

Document Database Service

API Reference

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1 Before You Start

Overview

Welcome to *Document Database Service API Reference*. This document describes how to use application programming interfaces (APIs) to perform operations on DDS, such as creating, deleting, and querying DB instances. For details about all supported operations, see [API Overview](#).

If you plan to access DDS through an API, ensure that you are familiar with DDS concepts. For details, see [Service Overview](#).

API Calling

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

Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

Constraints

- The number of DDS DB instances that you can create is determined by your instance quota. For details, see [Quotas](#).
- For more constraints, see API description.

Concepts

- Account
An account is created upon successful registration with the cloud platform. 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 by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).

API authentication requires information such as the account name, username, and password.

- 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.

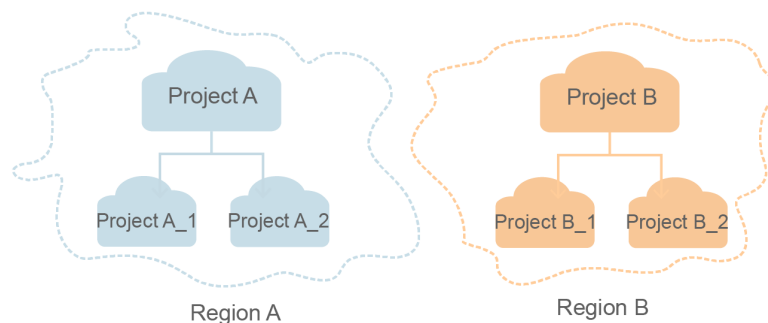
- AZ

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 a group and have physically isolated resources (including computing, storage, and network resources) across regions. Users can be granted 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



- Enterprise Project

Enterprise projects group and manage resources across regions. Resources in enterprise projects are logically isolated from each other. An enterprise project can contain resources of multiple regions, and resources can be added to or removed from enterprise projects.

2 API Overview

DDS provides extension APIs, allowing you to perform specific operations using APIs.

Table 2-1 API description

Type	Description
Querying the API Version	Query the API versions and a specified API version.
Querying Database Version Information	Obtain database version information about a specified instance type.
Querying Database Specifications	Query all DB instance specifications in a specified region.
Querying the Database Disk Type	Query the database disk type in the current region.
DB Instance Management	Create, restart, delete, and query instances, scale up storage, add instance nodes, change instance specifications, switch over primary and standby nodes, enable or disable SSL, change instance names, change database ports, change security groups, and bind or unbind an EIP, change the private network address of an instance, enable the shard/config IP addresses, query AZs to which an instance can be migrated, migrate a DB instance to another AZand configure cross-CIDR access for replica sets.
Connection Management	Query instance node sessions, terminate instance node sessions, and query the number of instance node connections.

Type	Description
Backup and Restoration	Create manual backups, delete manual backups, query backups, query the automated backup policy, set the automated backup policy, restore to a new DB instance, obtain the backup download link, query the restoration time range, obtain the list of databases that can be restored, obtain the list of database collections that can be restored, obtain the current DB instance, and restore a database or table to a specified point in time.
Parameter Configuration	Obtain parameter templates, create a parameter template, delete a parameter template, obtain details about a parameter template, modify a parameter template, apply a parameter template, obtain parameters of a specified DB instance, and modify parameters of a specified DB instance.
Log Information Queries	Query database slow logs, obtain the download link of slow logs, query database error logs, obtain the download link of error logs, set audit log policies, query audit log policies, obtain the audit logs, and obtain the download link of audit logs.
Tag Management	Manage tags, including querying resources by tag, adding and deleting a tag or tags, and querying resource tags and project tags.
Managing Databases and Users	Create a database user, create a database role, query database users and roles, change the database user password, query the cluster balancing settings, enable or disable cluster balancing, and set the activity time window of cluster balancing, delete database users, delete database roles, and check the database password.
Quota Management	This API is used to query the DDS resource quotas of a tenant, including the cluster instance quota, single node instance quota, and replica set instance quota.
Task Management	This API is used to obtain information about a task with a specified ID in the task center.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API, and uses the IAM API for obtaining a user token as an example to describe how to call an API. The obtained token is used to authenticate the calling of other APIs.

Request URI

A request URI is in the following format:

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

Although a request URI is included in a request header, most programming languages or frameworks require the request URI to be separately transmitted, rather than being conveyed in a request message.

Table 3-1 URI parameter description

Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Specifies the domain name or IP address of the server bearing the REST service endpoint. Obtain the value from Regions and Endpoints.
resource-path	API access path for performing a specified operation. Obtain the value from the URI of the API. For example, the resource-path of the API for obtaining a user token is /v3/auth/tokens .
query-string	Query parameter, which is optional. Not all APIs have a query parameter. Ensure that a question mark (?) is included before a query parameter that is in the format of "Parameter name=Parameter value". For example, ? limit=10 indicates that a maximum of 10 pieces of data is to be viewed.

 NOTE

To simplify URI display, each API is provided with only a **resource-path** and a request method. This is because the **URI-scheme** value of all APIs is **HTTPS**, and the endpoints in a region are the same. Therefore, the two parts are omitted.

Request Methods

HTTP-based request methods, which are also called operations or actions, specify the type of operations that you are requesting.

Table 3-2 HTTP methods

Method	Description
GET	Requests a server to return the specified resources.
PUT	Requests a server to update specified resources.
POST	Requests a server to add resources or perform special operations.
DELETE	Requests a server to delete specified resources, for example, an object.

For example, in the URI for obtaining a user token, the request method is POST, and the request is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

Request Header

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

Table 3-3 lists common request header fields.

Table 3-3 Common request header fields

Name	Description	Mandatory	Example
Host	Specifies the requested server information, which can be obtained from the URL of the service API. The value is in the <i>hostname[:port]</i> format. If the port number is not specified, the default port is used. The default port number for https is 443 .	No This parameter is mandatory for AK/SK authentication.	code.test.com or code.test.com:443
Content-Type	Specifies the MIME type of the request body. You are advised to use the default value application/json . For APIs used to upload objects or images, the value can vary depending on the flow type.	Yes	application/json
Content-Length	Specifies the length of the request body. The unit is byte.	This parameter is optional for POST requests, but must be left blank for GET requests.	3495
X-Project-Id	Specifies the project ID. Obtain the project ID by following the instructions in Obtaining a Project ID .	No This parameter is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario.	e9993fc787d94b6c886cb aa340f9c0f4

Name	Description	Mandatory	Example
X-Auth-Token	Specifies the user token. After the request is processed, the value of X-Subject-Token in the header is the token value.	No This parameter is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQc-Co...ggg1BBIINPXsidG9rZ

NOTE

In addition to supporting token-based authentication, APIs support authentication using access key ID/secret access key (AK/SK). During AK/SK-based authentication, an SDK is used to sign the request, and the **Authorization** (signature information) and **X-Sdk-Date** (time when the request is sent) header fields are automatically added to the request.

For more information, see **AK/SK-based Authentication** in [Authentication](#).

The API used to obtain a user token does not require authentication. Therefore, this API only requires adding the **Content-Type** field. The request with the added **Content-Type** header is as follows:

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

(Optional) Request Body

This part is optional. A request body is generally sent in a structured format (for example, JSON or XML), corresponding to **Content-Type** in the request header, and is used to transfer content other than the request header. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies according to the APIs. Certain APIs do not require the request body, such as the GET and DELETE APIs.

For the API used to , the request parameters and parameter description can be obtained in the API request. The following provides an example request with a body included. Replace **username**, **domiannname**, ********* (login password), and **xxxxxxxxxxxxxxxxxxxxxx** (project ID, for example, ap-southeast-1) with the actual values. Obtain the value from the Regions and Endpoints.

NOTE

scope specifies where a token takes effect. In the following example, the token takes effect only on the resources specified by the project ID. You can set the scope to an account or a project under an account. For details, see Obtaining a User Token.

