String	Task status.
process_time	String	Migration time in timestamp format.
remaining_time	String	Estimated remaining time.
progress_map	Map<String, ProgressInfo >	Data, structure, and index migration progress information body. For details, see Table 4-144 .
error_code	String	Error code.
error_msg	String	Error message.

Table 4-144 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" : "INCRE_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" : "INCRE_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 [A.3 Error Code](#).

4.1.20 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.

URI

POST /v3/{project_id}/jobs

Table 4-145 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-146 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: • en-us • zh-cn

Table 4-147 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 . • 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: • migration • sync • cloudDataGuard

Parameter	Mandatory	Type	Description
engine_type	No	String	Engine type of a DRS task. Default value: mysql Values: • mysql: migration and synchronization from MySQL to MySQL • mongodb: migration from MongoDB to DDS • cloudDataGuard-mysql: DR from MySQL to MySQL • postgresql: synchronization from PostgreSQL to PostgreSQL • oracle-to-gaussdbv5: synchronization from Oracle to GaussDB Distributed • oracle-to-gaussdbv5ha: synchronization from Oracle to GaussDB Centralized • gaussdbv5-to-oracle: synchronization from GaussDB Distributed to Oracle • gaussdbv5ha-to-oracle: synchronization from GaussDB Centralized to Oracle • gaussdbv5-to-kafka: synchronization from GaussDB Distributed to Kafka
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. You can enter a maximum of 100 task IDs separated by commas (,).

Parameter	Mandatory	Type	Description
net_type	No	String	Network type. Values: • vpn • vpc • eip
service_name	No	String	Service name.

Parameter	Mandatory	Type	Description
status	No	String	Task status. • 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
			• 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. Enumerated values: • CREATING • CREATE_FAILED • CONFIGURATION • STARTJOBING • WAITING_FOR_START

Parameter	Mandatory	Type	Description
			• 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 4-7 .

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 4-148 Response body parameters

Parameter	Type	Description
total_record	Integer	Total number of tasks
jobs	Array of objects	Task details. For details, see Table 4-149 .

Table 4-149 Data structure description of field **jobs**

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

Parameter	Type	Description
status	String	Task status. • 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
		• 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. Enumerated values: • 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
		• 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: • mysql: migration and synchronization from MySQL to MySQL • mongodb: migration from MongoDB to DDS • cloudDataGuard-mysql: DR from MySQL to MySQL • postgresql: synchronization from PostgreSQL to PostgreSQL • oracle-to-gaussdbv5: synchronization from Oracle to GaussDB Distributed • oracle-to-gaussdbv5ha: synchronization from Oracle to GaussDB Centralized • gaussdbv5-to-oracle: synchronization from GaussDB Distributed to Oracle • gaussdbv5ha-to-oracle: synchronization from GaussDB Centralized to Oracle • gaussdbv5-to-kafka: synchronization from GaussDB Distributed to Kafka
net_type	String	Network type. Values: • vpn • vpc • eip
billing_tag	Boolean	Billing tag.
job_direction	String	Task direction. Values: • 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: • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.
task_type	String	Task mode. Values: • 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 4-150 .
node_newFramework	Boolean	Whether the framework is a new framework.
job_action	Object	The matrix of task operation commands. For details, see Table 4-151 .

Table 4-150 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: • 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: • mysql: migration and synchronization from MySQL to MySQL • mongodb: migration from MongoDB to DDS • cloudDataGuard-mysql: DR from MySQL to MySQL • postgresql: synchronization from PostgreSQL to PostgreSQL • oracle-to-gaussdbv5: synchronization from Oracle to GaussDB Distributed • oracle-to-gaussdbv5ha: synchronization from Oracle to GaussDB Centralized • gaussdbv5-to-oracle: synchronization from GaussDB Distributed to Oracle • gaussdbv5ha-to-oracle: synchronization from GaussDB Centralized to Oracle • gaussdbv5-to-kafka: synchronization from GaussDB Distributed to Kafka
error_msg	String	Task failure cause.
id	String	Task ID.
job_direction	String	Migration direction. Values: • 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: • vpc • vpn • eip
node_newFramework	Boolean	New framework

Parameter	Type	Description
status	String	Task status. • 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
		• 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. Enumerated values: • 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
		• RELEASE_CHILD_TRANSFER_STARTED • RELEASE_CHILD_TRANSFER_COMPLETE • NODE_UPGRADE_START • NODE_UPGRADE_COMPLETE • NODE_UPGRADE_FAILED
task_type	String	Task mode. Values: • 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 4-151 .

Table 4-151 Data structure description of field **job_action**

Parameter	Type	Description
available_actions	Array of strings	The collection of operation commands that can be executed for a task. Values: • 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
		• 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	The collection of operation commands that cannot be executed for a task. Values: • 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
		• 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	The current operation. Values: • 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 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" : ""
}
```

- Querying the real-time synchronization task list using multiple task IDs

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

```
{
  "cur_page": 1,
  "db_use_type": "sync",
  "engine_type": "",
  "name": "bee869bc-15c0-4b3b-a34b-bf0d5efjb201,c2a61a77-6e55-4cd8-8be1-a562cc6jb201",
  "net_type": "",
  "per_page": 100,
  "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
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.21 Querying Task Details in Batches

Function

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

URI

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

Table 4-152 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-153 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: • en-us • zh-cn

Table 4-154 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Querying task details in batches
page_req	No	Object	Pagination information. For details, see Table 4-155 .

Table 4-155 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) • Minimum value: 1. • Default value: 1
per_page	No	Integer	Number of items on each page. If this parameter is set to 0 , all items are obtained. • Minimum value: 0 • Maximum value: 100 • Default value: 5

Response Parameters

Status code: 200

Table 4-156 Response body parameters

Parameter	Type	Description
count	Integer	Number of tasks.
results	Array of objects	Task details. For details, see Table 4-157 .

Table 4-157 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	Task status. • 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
		• 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. Enumerated values: • 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
		• RELEASE_CHILD_TRANSFER_STARTED • RELEASE_CHILD_TRANSFER_COMPLETE • NODE_UPGRADE_START • NODE_UPGRADE_COMPLETE • NODE_UPGRADE_FAILED
description	String	Description.
create_time	String	Creation time, in timestamp format.
task_type	String	Task mode. Values: • FULL_TRANS: full migration • INCR_TRANS: incremental migration • FULL_INCR_TRANS: full+incremental migration
source_endpoint	Object	Source database information. For details, see Table 4-158 .
dmq_endpoint	Object	DMQ information body. For details, see Table 4-158 .
source_sharding	Array of objects	Information about the physical source database. For details, see Table 4-158 .
target_endpoint	Object	Information body of the destination database. For details, see Table 4-158 .
net_type	String	Network type. Values: • vpn • vpc • eip
failed_reason	String	Failure cause.
inst_info	Object	Replication instance information. For details, see Table 4-160 .
actual_start_time	String	Start time, in timestamp format.
full_transfer_completion_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: • 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.
db_use_type	String	Migration scenario Values: • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery.
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: • stop: The conflict fails. • overwrite: Conflicting data is overwritten. • ignore: The conflict is ignored.
filter_ddl_policy	String	DDL filtering policy. Values: • drop_database: Filters DDLs. • drop_databasefilter_all: Filters out all DLLs. • "": No filter.
speed_limit	Array of objects	Migration speed limit. For details, see Table 4-161 .
schema_type	String	Migration schemes. Values: • Replication: primary/standby replication. • Tungsten: parses logs. • PGBaseBackup: PostgreSQL backup.
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. For details, see Table 4-162 .
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.
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. For details, see Table 4-163 .
incr_start_position	String	Start point of an incremental task.
object_infos	Array of objects	Synchronized object information. For details, see Table 4-165 .
original_job_direction	String	Task direction. Values: ● 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.
data_transformation	Object	Data filtering configuration information. For details, see Table 4-166 .

Parameter	Type	Description
tags	Array of objects	Task tag. For details, see Table 4-171 .
public_ip_list	Array of objects	Information about a specified EIP. For details, see Table 4-172 .
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. For details, see Table 4-173 .
is_open_fast_clean	Boolean	Specifies whether to enable binlog clearing for RDS for MySQL or RDS for MariaDB.

Table 4-158 Data structure description of fields **source_endpoint**, **dmq_endpoint**, **source_sharding**, and **target_endpoint**

Parameter	Type	Description
db_type	String	Database type. Values: • mysql: MySQL • mongodb: MongoDB • postgresql: PostgreSQL • oracle: Oracle
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	ID of the project to which the DB instance belongs.
db_password	String	Database password.

Parameter	Type	Description
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: ● 0: Normal cluster ● 1: Security cluster
ssl_cert_password	String	SSL certificate password. The certificate file name extension is .p12.
ssl_cert_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_cert_key	String	SSL certificate content, which is encrypted using Base64.
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 source_endpoint to Sharding4.0+ . Default value: Sharding4.0+ Enumerated value: Sharding4.0+
kafka_security_config	Object	This parameter is only for Kafka security authentication. For details, see Table 4-159 .