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

{
  "auth": {
    "identity": {
      "methods": [
        "password"
```

```
    ],
    "password": {
      "user": {
        "name": "username",
        "password": "*****#",
        "domain": {
          "name": "domiannname"
        }
      }
    },
    "scope": {
      "project": {
        "name": "xxxxxxxxxxxxxxxxxxxxx"
      }
    }
  }
}
```

If all data required by a request is available, you can send the request to call an API through [curl](#), [Postman](#), or coding. For the API used to obtain a user token, **x-subject-token** in the response header is the desired user token. Then, you can use the token to authenticate the calling of other APIs.

3.2 Authentication

Requests for calling an API can be authenticated using either of the following methods:

- Token-based authentication: Requests are authenticated using a token.
- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair. Authentication using AK/SK is recommended because it is more secure than authentication using tokens.

Token Authentication

NOTE

The validity period of a token is 24 hours. If a token needs to be used, the system caches the token to avoid frequent calling.

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.

If you use a token for authentication, you must obtain the user's token and add **X-Auth-Token** to the request message header of the service API when making an API call.

When calling an API to obtain a user token, you must set **auth.scope** in the request body to **project**.

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
```

```
{
  "name": "username",
  "password": "password",
  "domain": {
    "name": "domainname"
  }
},
"scope": {
  "project": {
    "name": "xxxxxxx"
  }
}
}
```

After a token is obtained, 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 **ABCDEFGH....**, add **X-Auth-Token: ABCDEFGH....** to a request as follows:

```
GET https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFGH....
```

AK/SK-based Authentication

NOTE

AK/SK-based authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token-based authentication is recommended.

In AK/SK-based authentication, AK/SK is used to sign requests and the signature is then added to the requests for authentication.

- **AK:** access key ID, which is a unique identifier associated with a secret access key and is used in conjunction with a secret access key to sign requests cryptographically.
- **SK:** secret access key used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK-based authentication, you can use an AK/SK to sign requests based on the signature algorithm or use the signing SDK to sign requests.

NOTE

The signing SDK is only used for signing requests and is different from the SDKs provided by services.

3.3 Returned Values

Status Code

After sending a request, you will receive a response, including the 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 response. For more information, see [Status Code](#).

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

Response Header

A response header corresponds to a request header, for example, **Content-Type**.

Figure 3-1 shows the response header for the API used to obtain a user token, in which **x-subject-token** is the desired user token. Then, you can use the token to authenticate the calling of other APIs.

Figure 3-1 Header for the API used to obtain 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
→ MIIVXQYJKoZIhvcNAQcCoIIYJCCEoCAQExDTALBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOnsiZXhwaXJlc19hdCI6IjIwMTktMTNUMC
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkqjACgklqO1wi4JlGzrpd18LGXK5tdfdq4lqHCYb8P4NaY0NYejcAgz/VeFYtLWT1GSO0zxKZmlQHqJ82HBqHdglZO9fuEbL5dMhdavj+33wEI
xHRC9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jqgIFkNPQuFSOU8+uSsttVwRtNfsC+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUVhVpxk8pxiX1wTEboX-
RzT6MUbpvGw-oPNFYxJECKnoH3HRozv0vN--n5d6Nbxg==

x-xss-protection → 1; mode=block;
```

(Optional) Response Body

This part is optional. A response body is generally returned in a structured format (for example, JSON or XML), corresponding to **Content-Type** in the response header, and is used to transfer content other than the response header.

If the following response body is returned for calling the API used to obtain a user token, the request is successful. 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": "aaa",
            .....
          }
        ]
      }
    ]
  }
}
```

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

```
{  
  "error_msg": "Parameter error",  
  "error_code": "DBS.200001"  
}
```

In the preceding information, **error_code** is an error code, and **error_msg** describes the error.

4 Getting Started

This section describes how to create a cluster instance by calling APIs.

NOTE

The validity period of a token obtained from IAM is 24 hours. If you want to use a token for authentication, cache it to avoid frequent IAM API calling.

Involved APIs

If you use a token for authentication, you must obtain the user's token and add **X-Auth-Token** to the request message header of the service API when making an API call.

- API for obtaining tokens from IAM
- Creating a DDS DB instance using an open API

Procedure

1. Obtain the token by following instructions in section [Authentication](#).
2. Send **POST** [https://DDS_endpoint/v3/{project_id}/instances](#).
3. Add **X-Auth-Token** to the request header.
4. Specify the following parameters in the request body:

NOTE

The values of **region** and **availability_zone** are used as examples.

For details about the API used for creating DB instances, see [Creating a DB Instance](#).

```
{
  "name": "test-cluster", //DB instance name
  "datastore": {
    "type": "DDS-Community", // Database type and version
    "version": "3.4", //Database version
    "storage_engine": "wiredTiger" //Storage engine
  },
  "region": "aaa", //Region name
  "availability_zone": "bbb", //AZ name
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961", //VPC ID
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b", //Subnet ID
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58", //Security group ID
}
```

```
"password": "*****", //Administrator password
"disk_encryption_id": "d4825f1b-5e47-4ff7-8ca9-0960da1770b1", //Key ID for encrypting
disks
"mode": "Sharding", //Sharded-cluster instance type
"flavor": [
{
  "type": "mongos", //mongos node
  "num": 2, //Quantity
  "spec_code": "dds.mongodb.c6.medium.4.mongos" //Node resource code
},
{
  "type": "shard", //shard node
  "num": 2, //Quantity
  "storage": "ULTRAHIGH", //Disk type
  "size": 20, //Disk size
  "spec_code": "dds.mongodb.c6.medium.4.shard" //Node resource code
},
{
  "type": "config", //config node
  "num": 1, //Quantity
  "storage": "ULTRAHIGH", //Disk type
  "size": 20, //Disk size
  "spec_code": "dds.mongodb.c6.large.2.config" //Node resource type
}
],
"backup_strategy": {
  "start_time": "23:00-00:00", //Backup period
  "keep_days": "8" //Retention days of backup files
},
"ssl_option": "1"
}
```

If the following information is displayed, the request is successful:

```
{
  "id": "46125c43ca4d424a9f5c97354223c4e0in02",
  "name": "test-cluster",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "storage_engine": "wiredTiger"
  },
  "created": "2019-01-14 08:50:27",
  "status": "creating",
  "region": "aaa",
  "availability_zone": "bbb",
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "disk_encryption_id": "d4825f1b-5e47-4ff7-8ca9-0960da1770b1",
  "mode": "Sharding",
  "flavor": [
    {
      "type": "mongos",
      "num": 2,
      "spec_code": "dds.mongodb.c6.medium.4.mongos"
    },
    {
      "type": "shard",
      "num": 2,
      "size": 20,
      "spec_code": "dds.mongodb.c6.medium.4.shard"
    }
  ],
}
```

```
{
  "type": "config",
  "num": 1,
  "size": 20,
  "spec_code": "dds.mongodb.c6.large.2.config"
},
"backup_strategy": {
  "start_time": "23:00-00:00",
  "keep_days": "8"
},
"enterprise_project_id": "",
"ssl_option": "1",
"job_id": "c0c606b6-470a-48c7-97a2-6c7f146014d4"
}
```

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

5 APIs V3.0 (Recommended)

5.1 Querying the API Version

5.1.1 Querying the API Version List

API Description

This API is used to query the currently supported API version list.

URI

- URI format
GET https://{Endpoint}/
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/

Request Parameters

None

Response Parameters

- Parameter description

Table 5-1 Parameter description

Name	Type	Mandator y	Description
versions	Array of objects	No	Indicates the list of detailed API version information. For more information, see Table 5-2 .

Table 5-2 versions field data structure description

Name	Type	Mandator y	Description
id	String	Yes	Indicates the API version.
links	Array of objects	Yes	Indicates the API link information. For more information, see Table 5-3 . NOTE If the version is v3 , the value is <code>[]</code> .
status	String	Yes	Version status The value CURRENT indicates that the version has been released.
version	String	Yes	Indicates the subversion of the API version.
min_version	String	Yes	Indicates the minimum API version.
updated	String	Yes	Indicates the version update time. The format is yyyy-mm- ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the UTC.

Table 5-3 links field data structure description

Name	Type	Mandato ry	Description
href	String	No	Indicates the API URL and the value is "".
rel	String	No	Its value is self , indicating that URL is a local link.