Table 4-159 Data structure description of field **kafka_security_config**

Parameter	Type	Description
type	String	Security protocol. This parameter is mandatory for security authentication. The corresponding field for Kafka is security.protocol. • PLAINTEXT: No security authentication mode is available. You only need to enter an IP address and a port number. • SASL_PLAINTEXT: The SASL mechanism is used to connect to Kafka, and you need to configure SASL parameters. • SSL: The SSL encryption is used to connect to Kafka, and you need to configure SSL parameters. • SASL_SSL: The SASL and SSL encryption authentication modes are used. You need to configure SSL and SASL parameters. Enumerated values: • PLAINTEXT • SASL_PLAINTEXT • SASL_SSL • SSL
trust_store_key_name	String	Certificate name. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL .
trust_store_key	String	Value of the security certificate after Base64 transcoding. This parameter is mandatory when the security protocol is set to SSL or SASL_SSL .
trust_store_password	String	Certificate password. This parameter is mandatory when a password is set for the certificate.
endpoint_algorithm	String	Host name endpoint identification algorithm, which specifies the endpoint identification algorithm for verifying the server host name using the server certificate. If this parameter is left blank, host name verification is disabled. The corresponding field for Kafka is ssl.endpoint.identification.algorithm .

Parameter	Type	Description
sasl_mechanism	String	SASL mechanism used for client connection. The corresponding field for Kafka is sasl.mechanism . The values are as follows: • GSSAPI • PLAIN • SCRAM-SHA-256 • SCRAM-SHA-512
delegation_to_kens	Boolean	Whether to use token authentication. This parameter is valid only when the security protocol is set to SASL_SSL or SASL_PLAINTEXT and the SASL mechanism is set to SCRAM-SHA-256 or SCRAM-SHA-512 .
enable_key_store	Boolean	Whether to enable two-way SSL authentication.
key_store_key	String	Keystore certificate. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_key_name	String	Keystore certificate name. This parameter is mandatory when two-way SSL authentication is enabled.
key_store_password	String	Keystore certificate password. This parameter is mandatory when a password is set for the certificate. The corresponding field for Kafka is ssl.keystore.password .
set_private_key_password	Boolean	Whether to set the keystore private key password. The default value is false .
key_password	String	Keystore private key password. This parameter is mandatory when two-way SSL authentication is enabled and set_private_key_password is set to true . The corresponding field for Kafka is ssl.key.password .

Table 4-160 Data structure description of field **inst_info**

Parameter	Type	Description
engine_type	String	Engine type of a DRS task. Values: • mysql: migration and synchronization from MySQL to MySQL • mongodb: migration from MongoDB to DDS • cloudDataGuard-mysql: DR from MySQL to MySQL • postgresql: synchronization from PostgreSQL to PostgreSQL • oracle-to-gaussdbv5: synchronization from Oracle to GaussDB Distributed • oracle-to-gaussdbv5ha: synchronization from Oracle to GaussDB Centralized • gaussdbv5-to-oracle: synchronization from GaussDB Distributed to Oracle • gaussdbv5ha-to-oracle: synchronization from GaussDB Centralized to Oracle • gaussdbv5-to-kafka: synchronization from GaussDB Distributed to Kafka
inst_type	String	DB instance type. Value: high
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.
status	String	Replication instance status. Values: • active • deleted
volume_size	Integer	Storage space of a replication instance.

Table 4-161 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 4-162 Data structure description of field **target_root_db**

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

Table 4-163 Data structure description of field **alarm_notify**

Parameter	Type	Description
subscriptions	Array of objects	SMN information. For details, see Table 4-164 .
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 4-164 Data structure description of field **subscriptions**

Parameter	Type	Description
endpoints	Array of strings	SMS or email list.
protocol	String	Notification methods. sms : SMS; email : Email. Enumerated value: • sms • email

Table 4-165 Data structure description of field **object_infos**

Parameter	Type	Description
id	String	When type is set to database , this parameter indicates the database name. If type is set to table or view , set the field value by referring to the example.
parent_id	String	When type is set to table or view , this parameter indicates the database name.

Parameter	Type	Description
type	String	Type. Values: • database • table • schema • view
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 4-166 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 Table 4-167 .

Table 4-167 Data structure description of field **filter_conditions**

Parameter	Type	Description
transformation_info	Object	Common configuration for data filtering. For details, see Table 4-169 .
config_transformation	Object	Advanced configuration for data filtering. For details, see Table 4-170 .
data_transformation_object_infos	Array of objects	Data filtering object information. For details, see Table 4-168 .

Table 4-168 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 db1-**-tb1-**-***conditionFilter-- .

Parameter	Mandatory	Type	Description
data_transformation_type	No	String	• The processing rule value is contentConditionalFilter. • The configuration rule value is configConditionalFilter. Values: – contentConditionalFilter – configConditionalFilter
schema_name	No	String	Name of the schema for data processing.
table_name	No	String	Name of the table for data processing.

Table 4-169 Data structure description of field **transformation_info**

Parameter	Mandatory	Type	Description
transformation_type	Yes	String	• The processing rule value is contentConditionalFilter. • The configuration rule value is configConditionalFilter. Values: – contentConditionalFilter – configConditionalFilter
value	Yes	String	Filter criteria. The processing rule value is a SQL statement, and the configuration rule value is config . The value contains a maximum of 256 characters.

Table 4-170 Data structure description of field **config_transformation**

Parameter	Mandatory	Type	Description
db_table_name	Yes	String	<i>Database-name.Table-name</i> , for example, lxl_test1.test_1 , where lxl_test1 is the database name and test_1 is the table name.

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

Table 4-171 Data structure description of field **tags**

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

Table 4-172 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. - 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: master slave

Table 4-173 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" : "region-1",
      "db_type" : "mysql",
      "db_port" : 3306,
      "ssl_link" : false,
      "project_id" : "054ba152d480d55b2f5dc0069e7ddef0",
      "db_user" : "root"
    }
  }
]
```

```
},
"target_endpoint": {
  "ip": "172.21.176.219",
  "region": "region-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": "*****",
  "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",
"is_open_fast_clean": true,
"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": "region-1",
    "db_type": "mysql",
    "db_port": 3306,
    "ssl_link": false,
    "project_id": "054ba152d480d55b2f5dc0069e7ddef0",
    "db_user": "root"
  },
  "target_endpoint": {
```

```
"ip" : "192.168.0.131",
"region" : "region-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"
      }
    }
  ]
}
```

Status Code

Status Code	Description
200	OK

Error Code

For details, see [A.3 Error Code](#).

4.1.22 Querying Task Statuses in Batches

Function

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

URI

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

Table 4-174 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-175 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: • en-us • zh-cn

Table 4-176 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Querying task details in batches
page_req	No	Object	Pagination information. For details, see Table 4-177 .

Table 4-177 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) • Minimum value: 1. • Default value: 1
per_page	No	Integer	Number of items on each page. If this parameter is set to 0 , all items are obtained. • Minimum value: 0 • Maximum value: 100 • Default value: 5

Response Parameters

Status code: 200

Table 4-178 Response body parameters

Parameter	Type	Description
results	Array of objects	Task status information For details, see Table 4-179 .
count	Integer	Number of returned tasks.

Table 4-179 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.

Parameter	Type	Description
status	String	Task status. • 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
		• 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. Enumerated values: • 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
		• RELEASE_CHILD_TRANSFER_STARTED • RELEASE_CHILD_TRANSFER_COMPLETE • NODE_UPGRADE_START • NODE_UPGRADE_COMPLETE • NODE_UPGRADE_FAILED
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 [A.3 Error Code](#).

4.1.23 Querying Available Node Specifications

Function

This API is used to query available node specifications.

URI

GET /v3/{project_id}/node-type

Table 4-180 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .

Table 4-181 Query parameters

Parameter	Mandatory	Type	Description
engine_type	Yes	String	Engine type of a DRS task. Values: • mysql: migration and synchronization from MySQL to MySQL • mongodb: migration from MongoDB to DDS • cloudDataGuard-mysql: DR from MySQL to MySQL • postgresql: synchronization from PostgreSQL to PostgreSQL

Parameter	Mandatory	Type	Description
db_use_type	Yes	String	Migration scenario. • migration: real-time migration. • sync: real-time synchronization. • cloudDataGuard: real-time disaster recovery. Enumerated values: • migration • sync • cloudDataGuard
job_direction	Yes	String	Migration direction. The value can be up (to the cloud), down (out of the cloud), or non-dbs (self-built databases). Enumerated values: • up • down • non-dbs
is_use_sellout_info	No	Boolean	Whether to check if resources are sold out. Default value: false
is_multi_write	No	Boolean	Whether dual-active disaster recovery is used. Default value: false

Request Parameters

Table 4-182 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	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 Enumerated values: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-183 Response body parameters

Parameter	Type	Description
node_types	Array of objects	Node specification list. For details, see Table 4-184 .

Table 4-184 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}/v3/054ba152d480d55b2f5dc0069e7dde0/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 [A.3 Error Code](#).

4.1.24 Querying Data-level Table Comparison Tasks

Function

This API is used to query data-level table comparison tasks.

URI

GET /v3/{project_id}/jobs/{job_id}/table/compare

Table 4-185 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.

Table 4-186 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of items displayed per page. Default value: 1000
offset	No	Integer	Offset, which is the position where the query starts. The value must be no less than 0. Default value: 0

Request Parameters

Table 4-187 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: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-188 Response body parameters

Parameter	Type	Description
compare_jobs	Array of objects	Table comparison task details. For details, see Table 4-189 .
count	Long	Number of tasks.

Table 4-189 Data structure description of field **compare_jobs**

Parameter	Type	Description
id	String	ID of a comparison task.
type	String	Comparison type. • lines: row comparison. • contents: value comparison. • random: sampling comparison. This function is available only for tasks from GaussDB Distributed to GaussDB Distributed, GaussDB Distributed to PostgreSQL, and GaussDB Centralized to PostgreSQL.
options	Map<String,String>	Configuration item for a comparison task. The value is a key-value pair. Value comparison supports the following configuration items: • Comparison method. The key is contentCompareType. The value dynamic indicates a dynamic comparison, and the value static indicates a static comparison. • LOB comparison policy. The key is lobCompare. The value ignore indicates LOB data is ignored, and the value length indicates that LOB length is compared. Row comparison supports the following configuration items: • Comparison policy configuration, which is applicable to many-to-one synchronization. The key is comparePolicy. The value normal indicates a one-to-one comparison, and the value manyToOne indicates a many-to-one comparison.
start_time	String	Start time in UTC format, for example, 2020-09-01T18:50:20Z .
end_time	String	End time in UTC format, for example, 2020-09-01T18:50:20Z .

Parameter	Type	Description
status	String	Status of a comparison task. ● RUNNING: The comparison task is in progress. ● WAITING_FOR_RUNNING: The comparison task is waiting to be started. ● SUCCESSFUL: The comparison task is complete. ● FAILED: The comparison task failed. ● CANCELLED: The comparison task is canceled. ● TIMEOUT_INTERRUPT: The comparison task timed out. ● FULL_DOING: Full verification is in progress. ● INCRE_DOING: Incremental verification is in progress.
export_status	String	Status of the exported comparison result. ● INIT: indicates that the comparison result export is in the initial status. ● EXPORTING: indicates that the comparison result is being exported. ● EXPORT_COMPLETE: indicates that the comparison result is exported. ● EXPORT_COMMON_FAILED: indicates that the comparison result fails to be exported.
report_remain_seconds	Long	Remaining validity period of the exported comparison result.
compare_job_tag	Map<String,String>	Tag of a comparison task. This parameter is returned only when a comparison policy is configured.
proportion_value	String	Sampling ratio. Set this parameter when the comparison type is set to sampling comparison.

Example Request

Querying data-level table comparison tasks

https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/{job_id}/table/compare?offset=0&limit=10

Example Response

Status code: 200

OK