- Response example

```
{
  "versions": [
    {
      "id": "v3",
      "links": [],
      "status": "CURRENT",
      "version": "",
      "min_version": "",

```

```
    "updated": "2017-02-07T17:34:02Z"
  }
]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.1.2 Querying API Version Information

API Description

This API is used to query the specified API version.

URI

- URI format
GET https://{Endpoint}/{version}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3

Request Parameters

None

Response Parameters

- Parameter description

Table 5-4 Parameter description

Name	Type	Mandator y	Description
versions	Array of objects	No	Indicates the list of detailed API version information. For more information, see Table 5-2 .

Table 5-5 versions field data structure description

Name	Type	Mandator y	Description
id	String	Yes	Indicates the API version.

Name	Type	Mandatory	Description
links	Array of objects	Yes	Indicates the API link information. For more information, see Table 5-3 . NOTE If the version is v3 , the value is [].
status	String	Yes	Version status The value CURRENT indicates that the version has been released.
version	String	Yes	Indicates the subversion of the API version.
min_version	String	Yes	Indicates the minimum API version.
updated	String	Yes	Indicates the version update time. The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the UTC.

Table 5-6 links field data structure description

Name	Type	Mandatory	Description
href	String	No	Indicates the API URL and the value is "".
rel	String	No	Its value is self , indicating that URL is a local link.

• Response example

```
{
  "version": {
    "id": "v3",
    "links": [],
    "status": "CURRENT",
    "version": "",
    "min_version": "",
    "updated": "2017-02-07T17:34:02Z"
  }
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.2 Querying Database Version Information

API Description

This API is used to obtain database version information about a specified type of a DB instance.

URI

- URI format
GET `https://{Endpoint}/v3/{project_id}/datastores/{datastore_name}/versions`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/datastores/DDS-Community/versions`

Request Parameters

Request parameters

Table 5-7 Request parameters

Name	Type	IN	Mandatory	Description
x-auth-token	string	header	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. Obtain the project ID by following the instructions in Obtaining a Project ID .
datastore_name	string	path	Yes	Specifies the database type. The value is DDS-Community .

Response Parameters

- Parameter description

Table 5-8 Parameter description

Name	Type	Mandatory	Description
versions	Array of strings	Yes	DB version. Versions 5.0, 4.4, 4.2, 4.0, and 3.4 are supported. The value can be 5.0 , 4.4 , 4.2 , 4.0 , or 3.4 .

- Response example

```
{
  "versions": [
    "3.4",
    "4.0",
    "4.2",
    "4.4",
    "5.0"
  ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.3 Querying Database Specifications

API Description

This API is used to query all instance specifications under a specified condition.

URI

- URI format
GET https://{Endpoint}/v3.1/{project_id}/flavors?
engine_name={engine_name}&engine_version={engine_version}&offset={offset}&limit={limit}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/
v3.1/0549b4a43100d4f32f51c01c2fe4acdb/flavors?engine_name=DDS-
Community&engine_version=3.4&offset=1&limit=20

Request Parameters

Request parameters

Table 5-9 Parameter description

Name	Type	IN	Man dator y	Description
x-auth-token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
engine_name	string	query	No	Specifies the database type. The value is DDS-Community . To obtain this value, see Querying Database Version Information .
engine_version	string	query	No	DB version number.
offset	Integer	query	No	Index offset. - If offset is set to N, the resource query starts from the $N+1$ piece of data. The default value is 0, indicating that the query starts from the first piece of data. - The value must be a positive number.
limit	Integer	query	No	Maximum pieces of specifications information that can be queried - The value ranges from 1 to 100. - If this parameter is not transferred, the first 100 pieces of specification information can be queried by default.

Response Parameters

- Parameter description

Table 5-10 Parameter description

Name	Type	Mandatory	Description
flavors	Array of objects	Yes	Indicates the DB instance specifications information list. For more information, see Table 5-11 .
total_count	Integer	Yes	Total number of records

Table 5-11 flavors field data structure description

Name	Type	Mandatory	Description
engine_name	String	Yes	Indicates the engine name.
type	String	Yes	Indicates the node type. DDS contains the following types of nodes: • mongos • shard • config • replica • single • readonly
vcpus	String	Yes	Indicates the number of vCPUs.
ram	String	Yes	Indicates the memory size in gigabyte (GB).

Name	Type	Mandatory	Description
spec_code	String	Yes	Indicates the resource specification code. Example: dds.mongodb.c6.xlarge.2.shard NOTE • dds: indicates the DDS service. • dds.mongodb: indicates the DDS service. • c6.xlarge.2: indicates the node specification. It is a high-memory type. • shard: indicates the node type. • When querying the specifications, check whether the specifications are of the same series. The specification series includes general-purpose (s6), enhanced (c3), and enhanced II (c6). Example: • dds.mongodb.s6.large.4.mongos and dds.mongodb.s6.large.4.config have the same specifications. • dds.mongodb.s6.large.4.mongos and dds.mongodb.c3.large.4.config are not of the same specifications.
az_status	Map<String,String>	Yes	key indicates the AZ ID, and value indicates the specification status in the AZ. Its value can be any of the following: • normal: The specification is on sale. • unsupported: This specification is not supported. • sellout: The specification is sold out.
engine_versions	Array of strings	Yes	Database versions For example, DDS mongos node, {"3.4", "4.0"}

 NOTE

In the example response, **az1**, **az2**, and **az3** in the **az_status** field are example values.

- Response example

```
{
  "total_count": 4,
  "flavors": [
    {
      "engine_name": "DDS-Community",
      "type": "mongos",
      "vcpus": "1",
      "ram": "4",
      "spec_code": "dds.mongodb.c6.medium.4.mongos",
      "engine_versions": ["3.4", "4.0"],
      "az_status": {
        "az1": "normal",
        "az2": "normal",
        "az3": "normal"
      }
    },
    {
      "engine_name": "DDS-Community",
      "type": "shard",
      "vcpus": "4",
      "ram": "8",
      "spec_code": "dds.mongodb.c6.xlarge.2.shard",
      "engine_versions": ["3.4", "4.0"],
      "az_status": {
        "az1": "normal",
        "az2": "normal",
        "az3": "normal"
      }
    },
    {
      "engine_name": "DDS-Community",
      "type": "config",
      "vcpus": "2",
      "ram": "4",
      "spec_code": "dds.mongodb.c6.large.2.config",
      "engine_versions": ["3.4", "4.0"],
      "az_status": {
        "az1": "normal",
        "az2": "normal",
        "az3": "normal"
      }
    },
    {
      "engine_name": "DDS-Community",
      "type": "replica",
      "vcpus": "1",
      "ram": "4",
      "spec_code": "dds.mongodb.c6.medium.4.repset",
      "engine_versions": ["3.4", "4.0"],
      "az_status": {
        "az1": "normal",
        "az2": "normal",
        "az3": "normal"
      }
    }
  ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.4 Querying the Database Disk Type

API Description

This API is used to query the database disk type in the current region.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/storage-type?
engine_name={engine_name}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/
storage-type?engine_name=DDS-Community

Request Parameters

Request parameters

Table 5-12 Parameter description

Name	Type	IN	Man dator y	Description
x-auth-token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
engine_name	string	query	No	Specifies the database type. The value is DDS-Community . To obtain this value, see Querying Database Version Information .

Response Parameters

- Parameter description

Table 5-13 Parameter description

Name	Type	Mandatory	Description
storage_type	Array of objects	Yes	Indicates the database disk information list. For more information, see Table 5-14 .
dss_pool_info	Array of objects	Yes	Indicates the dss_pool specifications information list. For more information, see Table 5-15 . NOTE Only Dedicated Cloud (DeC) users are supported.

Table 5-14 storage_type field data structure description

Name	Type	Mandatory	Description
name	String	Yes	Indicates the storage type. Its value can be: ULTRAHIGH : indicates the SSD type. EXTREMEHIGH indicates ESSD.
az_status	Map<String,String>	Yes	key indicates the AZ ID, and value indicates the specification status in the AZ. Its value can be any of the following: • normal: indicates that the specifications are on sale. • unsupported: The disk type is not supported. • sellout: indicates the specifications are sold out.

Table 5-15 dss_pool_info field data structure description

Name	Type	Mandatory	Description
az_name	String	Yes	Indicates the name of the AZ where the dss_pool is located.

Name	Type	Mandatory	Description
free_capacity_gb	String	Yes	Indicates the available capacity of DSS. Unit: GB
dss_pool_volume_type	String	Yes	Indicates the disk type of DSS storage pool.
dss_pool_id	String	Yes	Indicates the DSS pool ID.
dss_pool_status	String	Yes	Indicates the dss_pool status. Its value can be any of the following: • available • deploying • enlarging • frozen • sellout

 NOTE

In the example response, **az1**, **az2**, and **az3** in the **az_status** field are example values.