```
{
  "count" : 2,
  "compareJobs" : [ {
    "id" : "48c6acb4-1473-48fd-8676-df3705758c27",
    "type" : "lines",
    "options" : { },
    "status" : "SUCCESSFUL",
    "start_time" : "2024-03-14T06:30:14Z",
    "end_time" : "2024-03-14T06:31:14Z",
    "export_status" : "INIT",
    "report_remain_seconds" : -1
  }, {
    "id" : "9e01bd96-e627-4538-a545-5f31d1c88e94",
    "type" : "lines",
    "options" : { },
    "status" : "SUCCESSFUL",
    "start_time" : "2024-03-14T06:30:14Z",
    "end_time" : "2024-03-14T06:31:14Z",
    "export_status" : "INIT",
    "report_remain_seconds" : -1,
    "proportion_value" : "1"
  } ]
}
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.25 Creating a Data-level Table Comparison Task

Function

This API is used to create a data-level table comparison task.

URI

POST /v3/{project_id}/jobs/{job_id}/table/compare

Table 4-190 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.

Request Parameters

Table 4-191 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: • en-us • zh-cn

Table 4-192 Request body parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Comparison type. • lines: row comparison. • contents: value comparison. • random: sampling comparison. This function is available only for tasks from GaussDB Distributed to GaussDB Distributed, GaussDB Distributed to PostgreSQL, and GaussDB Centralized to PostgreSQL.

Parameter	Mandatory	Type	Description
start_time	No	String	Start time of a comparison task. The value is in timestamp format. If the value is empty, the task is started immediately.
compare_mode	No	String	Data-level comparison mode. If this parameter is left empty, object information needs to be transferred in compare_object or compare_object_with_token.quick_comparison indicates a quick comparison. Value: quick_comparison Default value: quick_comparison
compare_object	No	Array of objects	Data-level comparison object. For details, see Table 4-193 .

Parameter	Mandatory	Type	Description
options	No	Map<String,String>	Configuration item for a comparison task. The value is a key-value pair. Value comparison supports the following configuration items: • Comparison method. The key is contentCompareType. The value dynamic indicates a dynamic comparison, and the value static indicates a static comparison. • LOB comparison policy. The key is lobCompare. The value ignore indicates LOB data is ignored, and the value length indicates that LOB length is compared. Row comparison supports the following configuration items: • Comparison policy configuration, which is applicable to many-to-one synchronization. The key is comparePolicy. The value normal indicates a one-to-one comparison, and the value manyToOne indicates a many-to-one comparison.
compare_object_with_token	No	Array of objects	Object for data-level comparison (Cassandra DR only, with token information). For details, see Table 4-194.
compare_task_num	No	Integer	Number of comparison task threads. This parameter is available only for tasks of cloudDataGuard-cassandra and cloudDataGuard-gausscassandra-to-gausscassandra.
compare_transformation_infos	No	Array of objects	Data filtering information. For details, see Table 4-196.

Parameter	Mandatory	Type	Description
proportion_value	No	Double	Sampling ratio. Set this parameter when the comparison type is set to sampling comparison.

Table 4-193 Data structure description of field **compare_object**

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

Table 4-194 Data structure description of field **compare_object_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 4-195 .

Table 4-195 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.
max_token	No	String	Max token of a table.

Table 4-196 Data structure description of field **compare_transformation_infos**

Parameter	Mandatory	Type	Description
object_info	Yes	Array of objects	Object information. For details, see Table 4-197 .
transformation_info	Yes	Object	Data filtering information. For details, see Table 4-198 .

Table 4-197 Data structure description of field **object_info**

Parameter	Mandatory	Type	Description
id	No	String	- Database name and table name. For example, the format is t_auto_db--users, where t_auto_db is the database name and users is the table name. - Database name, schema name, and table name. For example, the format is t_auto_db--schema1--users, where t_auto_db is the database name, schema1 is the schema name, and users is the table name.

Table 4-198 Data structure description of field **transformation_info**

Parameter	Mandatory	Type	Description
transformation_type	Yes	String	Processing rule. The value is contentConditionalFilter .
value	Yes	String	Filtering condition. The value is an SQL condition statement, for example, id>100 . The value contains a maximum of 256 characters.

Response Parameters

Status code: 202

Table 4-199 Response body parameters

Parameter	Type	Description
id	String	ID of a comparison task.

Example Request

- Creating a data-level sampling comparison task
`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/{job_id}/table/compare`

```
{
  "compare_object" : [ {
```

```
"db_name": "t_auto_db",  
"table_name": [ ]  
} ],  
"options": { },  
"proportion_value": 20.1,  
"type": "random"  
}
```

- **Creating a data-level dynamic value comparison task**
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/{job_id}/table/compare

```
{  
  "compare_object": [ {  
    "db_name": "t_auto_db",  
    "table_name": [ ]  
  } ],  
  "options": {  
    "contentCompareType": "dynamic"  
  },  
  "start_time": "1809366237000",  
  "type": "contents"  
}
```

- **Creating a row comparison task with data filtering enabled**
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/{job_id}/table/compare

```
{  
  "compare_object": [ ],  
  "compare_transformation_infos": [ {  
    "object_info": [ {  
      "id": "t_auto_db-**-test-**-users"  
    } ],  
    "transformation_info": {  
      "transformationType": "contentConditionalFilter",  
      "value": "id>100"  
    }  
  } ],  
  "type": "lines"  
}
```

Example Response

Status code: 202

OK

```
{  
  "id": "6a0deb4a-ce39-449b-8c49-e0eed954c155"  
}
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
202	OK

Status Code	Description
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.26 Canceling a Comparison Task

Function

This API is used to cancel a comparison task.

URI

DELETE /v3/{project_id}/jobs/{job_id}/compare/{compare_job_id}

Table 4-200 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.
compare_job_id	Yes	String	ID of a comparison task.

Request Parameters

Table 4-201 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 Enumerated values: • en-us • zh-cn

Response Parameters

None

Example Request

Canceling a comparison task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/compare/48c6acb4-1473-48fd-8676-df3705758c27
```

Example Response

Status code: 200

OK

```
{ }
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.27 Immediately Starting a Data-level Table Comparison Task

Function

This API is used to immediately start a data-level table comparison task.

URI

POST /v3/{project_id}/jobs/{job_id}/table/compare/{compare_job_id}

Table 4-202 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.
compare_job_id	Yes	String	ID of a comparison task.

Request Parameters

Table 4-203 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: • en-us • zh-cn

Response Parameters

None

Example Request

Immediately starting a data-level table comparison task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/  
table/compare/48c6acb4-1473-48fd-8676-df3705758c27
```