- Response example

```
{
  "storage_type": [
    {
      "name": "ULTRAHIGH",
      "az_status": {
        "az1": "normal",
        "az2": "normal"
      }
    }
  ],
  "dss_pool_info": [
    {
      "az_name": "az1xahz",
      "free_capacity_gb": 150,
      "dss_pool_volume_type": "ULTRAHIGH",
      "dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4df",
      "dss_pool_status": "available"
    }
  ]
}
```

- DeC user query response example

```
{
  "storage_type": [
    {
      "name": "ULTRAHIGH",
      "az_status": {
        "az1": "normal",
        "az2": "normal",
        "az3": "unsupported"
      }
    }
  ]
}
```

```
    }  
  }  
],  
"dss_pool_info": [  
  {  
    "az_name": "az1",  
    "free_capacity_gb": "8656",  
    "dss_pool_volume_type": "ULTRAHIGH",  
    "dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",  
    "dss_pool_status": "available"  
  }  
]  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5 DB Instance Management

5.5.1 Creating a DB Instance

API Description

This API is used to create cluster and replica set instances.

Restrictions

This API supports both yearly/monthly and pay-per-use DB instances.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances
- URI example
<https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances>

Table 5-16 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-17 Parameter description

Name	Type	Mandatory	Description
name	String	Yes	The DB instance name. The instance name can be the same as an existing name. The instance name must contain 4 to 64 characters and must start with a letter. It is case sensitive and can contain letters, digits, hyphens (-), and underscores (_). It cannot contain other special characters.

Name	Type	Mandatory	Description
datastore	Object	Yes	The database information. For details, see Table 5-18 .
region	String	Yes	The region ID. The value cannot be empty.
availability_zone	String	Yes	AZ ID. You can select multiple AZs to create a cross-AZ cluster based on az_status returned by the API described in Querying Database Specifications . The value cannot be empty.
vpc_id	String	Yes	The VPC ID. To obtain this parameter value, use either of the following methods: • Method 1: Log in to VPC console and view the VPC ID on the VPC details page. • Method 2: Query the VPC ID through the VPC API. For details, see Querying VPCs.
subnet_id	String	Yes	The network ID of the subnet. To obtain this parameter value, use either of the following methods: • Method 1: Log in to VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page. • Method 2: Query the network ID through the VPC API. For details, see Querying Subnets.

Name	Type	Mandatory	Description
security_group_id	String	Yes	- Specifies the ID list of the security groups which a specified DB instance belongs to. - You can add up to 10 security group IDs for each instance and separate them with commas (,). - You can obtain it in either of the following ways: - Method 1: Log in to VPC console. Choose Access Control > Security Groups in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. - Method 2: Query the security group through the VPC API. For details, see Querying Security Groups.
port	String	No	Database access port Value range: 2100 to 65535 (excluding 12017 and 33071) If this parameter is not transferred, the port of the created DB instance is 8635 by default.

Name	Type	Mandatory	Description
password	String	No	The database password. The value must be 8 to 32 characters in length and contain uppercase letters (A to Z), lowercase letters (a to z), digits (0 to 9), and special characters, such as ~!@#%^*_-=+? Enter a strong password to improve security, preventing security risks such as brute force cracking. If this parameter is not transferred, set a password for the instance before connecting to the instance. For details, see Resetting the Administrator Password.
disk_encryption_id	String	No	The key ID used for disk encryption. The string must comply with UUID regular expression rules. If this parameter is not transferred, disk encryption is not performed.
mode	String	Yes	The instance type. Cluster and replica set instances are supported. Valid value: • Sharding • ReplicaSet
configurations	Array of objects	No	Parameter group configuration information. For details, see Table 5-19. If this parameter is not transferred, the default parameter group is used.

Name	Type	Mandatory	Description
flavor	Array of objects	Yes	The instance specifications. For more information, see Table 5-20 . For details about how to obtain the value, see the response values of flavor in Querying Database Specifications .
backup_strategy	Object	No	The advanced backup policy. For more information, see Table 5-21 .
enterprise_project_id	String	No	The enterprise project ID. • This parameter is not transferred for users who have not enabled the enterprise multi-project service. • If this parameter is not transferred for a user who has enabled the enterprise multi-project service, the value is the default enterprise project. To obtain the enterprise project ID, see the id value in the enterprise_project field data structure table in section "Querying the Enterprise Project List" of the <i>Enterprise Management API Reference</i> .
ssl_option	String	No	Specifies whether to enable or disable SSL. Valid value: • The value 0 indicates that SSL is disabled by default. • The value 1 indicates that SSL is enabled by default. • If this parameter is not transferred, SSL is disabled by default.
dss_pool_id	String	No	The dedicated storage ID of the DeC user. The value is left blank by default. Only DeC users support this parameter.

Name	Type	Mandatory	Description
server_group_policies	Array of strings	No	The names of the policies associated with the ECS group of the DeC user. Only DeC users support this parameter. The values are as follows: • anti-affinity indicates that anti-affinity deployment is enabled for the DDS instance. To ensure high availability, the primary, secondary, and hidden nodes are created on different physical machines. • If this parameter is not specified for Dec users, anti-affinity deployment is disabled by default.
tags	Array of objects	No	Tags A maximum of 20 tags can be added for each instance. For details, see Table 5-22 .
charge_info	Object	No	Billing mode, which includes yearly/monthly and pay-per-use. The default billing mode is pay-per-use. For details, see Table 5-23 .

Table 5-18 Data structure of the datastore field

Name	Type	Mandatory	Description
type	String	Yes	The database type. The value is DDS-Community .
version	String	Yes	The database version. Versions 5.0, 4.4, 4.2, 4.0, and 3.4 are supported. The value can be 5.0, 4.4, 4.2, 4.0, or 3.4 .

Name	Type	Mandatory	Description
storage_engine	String	Yes	The storage engine. DDS supports the WiredTiger and RocksDB storage engines. • If the database version is 4.2 or later, the storage engine is RocksDB and the value is rocksDB. • If the database version is 4.0 or 3.4, the storage engine is WiredTiger and the value is wiredTiger.

Table 5-19 Data structure of the Configurations field

Parameter	Type	Mandatory	Description
type	String	Yes	Node type. Valid value: • For a cluster instance, the value can be mongos, shard, or config. • For a replica set instance, the value is replica. Enumerated values: • mongos • shard • config • replica
configuration_id	String	Yes	Parameter group ID. For details, see Table 5-168 .

Table 5-20 Data structure of the flavor field

Name	Type	Mandatory	Description
type	String	Yes	The node type. Valid value: - For a cluster instance, the value can be mongos, shard, or config. - For a replica set instance, the value is replica.
num	String	Yes	Number of nodes or groups. Valid value: - If the value of type is mongos, num indicates the number of mongos nodes in the cluster instance. The value ranges from 2 to 16. - If the value of type is shard, num indicates the number of shard groups in the cluster instance. The value ranges from 2 to 16. - If the value of type is config, num indicates the number of config groups in the cluster instance. The value can only be 1. - If the value of type is replica, num indicates the number of replica nodes in the replica set instance. The value can be 3, 5, or 7. NOTE When creating a replica set instance, you can also set num to 1 to create a 3-node replica set instance.

Name	Type	Mandatory	Description
storage	String	No	The disk type. The value can be: • ULTRAHIGH: SSD storage. • EXTREMEHIGH: extreme SSD storage. This parameter is valid for the shard and config nodes of a cluster instance and for replica set instances. This parameter is invalid for mongos nodes. Therefore, you do not need to specify the storage space for mongos nodes.
size	String	No	The disk size. This parameter is mandatory for all nodes except mongos. This parameter is invalid for the mongos nodes. The value must be a multiple of 10. The unit is GB. • For a cluster instance, the storage space of a shard node can be 10 to 2,000 GB, and the config storage space is 20 GB. This parameter is invalid for mongos nodes. Therefore, you do not need to specify the storage space for mongos nodes. • For a replica set instance, the value ranges from 10 to 3000.

Name	Type	Mandatory	Description
spec_code	String	Yes	Resource specification code. For details about how to obtain the code, see the value of response parameter spec_code in Querying Database Specifications. In a cluster instance, multiple specifications need to be specified. All specifications must be of the same series, that is, general-purpose (s6), enhanced (c3), or enhanced II (c6). Example: • dds.mongodb.s6.large.4.mongos and dds.mongodb.s6.large.4.config have the same specifications. • dds.mongodb.s6.large.4.mongos and dds.mongodb.c3.large.4.config are not of the same specifications.

Table 5-21 Data structure of the backup_strategy field

Name	Type	Mandatory	Description
start_time	String	Yes	The backup time window. Automated backups will be triggered during the backup time window. The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to 00. • If this parameter is not transferred, the default backup time window is set to 00:00-01:00. Example value: 23:00-00:00
keep_days	String	No	The number of days to retain the generated backup files. The value range is from 0 to 732. • If this parameter is set to 0, the automated backup policy is not set. • If this parameter is not transferred, the automated backup policy is enabled by default. Backup files are stored for seven days by default.

Table 5-22 Data structure of the tags field

Name	Type	Mandatory	Description
key	String	Yes	Tag key. The value can contain a maximum of 36 unicode characters. The key cannot be left blank or an empty string. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).
value	String	Yes	Tag value. It contains a maximum of 43 Unicode characters. The value can be an empty string. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).

Table 5-23 Data structure of the charge_info field

Parameter	Type	Mandatory	Description
charge_mode	String	Yes	Billing mode. Value range: • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.
period_type	String	No	Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • month: The service is subscribed by month. • year: The service is subscribed by year.

Parameter	Type	Mandatory	Description
period_num	Integer	No	This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • If period_type is set to month, the parameter value ranges from 1 to 9. • If period_type is set to year, the parameter value ranges from 1 to 3.
is_auto_renew	Boolean	No	Whether automatic renewal is enabled for yearly/monthly instances. The renewal period is the same as the original period and the order will be automatically paid during the subscription renewal. Value range: • true: indicates that the subscription is automatically renewed. • false: indicates that the subscription is not automatically renewed. The default value is false.
is_auto_pay	Boolean	No	Payment method. When creating a yearly/monthly DB instance, you can specify whether to automatically pay with your account. This parameter does not affect the payment method of automatic renewal. Value range: • true: indicates that the fee is automatically paid from the account. • false: indicates that the fee is manually paid from the account. This payment method is used by default.

 NOTE

The values of **region** and **availability_zone** are used as examples.

Example Request

- Creating a cluster instance whose version is DDS 3.2, storage engine is WiredTiger, VPC, subnet, security group, and parameter template are configured, SSL is enabled, and tags are added

```
{
  "name": "test-cluster-01",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.2",
    "storage_engine": "wiredTiger"
  },
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "password": "*****",
  "mode": "Sharding",
  "configurations": [
    {
      "type": "mongos",
      "configuration_id": "acb288dbd1174f26a8960b45591bd98apr02"
    },
    {
      "type": "shard",
      "configuration_id": "5bca546f0be64b038124ef9cedd1bfa1pr02"
    },
    {
      "type": "config",
      "configuration_id": "4d123b3ba8294921802b11bf4d8c5735pr02"
    }
  ],
  "flavor": [
    {
      "type": "mongos",
      "num": 2,
      "spec_code": "dds.mongodb.c6.medium.4.mongos"
    },
    {
      "type": "shard",
      "num": 2,
      "storage": "ULTRAHIGH",
      "size": 20,
      "spec_code": "dds.mongodb.c6.medium.4.shard"
    },
    {
      "type": "config",
      "num": 1,
      "storage": "ULTRAHIGH",
      "size": 20,
      "spec_code": "dds.mongodb.c6.large.2.config"
    }
  ],
  "backup_strategy": {
    "start_time": "08:15-09:15",
    "keep_days": 8
  },
  "ssl_option": 1,
  "dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",
  "server_group_policies": [
    "anti-affinity"
  ],
  "tags": [
    {
      "key": "dds001",
      "value": "dds001"
    }
  ]
}
```

```
]
}
```

- Creating a cross-AZ cluster instance whose version is DDS 3.4, storage engine is WiredTiger, VPC, subnet, security group, and parameter template are configured, SSL is enabled, and tags are added

```
{
  "name": "test-cluster-01",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "storage_engine": "wiredTiger"
  },
  "region": "aaa",
  "availability_zone": "aaa,bbb,ccc",
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "password": "*****",
  "mode": "Sharding",
  "flavor": [
    {
      "type": "mongos",
      "num": 2,
      "spec_code": "dds.mongodb.c6.medium.4.mongos"
    },
    {
      "type": "shard",
      "num": 2,
      "storage": "ULTRAHIGH",
      "size": 20,
      "spec_code": "dds.mongodb.c6.medium.4.shard"
    },
    {
      "type": "config",
      "num": 1,
      "storage": "ULTRAHIGH",
      "size": 20,
      "spec_code": "dds.mongodb.c6.large.2.config"
    }
  ],
  "backup_strategy": {
    "start_time": "23:00-00:00",
    "keep_days": "8"
  },
  "ssl_option": "1",
  "tags": [{
    "key": "dds001",
    "value": "dds001"
  }]
}
```

- Creating a replica set instance whose version is DDS 3.2, storage engine is WiredTiger, VPC, subnet, security group, and parameter template are configured, SSL is enabled, and tags are added

```
{
  "name": "test-replicaset",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.2",
    "storage_engine": "wiredTiger"
  },
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "password": "*****",
  "mode": "ReplicaSet",

```

```
"configurations": [
  {
    "type": "replica",
    "configuration_id": "f17e3aad778440fbb68603c8c9032003pr02"
  }
],
"flavor": [
  {
    "type": "replica",
    "num": 1,
    "storage": "ULTRAHIGH",
    "size": 30,
    "spec_code": "dds.mongodb.c6.medium.4.repset"
  }
],
"backup_strategy": {
  "start_time": "08:15-09:15",
  "keep_days": 8
},
"ssl_option": 1,
"tags": [
  {
    "key": "dds001",
    "value": "dds001"
  }
]
}
```

Response Parameters

- Parameter description

Table 5-24 Parameter description

Name	Type	Mandatory	Description
id	String	No	Indicates the DB instance ID.
name	String	No	Same as the request parameter.
datastore	Object	No	Indicates the database information, which is the same as the request parameter. For more information, see Table 5-25 .
created	String	No	Indicates the creation time in the following format: yyyy-mm-dd hh:mm:ss.
status	String	No	Indicates the DB instance status. The value is creating .
region	String	No	Indicates the region ID, which is the same as the request parameter.

Name	Type	Mandatory	Description
availability_zone	String	No	Indicates the AZ ID, which is the same as the request parameter.
vpc_id	String	No	Indicates the VPC ID, which is the same as the request parameter.
subnet_id	String	No	Indicates the network ID of the subnet, which is the same as the request parameter.
security_group_id	String	No	Indicates the security group ID list, which is the same as the request parameter.
port	Integer	No	Indicates the database port.
disk_encryption_id	String	No	Indicates the ID of the disk encryption key, which is the same as the request parameter.
mode	String	No	Indicates the instance type, which is the same as the request parameter.
configurations	Array of objects	No	Parameter group configuration information. For details, see Table 5-26 .
flavor	Array of objects	No	Indicates the instance specification, which is the same as the request parameter. For more information, see Table 5-27 .
backup_strategy	Object	No	Indicates the advanced backup policy, which is the same as the request parameter. For more information, see Table 5-28 .

Name	Type	Mandatory	Description
enterprise_project_id	String	No	Indicates the enterprise project ID. If the value is 0 , the resource belongs to the default enterprise project.
ssl_option	String	No	Indicates whether to enable SSL, which functions the same as the request parameter.
dss_pool_id	String	No	Indicates the DSS storage pool ID, which is the same as the request parameter.
job_id	String	No	Indicates the ID of the workflow for creating a DB instance.
tags	Array of objects	No	Tag list, which is the same as the request parameter. For details, see Table 5-29 .
order_id	String	No	The ID of the order for creating an instance. This parameter is returned only when you create a yearly/monthly instance.
charge_info	Object	No	Billing mode, which is the same as the request parameter. For details, see Table 5-30 .

Table 5-25 Data structure of the datastore field

Name	Type	Mandatory	Description
type	String	Yes	The database type. The value is DDS-Community .
version	String	Yes	The database version. Versions 5.0, 4.4, 4.2, 4.0, and 3.4 are supported. The value can be 5.0, 4.4, 4.2, 4.0, or 3.4 .

Name	Type	Mandatory	Description
storage_engine	String	Yes	The storage engine. DDS supports the WiredTiger and RocksDB storage engines. - If the database version is 4.2 or later, the storage engine is RocksDB and the value is rocksDB. - If the database version is 4.0 or 3.4, the storage engine is WiredTiger and the value is wiredTiger.

Table 5-26 Data structure of the Configurations field

Parameter	Type	Mandatory	Description
type	String	Yes	Node type. Valid value: - For a cluster instance, the value can be mongos, shard, or config. - For a replica set instance, the value is replica. Enumerated values: mongos shard config replica
configuration_id	String	Yes	Parameter group ID. For details, see Table 5-168 .

Table 5-27 Data structure of the flavor field

Name	Type	Mandatory	Description
type	String	Yes	Node type.
num	String	Yes	Number of nodes or groups.
storage	String	No	Disk type.
size	String	No	Disk size.

Name	Type	Mandatory	Description
spec_code	String	Yes	Resource specification code.

Table 5-28 Data structure of the backup_strategy field

Name	Type	Mandatory	Description
start_time	String	Yes	The backup time window. Automated backups will be triggered during the backup time window.
keep_days	String	No	The number of days to retain the generated backup files.

Table 5-29 Data structure of the tags field

Name	Type	Mandatory	Description
key	String	Yes	Tag key. The value can contain a maximum of 36 unicode characters. The key cannot be left blank or an empty string. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).
value	String	Yes	Tag value. It contains a maximum of 43 Unicode characters. The value can be an empty string. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).

Table 5-30 Data structure of the charge_info field

Parameter	Type	Mandatory	Description
charge_mode	String	Yes	Billing mode. Value range: • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.
period_type	String	No	Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • month: The service is subscribed by month. • year: The service is subscribed by year.
period_num	Integer	No	This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • If period_type is set to month, the parameter value ranges from 1 to 9. • If period_type is set to year, the parameter value ranges from 1 to 3.
is_auto_renew	Boolean	No	Whether automatic renewal is enabled for yearly/monthly instances. The renewal period is the same as the original period and the order will be automatically paid during the subscription renewal. Value range: • true: indicates that the subscription is automatically renewed. • false: indicates that the subscription is not automatically renewed. The default value is false.

Parameter	Type	Mandatory	Description
is_auto_pay	Boolean	No	Payment method. When creating a yearly/monthly DB instance, you can specify whether to automatically pay with your account. This parameter does not affect the payment method of automatic renewal. Value range: • true: indicates that the fee is automatically paid from the account. • false: indicates that the fee is manually paid from the account. This payment method is used by default.

 NOTE

The values of **region** and **availability_zone** are used as examples.

- Response example

Cluster instance:

```
{
  "id": "39b6a1a278844ac48119d86512e0000bin02",
  "name": "test-cluster-01",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "storage_engine": "wiredTiger"
  },
  "created": "2019-01-16 09:34:36",
  "status": "creating",
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
  "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
  "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
  "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
  "mode": "Sharding",
  "configurations": [
    {
      "type": "mongos",
      "configuration_id": "acb288dbd1174f26a8960b45591bd98apr02"
    },
    {
      "type": "shard",
      "configuration_id": "5bca546f0be64b038124ef9cedd1bfa1pr02"
    },
    {
      "type": "config",
      "configuration_id": "4d123b3ba8294921802b11bf4d8c5735pr02"
    }
  ]
}
```

```
"flavor": [
  {
    "type": "mongos",
    "num": 2,
    "spec_code": "dds.mongodb.c6.medium.4.mongos"
  },
  {
    "type": "shard",
    "num": 2,
    "storage": "ULTRAHIGH",
    "spec_code": "dds.mongodb.c6.medium.4.shard",
    "size": 20
  },
  {
    "type": "config",
    "num": 1,
    "storage": "ULTRAHIGH",
    "spec_code": "dds.mongodb.c6.large.2.config",
    "size": 20
  }
],
"backup_strategy": {
  "start_time": "08:15-09:15",
  "keep_days": "8"
},
"enterprise_project_id": "",
"ssl_option": "1",
"dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",
"job_id": "c010abd0-48cf-4fa8-8cbc-090f093eaa2f",
"tags": [
  {
    "key": "dds001",
    "value": "dds001"
  }
]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.2 Restarting a DB Instance

API Description

This API is used to restart a DB instance.

NOTICE

The DDS DB instance will be unavailable during the restart process. Exercise caution when performing this operation.

Restrictions

If the instance status is not normal, the instance cannot be restarted.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/restart
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/restart

Table 5-31 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details. If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-32 Parameter description

Name	Type	Mandatory	Description
target_type	String	No	Explanation: The type of the object to restart. Constraints: • This parameter is mandatory when you restart one or more nodes of a cluster instance. – Set the value to mongos if mongos nodes are restarted. – Set the value to shard if shard nodes are restarted. – Set the value to config if config nodes are restarted. • This parameter is not specified when a DB instance (cluster, replica set, or single node) is restarted. Value range: • mongos • shard • config Default value: N/A

Name	Type	Mandatory	Description
target_id	String	Yes	Explanation: The ID of the object to be restarted, which can be obtained by calling the API for querying instances. If you do not have an instance, you can call the API used for creating an instance. Constraints: • When you restart a node in a cluster instance, the value is the mongos node ID for a mongos node, and shard or config group ID for a shard or config group. • When you restart the entire DB instance, the value is the DB instance ID. • When you restart a replica set instance, the value is the DB instance ID. • When you restart a single node instance, the value is the DB instance ID. Value range: N/A Default value: N/A

Example Request

- Restarting a DB instance based on the value of **target_id**

```
{
  "target_id": "9136fd2a9fcd405ea4674276ce36dae8in02"
}
```
- Restarting a shard group based on the values of **target_type** and **target_id**

```
{
  "target_type": "shard",
  "target_id": "84e7c96b82aa4fedb3b00f98edd71ba4gr02"
}
```
- Restarting a config group based on the values of **target_type** and **target_id**

```
{
  "target_type": "config",
  "target_id": "06439baa35c146d3a8965af59d370908gr02"
}
```
- Restarting a mongos node based on the values of **target_type** and **target_id**

```
{
  "target_type": "mongos",
  "target_id": "bd4dccbd53ae48d5bd3046bebf715079no02"
}
```

Response Parameters

- Parameter description

Table 5-33 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Explanation: The workflow ID. Value range: N/A

- Response example

```
{  
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5"  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.3 Deleting a DB Instance

API Description

This API is used to delete a DB instance.

URI

- URI format
DELETE https://{Endpoint}/v3/{project_id}/instances/{instance_id}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02

Request Parameters

Parameter description

Table 5-34 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Response Parameters

- Parameter description

Table 5-35 Parameter description

Name	Type	Mandator y	Description
job_id	String	Yes	Explanation: Task ID Value range: N/A

- Response example

```
{
  "job_id": "252f11f1-2912-4c06-be55-1999bde659c5"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.4 Querying Instances and Details

API Description

This API is used to query instances and details based on specified conditions.

URI

- URI format

```
GET https://{Endpoint}/v3/{project_id}/instances?
id={id}&name={name}&mode={mode}&datastore_type={datastore_type}&vpc_
id={vpc_id}&subnet_id={subnet_id}&offset={offset}&limit={limit}&tags={key
}={value},{key}={value}
```
- URI example
 - Querying all instances and details

```
https://dds.ap-
southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e6
63/instances
```
 - Querying instances and details based on search criteria

```
https://dds.ap-
southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e6
63/instances?
offset=0&limit=10&id=ed7cc6166ec24360a5ed5c5c9c2ed726in02&name=
hy&mode=ReplicaSet&datastore_type=DDS-
Community&vpc_id=19e5d45d-70fd-4a91-87e9-
b27e71c9891f&subnet_id=bd51fb45-2dcb-4296-8783-8623bfe89bb7&tags
=key1=value1,key2=value2
```

Table 5-36 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	string	Yes	User token obtained from IAM. For details, see Authentication .
project_id	String	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
id	String	No	The instance ID, which can be obtained by calling the API that is used for querying instances and details. If you do not have an instance, you can call the API used for creating an instance.
name	String	No	The DB instance name. If you use asterisk (*) at the beginning of the name, fuzzy search results are returned. Otherwise, the exact results are returned. NOTE The asterisk (*) is a reserved character in the system and cannot be used alone.
mode	String	No	The instance type. • Sharding indicates the cluster instance. • ReplicaSet indicate the replica set instance. • Single indicates the single node instance.
datastore_type	String	No	The database type. The value is DDS-Community .
vpc_id	String	No	The VPC ID. To obtain this parameter value, use either of the following methods: • Method 1: Log in to VPC console and view the VPC ID on the VPC details page. • Method 2: Query the VPC ID through the VPC API. For details, see Querying VPCs.