Example Response

Status code: 200

OK

```
{ }
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.28 Querying the Row Comparison Overview

Function

This API is used to query the row comparison overview.

URI

GET /v3/{project_id}/jobs/{job_id}/compare/{compare_job_id}/line-overview

Table 4-204 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.
compare_job_id	Yes	String	ID of a comparison task.

Table 4-205 Query parameters

Parameter	Mandatory	Type	Description
status	No	Integer	Comparison status. ● 0: The comparison result is inconsistent. ● 2: The comparison result is consistent. ● 3: The destination database table does not exist. ● 4: The comparison failed. ● 5: The comparison task is in progress. ● 6: The comparison task is waiting to be started. ● 7: The comparison task is canceled. ● 8: The source database is empty. ● 9: The destination database is empty. ● 10: Both the source and destination databases are empty. ● 11: The source table does not exist. ● 12: The destination table does not exist. ● 13: Neither the source table nor the destination table exists. ● 14: Failed to connect to the source database. ● 15: Failed to connect to the destination database. ● 16: SQL execution timed out on the source database. ● 17: SQL execution timed out on the destination database. ● 18: A source database SQL execution error occurred. ● 19: A destination database SQL execution error occurred.

Parameter	Mandatory	Type	Description
			• 20: Neither the source database nor the destination database exists. • 21: The source database does not exist. • 22: The destination database does not exist. • 23: The number of rows exceeds 100 million, and the comparison cannot be performed. • 27: The comparison task timed out.
limit	No	Integer	Number of items displayed per page. Default value: 1000
offset	No	Integer	Offset, which is the position where the query starts. The value must be no less than 0. Default value: 0

Request Parameters

Table 4-206 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: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-207 Response body parameters

Parameter	Type	Description
total_count	Integer	Number of comparison items.
data_compare_overview_infos	Array of objects	Information list. For details, see Table 4-208 .

Table 4-208 Data structure description of field **data_compare_overview_infos**

Parameter	Type	Description
source_db_name	String	Source database name.
target_db_name	String	Destination database name.

Parameter	Type	Description
status	Integer	Comparison status. ● 0: The comparison result is inconsistent. ● 2: The comparison result is consistent. ● 3: The destination database table does not exist. ● 4: The comparison failed. ● 5: The comparison task is in progress. ● 6: The comparison task is waiting to be started. ● 7: The comparison task is canceled. ● 8: The source database is empty. ● 9: The destination database is empty. ● 10: Both the source and destination databases are empty. ● 11: The source table does not exist. ● 12: The destination table does not exist. ● 13: Neither the source table nor the destination table exists. ● 14: Failed to connect to the source database. ● 15: Failed to connect to the destination database. ● 16: SQL execution timed out on the source database. ● 17: SQL execution timed out on the destination database. ● 18: A source database SQL execution error occurred. ● 19: A destination database SQL execution error occurred. ● 20: Neither the source database nor the destination database exists. ● 21: The source database does not exist. ● 22: The destination database does not exist. ● 23: The number of rows exceeds 100 million, and the comparison cannot be performed. ● 27: The comparison task timed out.
compare_num	Integer	Total number of tables.
compare_end_num	Integer	Number of completed tables.

Parameter	Type	Description
data_inconsistent_num	Integer	Number of inconsistent tables.
uncomparable_num	Integer	Number of tables that cannot be compared.

Example Request

Querying the row comparison overview

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/table/compare/48c6acb4-1473-48fd-8676-df3705758c27/line-overview?offset=0&limit=10&status=2
```

Example Response

Status code: 200

OK

```
{
  "total_count" : 1,
  "data_compare_overview_infos" : [ {
    "status" : 2,
    "source_db_name" : "my_db",
    "target_db_name" : "my_db",
    "compare_num" : 16,
    "compare_end_num" : 16,
    "data_inconsistent_num" : 0,
    "uncomparable_num" : 0
  } ]
}
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.29 Querying Row Comparison Details

Function

This API is used to query row comparison details.

URI

GET /v3/{project_id}/jobs/{job_id}/compare/{compare_job_id}/line-detail

Table 4-209 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.
compare_job_id	Yes	String	ID of a comparison task.

Table 4-210 Query parameters

Parameter	Mandatory	Type	Description
status	No	Integer	Comparison status. ● 0: The comparison result is inconsistent. ● 2: The comparison result is consistent. ● 3: The destination database table does not exist. ● 4: The comparison failed. ● 5: The comparison task is in progress. ● 6: The comparison task is waiting to be started. ● 7: The comparison task is canceled. ● 8: The source database is empty. ● 9: The destination database is empty. ● 10: Both the source and destination databases are empty. ● 11: The source table does not exist. ● 12: The destination table does not exist. ● 13: Neither the source table nor the destination table exists. ● 14: Failed to connect to the source database. ● 15: Failed to connect to the destination database. ● 16: SQL execution timed out on the source database. ● 17: SQL execution timed out on the destination database. ● 18: A source database SQL execution error occurred. ● 19: A destination database SQL execution error occurred.

Parameter	Mandatory	Type	Description
			• 20: Neither the source database nor the destination database exists. • 21: The source database does not exist. • 22: The destination database does not exist. • 23: The number of rows exceeds 100 million, and the comparison cannot be performed. • 27: The comparison task timed out.
type	No	String	Type. • compare: Items that can be compared. • unCompare: Items that cannot be compared.
db_name	No	String	Source database name.
target_db_name	No	String	Destination database name.
query_tb_name	No	String	Keyword for filtering table names.
limit	No	Integer	Number of items displayed per page. Default value: 1000
offset	No	Integer	Offset, which is the position where the query starts. The value must be no less than 0. Default value: 0

Request Parameters

Table 4-211 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The content type. The default value is application/json .

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
X-Language	No	String	Request language type. Default value: en-us Enumerated values: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-212 Response body parameters

Parameter	Type	Description
total_count	Integer	Comparison quantity.
table_line_compare_result_infos	Array of objects	Comparison information list. For details, see Table 4-213 .

Table 4-213 Data structure description of field **TableLineCompareResultInfo**

Parameter	Type	Description
source_table_name	String	Table name of the source database.
source_row_num	Long	Number of table rows in the source database.
target_table_name	String	Table name of the destination database.
target_row_num	Long	Number of table rows in the destination database.
difference_row_num	Long	Row differences.

Parameter	Type	Description
status	Integer	Comparison status. ● 0: The comparison result is inconsistent. ● 2: The comparison result is consistent. ● 3: The destination database table does not exist. ● 4: The comparison failed. ● 5: The comparison task is in progress. ● 6: The comparison task is waiting to be started. ● 7: The comparison task is canceled. ● 8: The source database is empty. ● 9: The destination database is empty. ● 10: Both the source and destination databases are empty. ● 11: The source table does not exist. ● 12: The destination table does not exist. ● 13: Neither the source table nor the destination table exists. ● 14: Failed to connect to the source database. ● 15: Failed to connect to the destination database. ● 16: SQL execution timed out on the source database. ● 17: SQL execution timed out on the destination database. ● 18: A source database SQL execution error occurred. ● 19: A destination database SQL execution error occurred. ● 20: Neither the source database nor the destination database exists. ● 21: The source database does not exist. ● 22: The destination database does not exist. ● 23: The number of rows exceeds 100 million, and the comparison cannot be performed. ● 27: The comparison task timed out.
compare_line_config_filter	String	Row filtering condition.

Example Request

Querying row comparison details

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/
table/compare/48c6acb4-1473-48fd-8676-df3705758c27/line-detail?offset=0&limit=10
```

Example Response

Status code: 200

OK

```
{
  "total_count" : 2,
  "table_line_compare_result_infos" : [ {
    "source_table_name" : "tb2",
    "source_row_num" : 2434882,
    "target_table_name" : "tb2",
    "target_row_num" : 2434882,
    "difference_row_num" : 0,
    "status" : 2
  }, {
    "source_table_name" : "tb1",
    "source_row_num" : 1,
    "target_table_name" : "tb1",
    "target_row_num" : 1,
    "difference_row_num" : 0,
    "status" : 2
  } ]
}
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.30 Querying the Value Comparison Overview

Function

This API is used to query the value comparison overview.

URI

GET /v3/{project_id}/jobs/{job_id}/compare/{compare_job_id}/content-overview

Table 4-214 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.
compare_job_id	Yes	String	ID of a comparison task.

Table 4-215 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of items displayed per page. Default value: 1000
offset	No	Integer	Offset, which is the position where the query starts. The value must be no less than 0. Default value: 0

Request Parameters

Table 4-216 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 Enumerated values: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-217 Response body parameters

Parameter	Type	Description
total_count	Integer	Comparison quantity.
content_compare_result_infos	Array of objects	Information list. For details, see Table 4-218 .

Table 4-218 Data structure description of field **content_compare_result_infos**

Parameter	Type	Description
source_db	String	Source database name.
target_db	String	Destination database name.

Parameter	Type	Description
status	Integer	Comparison status. ● 0: The comparison result is inconsistent. ● 2: The comparison result is consistent. ● 3: The destination database table does not exist. ● 4: The comparison failed. ● 5: The comparison task is in progress. ● 6: The comparison task is waiting to be started. ● 7: The comparison task is canceled. ● 8: The source database is empty. ● 9: The destination database is empty. ● 10: Both the source and destination databases are empty. ● 11: The source table does not exist. ● 12: The destination table does not exist. ● 13: Neither the source table nor the destination table exists. ● 14: Failed to connect to the source database. ● 15: Failed to connect to the destination database. ● 16: SQL execution timed out on the source database. ● 17: SQL execution timed out on the destination database. ● 18: A source database SQL execution error occurred. ● 19: A destination database SQL execution error occurred. ● 20: Neither the source database nor the destination database exists. ● 21: The source database does not exist. ● 22: The destination database does not exist. ● 23: The number of rows exceeds 100 million, and the comparison cannot be performed. ● 27: The comparison task timed out.
compare_num	Integer	Total number of tables.
compare_end_num	Integer	Number of completed tables.

Parameter	Type	Description
data_inconsistent_num	Integer	Number of inconsistent tables.
uncomparable_num	Integer	Number of tables that cannot be compared.

Example Request

Querying the value comparison overview

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/table/compare/48c6acb4-1473-48fd-8676-df3705758c27/content-overview?limit=10&offset=0
```