Name	Type	Mandator y	Description
subnet_id	String	No	The network ID of the subnet. To obtain this parameter value, use either of the following methods: • Method 1: Log in to VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page. • Method 2: Query the network ID through the VPC API. For details, see Querying Subnets.
offset	Integer	No	The index position. The query starts from the next instance creation time indexed by this parameter under a specified project. If offset is set to N, the resource query starts from the N+1 piece of data. The value must be greater than or equal to 0. If this parameter is not transferred, offset is set to 0 by default, indicating that the query starts from the latest created DB instance.
limit	Integer	No	The maximum allowed number of DB instances. The value ranges from 1 to 100. If this parameter is not transferred, the first 100 DB instances are queried by default.
tags	String	No	Query based on the instance tag key and value. {key} indicates the tag key, and {value} indicates the tag value. A maximum of 20 key-value pairs are supported. The key cannot be empty or duplicate, but the value can be empty. To query instances with multiple tag keys and values, separate key-value pairs with commas (,).

Request Parameters

None

Response Parameters

- Parameter description

Table 5-37 Response body parameters

Name	Type	Mandatory	Description
instances	Array of objects	Yes	The DB instance information. For more information, see Table 5-38 .
total_count	Integer	Yes	The total number of queried records.

Table 5-38 Data structure of the instances field

Name	Type	Mandatory	Description
id	String	Yes	The DB instance ID.
name	String	Yes	The DB instance name.
remark	String	Yes	Instance remarks

Name	Type	Mandatory	Description
status	String	Yes	The DB instance status. Valid value: • normal: indicates that the instance is running properly. • abnormal: indicates that the instance is abnormal. • creating: indicates that the instance is being created. • frozen: indicates that the instance is frozen. • data_disk_full: The storage space is full. • createfail: indicates that the instance failed to be created. • enlargefail: indicates that nodes failed to be added to the instance. NOTE Actions that are being executed on an instance, for example, rebooting, are essentially different from the instance status. For details, see the actions field in this table.
port	String	Yes	The database port. The port range is 2100 to 9500.
mode	String	Yes	The instance type, which is the same as the request parameter.
region	String	Yes	The region where the DB instance is deployed.
datastore	Object	Yes	The database information. For more information, see Table 5-39 .

Name	Type	Mandatory	Description
engine	String	Yes	The storage engine. DDS supports the WiredTiger and RocksDB storage engines. • If the database version is 4.2 or later, the storage engine is RocksDB and the value is rocksDB. • If the database version is 4.0 or 3.4, the storage engine is WiredTiger and the value is wiredTiger.
created	String	Yes	The DB instance creation time.
updated	String	Yes	The time when a DB instance is updated.
db_user_name	String	Yes	The default username. The value is rwuser .
ssl	Integer	Yes	Whether SSL is enabled. • 1: indicate that SSL is enabled. • 0: indicate that SSL is disabled.
vpc_id	String	Yes	The VPC ID.
subnet_id	String	Yes	The network ID of the subnet.
security_group_id	String	Yes	Security group ID list. If an instance is associated with multiple security groups, use commas (,) to separate multiple security group IDs.
backup_strategy	Object	Yes	The backup policy. For more information, see Table 5-40 .

Name	Type	Mandatory	Description
pay_mode	String	No	The billing mode. • 0: indicates the pay-per-use billing mode. • 1: indicates the yearly/monthly billing mode.
maintenance_window	String	Yes	The maintenance time window.
groups	Array of objects	Yes	Group information. For more information, see Table 5-41 .
disk_encryption_id	String	Yes	The disk encryption key ID. This parameter is returned only when the instance disk is encrypted.
enterprise_project_id	String	Yes	Enterprise project ID. If the value is 0 , the resource belongs to the default enterprise project.
time_zone	String	Yes	The time zone.
dss_pool_id	String	No	The DSS storage pool ID of the DeC user.

Name	Type	Mandatory	Description
actions	Array of strings	Yes	Action that is being executed on an instance. Valid value: • RESTARTING: The instance is being restarted. • RESTORE: The instance is being restored. • RESIZE_FLAVOR: The specifications are being changed. • RESTORE_TO_NEW_INSTANCE: The instance is being restored. • MODIFY_VPC_PEER: Cross-subnet access is being configured. • CREATE: The instance is being created. • FROZEN: The instance is frozen. • RESIZE_VOLUME: The storage is being scaled up. • RESTORE_CHECK: The restoration is being checked. • RESTORE_FAILED_HANGUP: The restoration failed. • CLOSE_AUDIT_LOG: The audit policy is being disabled. • OPEN_AUDIT_LOG: The audit policy is being enabled. • PERIOD_RESOURCE_SPEC_CHG: The yearly/monthly resource changes are being checked.

Name	Type	Mandatory	Description
			• CREATE_IP_SHARD: The shard IP address is being enabled. • CREATE_IP_CONFIG : The config IP address is being enabled. • GROWING: The node is being scaled up. • SET_CONFIGURATION: Parameters are being modified. • RESTORE_TABLE: The table is being restored. • MODIFY_SECURITY_GROUP: A security group is being changed. • BIND_EIP: The EIP is being changed. • UNBIND_EIP: The EIP is being unbound. • SWITCH_SSL: The SSL is being switched. • SWITCH_PRIMARY: A primary/standby switchover is being performed. • CHANGE_DBUSER_PASSWORD: The password is being changed. • MODIFY_PORT: The port is being changed. • MODIFY_IP: The private IP address is being changed. • DELETE_INSTANCE: The instance is being deleted.

Name	Type	Mandatory	Description
			• REBOOT: The instance is being restarted. • BACKUP: The backup is in progress. • MIGRATE_AZ: The AZ is being changed. • PWD_RESETING: The password is being reset. • UPGRADE_DATABASE: The patch is being upgraded. • DATA_MIGRATION: Data is being migrated. • SHARD_GROWING: The shard is being scaled out. • APPLY_CONFIGURATION: A parameter group is being changed. • RESET_PASSWORD: The password is being reset. • GROWING_REVERT: Nodes are being deleted. • SHARD_GROWING_REVERT: Shards are being deleted. • ONDEMAND_TO_PERIOD: The billing mode is being changed to yearly/monthly. • LOG_PLAINTEXT_SWITCH: The slow query log configuration is being modified. • CREATE_DATABASE_USER: The

Name	Type	Mandatory	Description
			database user is being created. • CREATE_DATABASE_ROLE: The database role is being created. • MODIFY_NAME: The name is being changed. • MODIFY_PRIVATE_DNS: The private zone is being modified. • MODIFY_OP_LOG_SIZE: The oplog size is being changed. • ADD_READONLY_NODES: Read replicas are being scaled up.
order_id	String	No	Order ID, which is returned only when an instance is billed on a yearly/monthly basis.
tags	Array of objects	Yes	Tag list For details, see Table 5-44 .

Table 5-39 Data structure of the datastore field

Name	Type	Mandatory	Description
type	String	Yes	The DB engine.
version	String	Yes	The database version. Versions 5.0, 4.4, 4.2, 4.0, and 3.4 are supported. The value can be 5.0 , 4.4 , 4.2 , 4.0 , or 3.4 .
patch_available	Boolean	Yes	Whether there is an available patch for upgrade. If true is returned, you can install the patch to upgrade the instance.

Table 5-40 backup_strategy field data structure description

Name	Type	Mandatory	Description
start_time	String	Yes	The backup time window. Automated backups will be triggered during the backup time window. The current time is the UTC time.
keep_days	Integer	Yes	The number of days to retain the generated backup files. The value range is from 0 to 732.