Example Response

Status code: 200

OK

```
{
  "total_count" : 1,
  "content_compare_result_infos" : [ {
    "status" : 2,
    "source_db" : "tb1",
    "target_db" : "tb1",
    "compare_num" : 16,
    "compare_end_num" : 16,
    "data_inconsistent_num" : 0,
    "uncomparable_num" : 0
  } ]
}
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.31 Querying Value Comparison Details

Function

This API is used to query value comparison details.

URI

GET /v3/{project_id}/jobs/{job_id}/compare/{compare_job_id}/content-detail

Table 4-219 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.
compare_job_id	Yes	String	ID of a comparison task.

Table 4-220 Query parameters

Parameter	Mandatory	Type	Description
target_db_name	No	String	Destination database name.
db_name	No	String	Source database name.
type	No	String	Type. compare : Items that can be compared. unCompare : Items that cannot be compared.
limit	No	Integer	Number of items displayed per page. Default value: 1000
offset	No	Integer	Offset, which is the position where the query starts. The value must be no less than 0. Default value: 0

Request Parameters

Table 4-221 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: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-222 Response body parameters

Parameter	Type	Description
total_count	Integer	Comparison quantity.
content_compare_result_infos	Array of objects	Comparison information list. For details, see Table 4-223 .

Table 4-223 Data structure description of field **content_compare_result_info**

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.

Parameter	Type	Description
target_row_num	Long	Number of table rows in the destination database.
difference_row_num	Long	Difference between the tables in the source and destination databases.
line_compare_result	Boolean	Row comparison result. • true: consistent. • false: inconsistent.
content_compare_result	Boolean	Value comparison result. • true: consistent. • false: inconsistent.
message	String	Additional information.
compare_line_config_filter	String	Row filtering condition.
status	Integer	Full comparison status. -1: The comparison is in progress. -2: The comparison is complete. -3: The comparison is to be started. -4: The comparison is canceled.
complete_shard_count	Integer	Number of compared shards.
total_shard_count	Integer	Total number of shards.
progress	Double	Comparison progress.

Example Request

Querying value comparison details

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/table/compare/48c6acb4-1473-48fd-8676-df3705758c27/content-detail?limit=10&offset=0
```

Example Response

Status code: 200

OK

```
{
  "total_count": 2,
  "content_compare_result_infos": [ {
    "source_db": "db2",
    "source_table_name": "tb2",
    "source_row_num": 2434882,
    "target_db": "db2",
```

```
"target_table_name" : "tb2",
"target_row_num" : 2434882,
"difference_row_num" : 0,
"line_compare_result" : true,
"content_compare_result" : true,
"status" : 2,
"complete_shard_count" : 21,
"total_shard_count" : 21,
"progress" : 100
}, {
  "source_db" : "db1",
  "source_table_name" : "tb1",
  "source_row_num" : 1,
  "target_db" : "db1",
  "target_table_name" : "tb1",
  "target_row_num" : 1,
  "difference_row_num" : 0,
  "line_compare_result" : true,
  "content_compare_result" : true,
  "status" : 2,
  "complete_shard_count" : 21,
  "total_shard_count" : 21,
  "progress" : 100
}]
}
```

Status code: 400

Bad Request

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

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.32 Querying Value Comparison Differences

Function

This API is used to query value comparison differences.

URI

GET /v3/{project_id}/jobs/{job_id}/compare/{compare_job_id}/content-difference

Table 4-224 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.
compare_job_id	Yes	String	ID of a comparison task.

Table 4-225 Query parameters

Parameter	Mandatory	Type	Description
table_name	No	String	Table name.
db_name	No	String	Source database name.
limit	No	Integer	Number of records displayed on each page. The maximum value is 1000 . Minimum value: 1 Maximum value: 1000 Default value: 1000
offset	No	Integer	Offset, which is the position where the query starts. The value must be no less than 0. Default value: 0

Request Parameters

Table 4-226 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 Enumerated values: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-227 Response body parameters

Parameter	Type	Description
count	Long	Total number of records.
target_meta_is_null	Long	Inconsistency details: The objects were found only in the source database.
source_meta_is_null	Long	Inconsistency details: The objects were found only in the destination database.
source_target_meta_not_null	Long	Inconsistency details: The objects were found in the source and destination databases.
contents_infos	Array of objects	List of detailed information. For details, see Table 4-228 .

Table 4-228 Data structure description of field **contents_infos**

Parameter	Type	Description
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.
select_sql	String	Query the SQL statements of the source database.
target_select_sql	String	Query the SQL statements of the destination database.

Example Request

Querying value comparison differences

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/compare/48c6acb4-1473-48fd-8676-df3705758c27/content-difference?limit=10&offset=0
```

Example Response

Status code: 200

OK

```
{
  "count" : 1,
  "target_meta_is_null" : 0,
  "source_meta_is_null" : 0,
  "source_target_meta_not_null" : 1,
  "contents_infos" : [ {
    "source_key_value" : [ "id=5" ],
    "target_key_value" : [ "id=5" ],
    "select_sql" : "select * from db1.tb1 where id=5",
    "target_select_sql" : "select * from db1.tb1 where id=5"
  } ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "DRS.10000010",
  "error_msg" : "Task not found. Check the task ID."
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.33 Creating an Object-level Comparison Task

Function

This API is used to create an object-level comparison task.

URI

POST /v3/{project_id}/jobs/{job_id}/object/compare

Table 4-229 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.

Request Parameters

Table 4-230 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: • en-us • zh-cn

Table 4-231 Request body parameters

Parameter	Mandatory	Type	Description
compare_task_num	No	Integer	Number of comparison task threads. This parameter is available only for tasks of cloudDataGuard-cassandra and cloudDataGuard-gausscassandra-to-gausscassandra.

Response Parameters

None

Example Request

Creating an object-level comparison task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/a2b4999c-0acf-45eb-843d-5c1cdb2jb201/object/compare

{
  "compare_task_num" : 2
}
```

Example Response

Status code: 202

OK

```
{ }
```

Status code: 400

Bad Request

```
{
  "error_code" : "DRS.10000024",
  "error_msg" : "Another operation is being performed on the migration task or the migration task is abnormal."
}
```

Status Code

Status Code	Description
202	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.34 Querying the Overview of an Object Comparison Task

Function

This API is used to query the overview of an object comparison task.

URI

GET /v3/{project_id}/jobs/{job_id}/object/compare

Table 4-232 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.

Request Parameters

Table 4-233 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: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-234 Response body parameters

Parameter	Type	Description
create_time	String	Time when a comparison task is created. The value is a UTC time, for example, 2024-04-09T07:00:57Z .
start_time	String	Time when a comparison task starts. The value is a UTC time, for example, 2024-04-09T07:00:57Z .

Parameter	Type	Description
status	String	Status of a comparison task. Value: • RUNNING: The comparison task is in progress. • WAITING_FOR_RUNNING: The comparison task is waiting to be started. • SUCCESSFUL: The comparison task is complete. • FAILED: The comparison task fails. • CANCELLED: The comparison task is canceled. • TIMEOUT_INTERRUPT: The comparison task times out. • FULL_DOING: Full verification is in progress. • INCRE_DOING: Incremental verification is in progress.
export_status	String	Status of generating a comparison result file. The values are as follows: • INIT: indicates that the comparison result export is in the initial status. • EXPORTING: indicates that the comparison result is being exported. • EXPORT_COMPLETE: indicates that the comparison result is exported. • EXPORT_COMMON_FAILED: indicates that the comparison result fails to be exported.
report_remain_seconds	Long	Remaining validity period of a comparison result file, in seconds. If the report is not generated, -1 is returned.
compare_job_id	String	ID of a comparison task.
error_msg	String	Failure cause.
compare_result	Array of objects	Comparison result. For details, see Table 4-235 .

Table 4-235 Data structure description of field **compare_result**

Parameter	Type	Description
type	String	Object type. The values are as follows: • DB: indicates a database. • TABLE: indicates a table. • VIEW: indicates a view. • EVENT: indicates an event. • ROUTINE: indicates a stored procedure and function. • INDEX: indicates an index. • TRIGGER: indicates a trigger. • SYNONYM: indicates a synonym. • FUNCTION: indicates a function. • PROCEDURE: indicates a stored procedure. • TYPE: indicates a user-defined type. • RULE: indicates a rule. • DEFAULT_TYPE: indicates a default value. • PLAN_GUIDE: indicates an execution plan. • CONSTRAINT: indicates a constraint. • FILE_GROUP: indicates a file group. • PARTITION_FUNCTION: indicates a partition function. • PARTITION_SCHEME: indicates a partition scheme. • TABLE_COLLATION: indicates table collation. • EXTENSIONS: indicates a plug-in.
source_count	Long	Number of objects of this type in the source database.
target_count	Long	Number of objects of this type in the destination database.
status	Integer	Comparison result. The value 0 indicates that the result is inconsistent, the value 2 indicates that the result is consistent, and the value 3 indicates the comparison is incomplete.

Example Request

Querying the overview of an object comparison task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/object/compare
```

Example Response

Status code: 200

OK

```
{
  "status": "SUCCESSFUL",
  "create_time": "2024-04-02T06:17:56Z",
  "compare_result": [ {
    "type": "DB",
    "status": 2,
    "source_count": 2,
    "target_count": 2
  }, {
    "type": "TABLE",
    "status": 2,
    "source_count": 2,
    "target_count": 2
  }, {
    "type": "INDEX",
    "status": 2,
    "source_count": 2,
    "target_count": 2
  }, {
    "type": "TABLE_COLLATION",
    "status": 2,
    "source_count": 2,
    "target_count": 2
  } ],
  "start_time": "2024-04-02T06:17:49Z",
  "export_status": "INIT",
  "report_remain_seconds": -1,
  "compare_job_id": "bfcdc4d9-f0ae-4108-be42-6974d60cd1d2"
}
```

Status code: 400

Bad Request

```
{
  "error_code": "DRS.10000010",
  "error_msg": "Task not found. Check the task ID."
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.35 Querying Details About an Object Comparison Task

Function

This API is used to query details about an object comparison task.

URI

GET /v3/{project_id}/jobs/{job_id}/object/compare/{compare_type}

Table 4-236 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.

Parameter	Mandatory	Type	Description
compare_type	Yes	String	Object type, which can be: • DB: indicates a database. • TABLE: indicates a table. • VIEW: indicates a view. • EVENT: indicates an event. • ROUTINE: indicates a stored procedure and function. • INDEX: indicates an index. • TRIGGER: indicates a trigger. • SYNONYM: indicates a synonym. • FUNCTION: indicates a function. • PROCEDURE: indicates a stored procedure. • TYPE: indicates a user-defined type. • RULE: indicates a rule. • DEFAULT_TYPE: indicates a default value. • PLAN_GUIDE: indicates an execution plan. • CONSTRAINT: indicates a constraint. • FILE_GROUP: indicates a file group. • PARTITION_FUNCTION: indicates a partition function. • PARTITION_SCHEME: indicates a partition scheme. • TABLE_COLLATION: indicates table collation.

Table 4-237 Query parameters

Parameter	Mandatory	Type	Description
compare_job_id	No	String	ID of a comparison task. If this parameter is not specified, the latest comparison task information is returned by default.
limit	No	Integer	Number of records displayed on each page. The maximum value is 1000 . Minimum value: 1 Maximum value: 1000 Default value: 1000
offset	No	Integer	Offset, which is the position where the query starts. The value must be no less than 0. Default value: 0

Request Parameters

Table 4-238 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: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-239 Response body parameters

Parameter	Type	Description
count	Integer	Comparison quantity.
compare_detail	Array of objects	Object comparison details. For details, see Table 4-240 .

Table 4-240 Data structure description of field **compare_detail**

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.
status	Integer	Comparison result. The value 0 indicates that the result is inconsistent, the value 2 indicates that the result is consistent, and the value 3 indicates the comparison is incomplete.
error_message	String	Error message.

Example Request

Querying table comparison details about an object comparison task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20y/object/compare/TABLE
```

Example Response

Status code: 200

OK

```
{
  "count" : 1,
  "compare_detail" : [ {
    "source_db_value" : "tb1",
    "target_db_value" : "tb1",
    "source_db_name" : "db1",
    "target_db_name" : "db1",
    "status" : 2
  } ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "DRS.10000010",
  "error_msg" : "Task not found. Check the task ID."
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.36 Exporting the Result File of a Comparison Task

Function

This API is used to export the comparison result file.

URI

POST /v3/{project_id}/jobs/{job_id}/compare/result/file

Table 4-241 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.

Request Parameters

Table 4-242 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: • en-us • zh-cn
Region	Yes	String	Region ID, for example, cn-north-4 .

Table 4-243 Request body parameters

Parameter	Mandatory	Type	Description
compare_type	Yes	String	Type of a comparison task. • contents: value comparison. • lines: row comparison. • random: sampling comparison. • objects_comparison: object-level comparison.
compare_job_id	No	String	ID of a comparison task. This parameter is mandatory in value comparison, sampling comparison, and row comparison scenarios.
time_zone	No	String	Time zone, for example, GMT +08:00. This parameter is used to generate the current time identifier and is added to a file name.

Response Parameters

None

Example Request

- Exporting the result file of an object comparison task
`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20ycompare/result/file`

```
{
  "compare_type": "objects_comparison"
}
```
- Exporting the result file of a value comparison task
`https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20ycompare/result/file`

```
{
  "compare_type": "contents",
  "compare_job_id": "9406224c-8063-436a-8fe2-796d87f054dc"
}
```

Example Response

Status code: 200

OK

```
""
```

Status code: 400

Bad Request

```
{
  "error_code": "DRS.10000010",
  "error_msg": "Task not found. Check the task ID."
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.1.37 Downloading the Result File of a Comparison Task

Function

This API is used to download the comparison result file.

URI

GET /v3/{project_id}/jobs/{job_id}/compare/result/file

Table 4-244 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. For details, see A.5 Obtaining a Project ID .
job_id	Yes	String	Task ID.

Table 4-245 Query parameters

Parameter	Mandatory	Type	Description
compare_type	No	String	Type of a comparison task. • contents: value comparison. • lines: row comparison. • random: sampling comparison. • objects_comparison: object-level comparison.
compare_job_id	No	String	ID of a comparison task. This parameter is mandatory in value comparison, sampling comparison, and row comparison scenarios.

Request Parameters

Table 4-246 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 Enumerated values: • en-us • zh-cn
Region	No	String	Region ID, for example, cn-north-4 .

Table 4-247 Request body parameters

Parameter	Mandatory	Type	Description
compare_type	Yes	String	Type of a comparison task. • contents: value comparison. • lines: row comparison. • random: sampling comparison. • objects_comparison: object-level comparison. • repair_data: data repair.
compare_job_id	No	String	ID of a comparison task. This parameter is mandatory in value comparison, sampling comparison, and row comparison scenarios.
time_zone	No	String	Time zone, for example, GMT +08:00. This parameter is used to generate the current time identifier and is added to a file name.

Response Parameters

None

Example Request

Downloading the result file of a comparison task

```
https://{endpoint}/v3/054ba152d480d55b2f5dc0069e7ddef0/jobs/f8688cfa-4e05-406f-a2e6-37a773cjb20ycompare/result/file?compare_type=objects_comparison
```

Example Response

Status code: 200

OK

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.10000010",
  "error_msg" : "Task not found. Check the task ID."
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

For details, see [A.3 Error Code](#).

4.2 Real-Time Migration Management

4.2.1 Updating Migrated User Information in Batches

Function

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

Constraints

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

URI

PUT /v3/{project_id}/jobs/batch-update-user

Table 4-248 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-249 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: • en-us • zh-cn

Table 4-250 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Requests for updating migrated users in batches. For details, see Table 4-251 .

Table 4-251 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
password	No	String	Global password.

Parameter	Mandatory	Type	Description
list	No	Array of objects	User migration information. This parameter is mandatory when a user is migrated. For details, see Table 4-252 .
user_roles	No	Array of objects	Role migration information. This parameter is mandatory when a user is migrated. For details, see Table 4-253 .
is_set_password	Yes	Boolean	Whether to set a password
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 false . This parameter is used for PostgreSQL synchronization.

Table 4-252 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	Array of strings	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 4-253 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.
selected	No	Boolean	Whether to select. If this parameter is left blank, migration is not performed by default.

Response Parameters

Status code: 200

Table 4-254 Response body parameters

Parameter	Type	Description
all_counts	Integer	Total number.
results	Array of objects	Migrate user information. For details, see Table 4-255 .

Table 4-255 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. For details, see Table 4-256 .
roles_list	Array of objects	Role list data. For details, see Table 4-257 .
is_success	Boolean	Whether the request is successful.

Table 4-256 Data structure description of field **user_list**

Parameter	Type	Description
id	String	Account ID.
account	String	Account.
comment	String	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 4-257 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 [A.3 Error Code](#).

4.2.2 Obtaining Migration Users of the Source Database

Function

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

Constraints

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

 NOTE

This API can be called only after the task is created and the connections to the source and destination databases are successful.

URI

GET /v3/{project_id}/jobs/{job_id}/get-src-user

Table 4-258 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-259 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: • en-us • zh-cn

Response Parameters

Status code: 200

Table 4-260 Response body parameters

Parameter	Type	Description
job_id	String	Task ID.
is_global_pass word	String	Whether to use the global password.
message	String	Error code.
user_list	Array of objects	User list data. For details, see Table 4-261 .
roles_list	Array of objects	Role list data. For details, see Table 4-262 .
is_success	Boolean	Whether the request is successful.

Table 4-261 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 4-262 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 [A.3 Error Code](#).

4.3 Real-Time Synchronization Management

4.3.1 Processing Data in Batches

Function

This API is used to add rules for data processing.

Constraints

- You can call the API for starting a task only after the task is created and database objects are selected.
- Each table has only one verification rule.

- MySQL source database supports a maximum of 10,000 tables at a time.
- Standard SQL statements can be used to filter records. The filter criteria cannot contain packages, functions, variables, or constants specific to a DB engine.

URI

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

Table 4-263 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-264 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: • en-us • zh-cn

Table 4-265 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	Requests for adding data processing rules in batches. For details, see Table 4-266 .

Table 4-266 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. For details, see Table 4-267 .
transformation_info	Yes	Object	Processing information. For details, see Table 4-268 .
config_transformation	No	Object	- 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. - The database name and table name can contain digits, letters, and underscores (_). - Ensure that the column names, primary keys, and indexes are the same as those in the source database. For details, see Table 4-269 .

Table 4-267 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 lxl_test1-*-test_1 , where lxl_test1 is the database name and test_1 is the table name.
select	No	String	Whether to select advanced configuration. The value is true .

Table 4-268 Data structure description of field **transformation_info**

Parameter	Mandatory	Type	Description
transformation_type	Yes	String	- The processing rule value is contentConditionalFilter. - The configuration rule value is configConditionalFilter. Values: contentConditionalFilter configConditionalFilter
value	Yes	String	Filter criteria. The processing rule value is a SQL statement, and the configuration rule value is config . The value contains a maximum of 256 characters.

Table 4-269 Data structure description of field **config_transformation**

Parameter	Mandatory	Type	Description
db_table_name	Yes	String	<i>Database-name.Table-name</i> , for example, lxl_test1.test_1 , where lxl_test1 is the database name and test_1 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.

Response Parameters

Status code: 200

Table 4-270 Response body parameters

Parameter	Type	Description
results	Array of objects	Batch data processing response list. For details, see Table 4-271 .
count	integer	Total number.

Table 4-271 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
status	String	Status Values: • success • failed
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",
      "indexes": "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 [A.3 Error Code](#).

4.3.2 Configuring Synchronization Policies in Batches

Function

- This API is used to configure synchronization policies in batches, including conflict policies, DROP Database filtering, and object synchronization scope.

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.

URI

POST /v3/{project_id}/jobs/batch-sync-policy

Table 4-272 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-273 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: en-us zh-cn

Table 4-274 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of objects	List of requests for setting synchronization policies in batches. For details, see Table 4-275 .

Table 4-275 Data structure description of field **jobs**

Parameter	Mandatory	Type	Description
job_id	Yes	String	Task ID.
conflict_policy	No	String	Conflict policy. Values: • ignore: Ignore the conflict. • overwrite: Overwrite the existing data with the conflicting data. • stop: Report an error.
filter_ddl_policy	No	String	DDL filtering policy. Value: drop_database
ddl_trans	No	Boolean	Whether to synchronize DDL during incremental synchronization.
index_trans	No	Boolean	Whether to synchronize indexes during incremental synchronization.
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 false .
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 false .
slot_name	No	String	Replication slot name. This parameter is optional for an incremental synchronization task with PostgreSQL serving as the source database.

Parameter	Mandatory	Type	Description
file_and_position	No	String	- When MySQL serves as the source database, run show master status to obtain the start point of the source database and set File and Position as prompted. For example, mysql-bin.000277:805, in which the file name can contain only 1 to 60 characters and cannot contain the following special character <code><>&:'"/\</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 File_name.file_number:Event_position. - 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 db.getReplicationInfo() for a non-cluster instance, and for a cluster instance, run db.watch([], {startAtOperationTime: Timestamp(xx, xx)}), where <i>xx</i> is the start position you specified. The value is in the format of timestamp:incr. The values of timestamp and incr are integers ranging from 1 to 2,147,483,647.

Parameter	Mandatory	Type	Description
gtid_set	No	String	- This parameter is mandatory for tasks whose source database is MySQL. Run show master status to obtain the start point of the source database and set Executed_Gtid_Set as prompted. (If the source database is MySQL 5.5, synchronization tasks are not supported.) - Enter a maximum of 2048 characters. Chinese characters and the following special characters are not allowed: < > & " ' / \\
ddl_topic	No	String	Topic for storing DDLs. This parameter is mandatory when Kafka is the destination database and ddl_trans is set to true . Value: name of an existing topic in the destination database.

Response Parameters

Status code: 200

Table 4-276 Response body parameters

Parameter	Type	Description
count	Integer	Total number.
results	Array of objects	List of returned synchronization policies that are configured in batches. For details, see Table 4-277 .

Table 4-277 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.

Parameter	Type	Description
status	String	Status Values: ● success: The task is successful. ● failed: The task fails.
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 [A.3 Error Code](#).

4.4 Real-Time Disaster Recovery Management

4.4.1 Performing Primary/Standby Switchovers in Batches

Function

This API is used to perform primary/standby switchovers in batches.

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.

URI

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

Table 4-278 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-279 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: • en-us • zh-cn

Table 4-280 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 4-281 Response body parameters

Parameter	Type	Description
results	Array of objects	Returned of batch primary/standby switchover tasks. For details, see Table 4-282 .
count	Integer	Total number.

Table 4-282 Data structure description of field **results**

Parameter	Type	Description
job_id	String	Task ID.

Parameter	Type	Description
updated_at	String	Update time, in the format yyyy-MM-dd'T'HH:mm:ss'Z'.
source_db	Object	Source database. For details, see Table 4-283 .
target_db	Object	Destination database. For details, see Table 4-283 .
job_direction	String	Task direction. Values: • 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.
is_target_read_only	Boolean	Whether the destination database is read-only.
error_msg	String	Error message
error_code	String	Error code

Table 4-283 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.
db_type	String	Database type. Values: • mysql
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'.

Parameter	Type	Description
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.
db_version	String	Database version.
mongo_ha_mode	String	Mongo HA mode. Values: ● Sharding: cluster. ● ReplicaSet: replica set. ● ReplicaSingle: single node.
project_id	String	Project ID of an RDS DB instance.

Parameter	Type	Description
cluster_mode	String	Cluster mode. Values: • Single: single-node RDS. • Ha: primary and standby RDS. • GR: RDS Finance Edition. • Sharding: MongoDB cluster or DDM mode. The default value is Sharding. • ReplicaSet: MongoDB replica set. • Replica: RDS read replica. • ReplicaSingle: MongoDB single node. • Cluster: cluster.
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: • 0: non-security authentication. • 1: security authentication.
kerberos_vo	Object	Information required for Kerberos authentication. For details, see Table 4-284 .
multi_write_db_id	String	ID of the multi-write database.

Table 4-284 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" : "region-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" : "region-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 [A.3 Error Code](#).

4.4.2 Querying RPO and RTO in Batches

Function

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

URI

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

Table 4-285 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-286 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: • en-us • zh-cn

Table 4-287 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 4-288 Response body parameters

Parameter	Type	Description
count	Integer	Total number.

Parameter	Type	Description
results	Array of objects	Response body set for querying RPO and RTO in batches. For details, see Table 4-289 .

Table 4-289 Data structure description of field **results**

Parameter	Type	Description
job_id	String	Task ID.
rpo_info	Object	RPO information. For details, see Table 4-290 .
rto_info	Object	RTO information. For details, see Table 4-290 .
error_code	String	Error code.
error_msg	String	Error message.

Table 4-290 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 [A.3 Error Code](#).

4.4.3 Querying DR Monitoring Data

Function

This API is used to query DR monitoring data based on the task ID.

URI

POST /v3/{project_id}/jobs/disaster-recovery-monitoring-data

Table 4-291 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-292 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: • en-us • zh-cn

Table 4-293 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Task query request body.

Response Parameters

Status code: 200

Table 4-294 Response body parameters

Parameter	Type	Description
results	Array of objects	DR monitoring data response body set. For details, see Table 4-295 .
count	Integer	Total number of queries.

Table 4-295 Data structure description of field **results**

Parameter	Type	Description
id	String	Task ID.
data_guard_m initior	object	DR task monitoring data. For details, see Table 4-296 .

Table 4-296 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
node_mem_in MB	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 [A.3 Error Code](#).

4.4.4 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.

URI

POST /v3/{project_id}/jobs/batch-struct-process

Table 4-297 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 A.5 Obtaining a Project ID .

Request Parameters

Table 4-298 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: • en-us • zh-cn

Table 4-299 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 4-300 Response body parameters

Parameter	Type	Description
results	Array of objects	DR initialization progresses queried in batches. For details, see Table 4-301 .
count	Integer	Total number.

Table 4-301 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_process	Object	Information about the DR initialization progress. For details, see Table 4-302 .

Table 4-302 Data structure description of field **struct_process**

Parameter	Type	Description
create_time	String	Data generation time.
result	Array of objects	Comparison result. For details, see Table 4-303 .

Table 4-303 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  
      }  
    ]  
  }  
}
```

```
"start_time" : 1608097599000,
"end_time" : 1608097600000
}],
"create_time" : "1608429670521"
}
}]
}
```

Status Code

Status Code	Description
200	OK

Error Code

For details, see [A.3 Error Code](#).

4.4.5 Querying DR Initialization Object Details in Batches

Function

This API is used to query details about DR initialization objects in batches by task ID.

URI

POST /v3/{project_id}/jobs/{type}/batch-struct-detail

Table 4-304 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 A.5 Obtaining a Project ID .

Parameter	Mandatory	Type	Description
type	Yes	String	Supported migration object types. Values: • database • schema • table • view • procedure • trigger • index • table_indexs • table_structure

Request Parameters

Table 4-305 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: • en-us • zh-cn

Table 4-306 Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of strings	Querying task details in batches
page_req	No	Object	Pagination information. For details, see Table 4-307 .

Table 4-307 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 1 .
per_page	No	Integer	Number of items on each page. If this parameter is set to 0 , all items are obtained. • Minimum value: 0 • Maximum value: 100 • Default value: 5

Response Parameters

Status code: 200

Table 4-308 Response body parameters

Parameter	Type	Description
count	Integer	Total number.
results	Array of objects	DR initialization object details that are queried in batches. For details, see Table 4-309 .

Table 4-309 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. For details, see Table 4-310 .

Table 4-310 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. For details, see Table 4-311 .

Table 4-311 Data structure description of field **list**

Parameter	Type	Description
progress	Integer	Progress.
src_DB	String	Source database name. If the source database has a three-layer structure, the format of the value is database.schema.
src_TB	String	Source object name.
dst_DB	String	Destination database name.
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 [A.3 Error Code](#).

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.3 Error Code .
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	Content-Type contained in the request header is not application/json .
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.

Table A-4 Error codes

Statu s Code	Error Codes	Error Message	Description	Troubleshooting
422	DRS.M0 0002	The returned result is empty.	The returned result is empty.	Check the request parameters or task status.
422	DRS.M0 0004	Service is abnormal. Check logs.	Service is abnormal. Check logs.	If the service is abnormal, contact technical support.
400	DRS.M0 0007	Invalid request parameter.	Invalid request parameter.	Check the request parameters.
403	DRS.M0 0100	Invalid token.	Failed to pass IAM authentication.	Check the user token information.
404	DRS.M0 0101	The user role is empty.	The user role is empty.	Check the role information of the user.
403	DRS.M0 0102	You do not have sufficient permissions.	Insufficient permissions.	Check the DRS permissions of the current user.
401	DRS.M0 0103	You do not have operation permissions. Check account permissions on IAM.	Operation denied.	Check the DRS permissions of the current user.
400	DRS.M0 0105	User restricted.	User restricted.	Check the DRS permissions of the current user.
400	DRS.M0 0200	Parameter error.	Invalid parameters.	Check the request parameters.
400	DRS.M0 0201	The parameter %s is empty.	The parameter %s is empty.	Check the request parameters.
400	DRS.M0 0202	The value of parameter %s is invalid.	The value of parameter %s is invalid.	Check the request parameters.
400	DRS.M0 0210	The value of Page is invalid, %s	Invalid page value, %s.	Check the request page parameters.

Statu s Code	Error Codes	Error Message	Description	Troubleshooting
400	DRS.M0 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 0261	Invalid project ID.	Invalid project ID.	Check the value of project ID in the request.
400	DRS.M0 0269	The tag key must be unique.	The tag key cannot be duplicated.	Check whether the tag key is unique.
400	DRS.M0 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 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 0273	Invalid parameter. The parameter contains %s.	Invalid parameter. %s exists in the parameter.	Check the request parameters.
422	DRS.M0 0277	The task name already exists.	The task name already exists.	Change the task name.
400	DRS.M0 0289	Missing query result: %s	No query result is found.	Check the request parameters.
400	DRS.M0 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 0299	Only one jobId is allowed.	Only one job ID can be transferred.	Check the request parameters.
400	DRS.M0 0300	Invalid request, %s	Invalid request. %s.	Check the request parameters.
400	DRS.M0 0301	There are duplicate %s in request.	The request contains duplicate task IDs.	Check the request parameters.
400	DRS.M0 0302	The transfer schema is invalid, please refer to supported transfer schema.	Invalid migration scheme.	Check the request parameters.

Statu s Code	Error Codes	Error Message	Description	Troubleshooting
400	DRS.M0 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 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 0305	Parameter error:%s	Parameter error: %s.	Check the request parameters.
400	DRS.M0 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 0307	Only subtasks can invoke this interface.	Only subtasks can use this API.	Change the task ID.
400	DRS.M0 0308	Only parent tasks can invoke this interface.	Only parent tasks can use this API.	Change the task ID.
400	DRS.M0 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 0402	The subtask already exists.	The subtask already exists.	Change the task ID.
400	DRS.M0 0403	This task does not support flow control.	This task does not support flow control.	Change the task ID.
422	DRS.M0 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 1501	Service error.	The server is abnormal.	If the service is abnormal, contact technical support.

Statu s Code	Error Codes	Error Message	Description	Troubleshooting
202	DRS.M0 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 5003	Task information not found.	Task information cannot be queried.	Check the task ID in the request.
400	DRS.M0 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 5006	Invalid RDS DB instance.	Invalid RDS DB instance.	Check the RDS instance ID in the request.
200	DRS.M0 5066	Failed to create instance!	Failed to create an instance.	Contact technical support.
400	DRS.M0 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 6011	Failed to obtain RDS information.	Obtain RDS DB instance information failed.	Check the RDS instance ID in the request.
422	DRS.M0 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 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 s Code	Error Codes	Error Message	Description	Troubleshooting
400	DRS.MO 7000	Data processing rule already exists.	Data processing rule already exists.	Modify the data processing rule in the request.
200	DRS.KE0 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 002	The username or password is incorrect.	The username or password is incorrect.	Check the username and password.
200	DRS.KE0 003	The port cannot be accessed.	The port cannot be accessed.	Check the database port.
200	DRS.KE0 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 005	The database user must allow remote connections.Handl ing 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 CREATE USER'Account'@'% ' IDENTIFIED BY 'Password' to create a user that allows remote connections. After the migration is complete, delete the user.

Statu s Code	Error 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 pg_hba.conf for the replication instance and database user.	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.
200	DRS.KE0007	The database user does not have the login permission.Handling suggestion: Run alter role *** (dbuser) login to grant the login permission.	The database user does not have the login permission.	Run alter role *** (dbuser) login 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 s Code	Error 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.

Status Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0016	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 postgresql.conf file, the listen_addresses parameter value or port number is incorrect.	In postgres.conf, set listen_addresses to * or change the port number to the correct value. Then, restart the database to apply the change.
200	DRS.KE0017	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.KE0018	Failed to resolve the domain name.	Failed to resolve the domain name.	See migration preparations in the <i>DRS Best Practices</i> .
200	DRS.KE0019	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.KE0020	Incorrect replica set name.	The replica set name is incorrect.	Contact technical support.

Statu s Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0021	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.KE0022	The SSL certificate is incorrect.Handling suggestion: Upload a correct SSL certificate.	The SSL certificate is incorrect.	Upload a correct SSL certificate.
200	DRS.KE0023	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.KE0030	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 s Code	Error 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.

Status Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0036	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.KE0037	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.KE0038	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.KE0039	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 ALTER SYSTEM permission to run the following SQL statement: alter system add hba entry (hostssl [username] [subnet CIDR block where RDS is located]).

Statu s Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0040	The kafka brokers is not available.	The Kafka node is unavailable.	Contact technical support.
200	DRS.KE0041	The kafka is not available.	Kafka is unavailable.	Contact technical support.
200	DRS.KE0042	The kafka topic is not existed.	The Kafka topic does not exist.	Contact technical support.
200	DRS.KE0043	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.KE0044	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.KE0045	The user account is locked.	The user account is locked.	Contact technical support.
200	DRS.KE0046	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 s Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0 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 048	Failed to connect to the database.	Failed to connect to the database.	Contact technical support.
200	DRS.KE0 049	Database user privilege is not enough.	The database user does not have sufficient permissions.	Contact technical support.
200	DRS.KE0 050	The PDB database is not open.	Failed to open the PDB database.	Open the PDB database.
200	DRS.KE0 051	The PDB database does not exist.	The PDB database does not exist.	Contact technical support.
200	DRS.KE0 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 053	Entered Oracle user has insufficient permissions.	The entered Oracle user does not have sufficient permissions.	Contact technical support.
200	DRS.KE0 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 055	Password has expired.Handling suggestion: Please reset the password.	The password has expired.	Reset the password.

Status Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0056	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.KE0057	The Kafka user name or password is incorrect.	The Kafka username or password is incorrect.	Check the username and password.
200	DRS.KE0058	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.KE0059	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.

Status Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0060	Test connection is succeeded.Handling suggestion: 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 s Code	Error Codes	Error Message	Description	Troubleshooting
200	DRS.KE0064	The account password has expired.Handling suggestion: Changing the Expired Status of a User to OPEN.Refer to the modification statement: UPDATE SYS.USER \$ SET ASTATUS = 0 WHERE NAME = 'user_name'.	The account password has expired.	Change the expiration status of the user to OPEN . For details, see the following statement: UPDATE SYS.USER\$ SET ASTATUS = 0 WHERE NAME = 'user_name'
200	DRS.KE0065	Database access denied. Handling suggestion: 1.Check whether the database name is correct before the connection test. 2.Check whether the DB2 database listening port number is correct. 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.KE0066	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.KE0067	Cannot open user default database.	Failed to open the default database of the account.	Contact technical support.
200	DRS.KE0068	The GTID format is incorrect.	The GTID format is incorrect.	Contact technical support.

Status Code	Error 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.

A.4 Task Statuses

Table A-5 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.

Status	Description
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
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.

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 [A.7 Regions and Endpoints](#). For details about API authentication, see [3.2 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": "project_name",
      "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 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 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.

----End

Obtaining a Task ID Through an API

You can also obtain the task ID by calling the API in [4.1.1 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.7 Regions and Endpoints

Region

Name	Region
-	-

AZ

Name	ID	Region
-	-	-
-	-	-

Regions and Endpoints

Service Name	Region Name	Region	Endpoint	Protocol
Data Replication Service (DRS)	-	-	-	-

A.8 Status Code

[Table A-6](#) describes status codes.

Table A-6 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. 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. 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. 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. 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. 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. The client should not repeat the request without modifications.
405	MethodNotAllowed	The method specified in the request is not supported for the requested resource. 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. The client may repeat the request without modifications at any later time.
409	Conflict	The request could not be processed due to a conflict. 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. 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. 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
2023-11-30	This issue is the second official release, which incorporates the following changes: - Added the is_show_breakpoint_position field in 4.1.14 Stopping or Deleting Tasks in Batches. - Added the incre_trans_delay_millis field in 4.1.19 Querying Task Progress in Batches. - Added the file_and_position and gtid_set fields in 4.3.2 Configuring Synchronization Policies in Batches.
2023-08-30	This issue is the first official release.