Table 5-41 groups field data structure description

Name	Type	Mandatory	Description
type	String	Yes	The node type. Valid value: • shard • config • mongos • replica • single • readonly
id	String	Yes	The group ID. This parameter is valid only when the node type is set to shard , config , or readonly .
name	String	Yes	The group name. This parameter is valid only when the node type is set to shard , config , or readonly .
status	String	Yes	The group status. This parameter is valid only when the node type is set to shard , config , or readonly .
volume	Object	Yes	The volume information. For more information, see Table 5-42 . This parameter is valid only when the node type is set to shard , config , or replica .

Name	Type	Mandatory	Description
nodes	Array of objects	Yes	The node information. For more information, see Table 5-43 .

Table 5-42 Data structure description of the volume field

Name	Type	Mandatory	Description
size	String	Yes	The disk size. Unit: GB
used	String	Yes	The disk usage. Unit: GB

Table 5-43 nodes field data structure description

Name	Type	Mandatory	Description
id	String	Yes	The node ID.
name	String	Yes	The node name.
status	String	Yes	The node status.
role	String	Yes	The node role. Valid value: • master: This value is returned for the mongos node. • Primary: This value is returned for the primary shard and config nodes, and the primary node of a replica set. • Secondary: This value is returned for the secondary shard and config nodes, and the secondary node of a replica set. • Hidden: This value is returned for the hidden shard and config nodes, and the hidden node of a replica set. • unknown. This value is returned when the node is abnormal.

Name	Type	Mandatory	Description
private_ip	String	Yes	The private IP address of a node. By default, this parameter is valid only for mongos nodes and replica set instances. The value exists after the ECS is created successfully. Otherwise, the value is "". CAUTION After the shard or config IP address is enabled, private IP addresses are assigned to the primary and secondary shard or config nodes of the cluster instance.
public_ip	String	Yes	The EIP that has been bound. This parameter is valid only for mongos nodes of cluster instances and the primary and secondary nodes of replica set instances.
spec_code	String	Yes	The resource specification code. For details about the instance specifications, see the value of the flavors.spec_code parameter in Querying Database Specifications .
availability_zone	String	Yes	AZ.

Table 5-44 Description of the tag field

Name	Type	Mandatory	Description
key	String	Yes	Tag key
value	String	Yes	Tag value

 NOTE

The values of **region** and **availability_zone** are used as examples.

- Response example

```
{  
  "instances": [  

```

```
{
  "id": "8436a91546294036b75931e879882200in02",
  "name": "dds-efa6",
  "remark": "test",
  "status": "normal",
  "port": "8635",
  "mode": "ReplicaSet",
  "region": "cn-xianhz-1",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "patch_available": false
  },
  "engine": "wiredTiger",
  "created": "2019-01-17T07:05:52",
  "updated": "2019-01-17T07:05:47",
  "db_user_name": "rwuser",
  "ssl": 1,
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "backup_strategy": {
    "start_time": "16:00-17:00",
    "keep_days": 7
  },
  "pay_mode": 0,
  "maintenance_window": "02:00-06:00",
  "groups": [{
    "type": "replica",
    "volume": {
      "size": "10",
      "used": "0.33"
    }
  }],
  "nodes": [
    {
      "id": "233eaac9c6f245c0bb9c2d21eea12d1bno02",
      "name": "dds-efa6_replica_node_2",
      "status": "normal",
      "role": "Primary",
      "private_ip": "192.168.0.174",
      "public_ip": "",
      "spec_code": "dds.s2.medium.4.shard",
      "availability_zone": "bbb"
    },
    {
      "id": "d57d76d6320a4a7b86db82c317550c4ano02",
      "name": "dds-efa6_replica_node_1",
      "status": "normal",
      "role": "Hidden",
      "private_ip": "192.168.0.39",
      "public_ip": "",
      "spec_code": "dds.s2.medium.4.shard",
      "availability_zone": "bbb"
    },
    {
      "id": "f46b0a1cf4d9400e9fd7af17f8742d37no02",
      "name": "dds-efa6_replica_node_3",
      "status": "normal",
      "role": "Secondary",
      "private_ip": "192.168.0.176",
      "public_ip": "",
      "spec_code": "dds.s2.medium.4.shard",
    }
  ]
}
```

```
        "availability_zone": "bbb"
      }
    ]
  },
  "enterprise_project_id": "0",
  "time_zone": "",
  "dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",
  "actions": [
    "CREATE"
  ],
  "tags": [
    {
      "key": "dds001",
      "value": "dds001"
    }
  ]
},
{
  "id": "d77905385f114217b75ae7d6ab9a7588in02",
  "name": "dds-5699",
  "status": "normal",
  "remark": "Test",
  "port": "8635",
  "mode": "Single",
  "region": "cn-xianhz-1",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "patch_available": false
  },
  "engine": "wiredTiger",
  "created": "2019-01-17T07:04:39",
  "updated": "2019-01-17T07:04:33",
  "db_user_name": "rwuser",
  "ssl": 1,
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "backup_strategy": {
    "start_time": "17:00-18:00",
    "keep_days": 7
  },
  "pay_mode": 0,
  "maintenance_window": "02:00-06:00",
  "groups": [{
    "type": "single",
    "volume": {
      "size": "10",
      "used": "0.33"
    }
  }],
  "nodes": [
    {
      "id": "bd4dccbd53ae48d5bd3046bebf715079no02",
      "name": "dds-5699_single_node_1",
      "status": "normal",
      "role": "Primary",
      "private_ip": "192.168.0.9",
      "public_ip": "",
      "spec_code": "dds.mongodb.c6.medium.4.single",
      "availability_zone": "bbb"
    }
  ]
}
```

```
    },
    "enterprise_project_id": "0",
    "time_zone": "",
    "actions": [
      "CREATE"
    ],
    "tags": [
      {
        "key": "dds001",
        "value": "dds001"
      }
    ]
  },
  {
    "id": "9136fd2a9fcd405ea4674276ce36dae8in02",
    "name": "dds-32f4",
    "remark": 123,
    "status": "normal",
    "port": "8635",
    "mode": "Sharding",
    "region": "cn-xianhz-1",
    "datastore": {
      "type": "DDS-Community",
      "version": "3.4",
      "patch_available": false
    },
    "engine": "wiredTiger",
    "created": "2019-01-17T07:04:37",
    "updated": "2019-01-17T07:04:31",
    "db_user_name": "rwuser",
    "ssl": 1,
    "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
    "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
    "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
    "backup_strategy": {
      "start_time": "19:00-20:00",
      "keep_days": 7
    },
    "pay_mode": 0,
    "maintenance_window": "02:00-06:00",
    "groups": [
      {
        "type": "mongos",
        "nodes": [
          {
            "id": "a742c13a284949adad177672e8a0f01cno02",
            "name": "dds-32f4_mongos_node_1",
            "status": "normal",
            "role": "Primary",
            "private_ip": "192.168.0.56",
            "public_ip": "",
            "spec_code": "dds.mongodb.c6.medium.4.mongos",
            "availability_zone": "bbb"
          },
          {
            "id": "d4f66666b1d64ab28719da0526341c7eno02",
            "name": "dds-32f4_mongos_node_2",
            "status": "normal",
            "role": "Primary",
            "private_ip": "192.168.0.185",
            "public_ip": "",
            "spec_code": "dds.mongodb.c6.medium.4.mongos",
```

```
        "availability_zone": "bbb"
      }
    ],
  },
  {
    "type": "shard",
    "volume": {
      "size": "10",
      "used": "0.33"
    },
    "nodes": [
      {
        "id": "0e9abaebe5974b63a5b221de6ee34cfeno02",
        "name": "dds-32f4_shard_2_node_3",
        "status": "normal",
        "role": "Primary",
        "spec_code": "dds.mongodb.c6.medium.4.shard",
        "availability_zone": "bbb"
      },
      {
        "id": "1d7f4c5476c04cc187f920925c2b601fno02",
        "name": "dds-32f4_shard_2_node_2",
        "status": "normal",
        "role": "Hidden",
        "spec_code": "dds.mongodb.c6.medium.4.shard",
        "availability_zone": "bbb"
      },
      {
        "id": "3dd2cce03da54fc08f10651cbfea778dno02",
        "name": "dds-32f4_shard_2_node_1",
        "status": "normal",
        "role": "Secondary",
        "spec_code": "dds.mongodb.c6.medium.4.shard",
        "availability_zone": "bbb"
      }
    ]
  },
  {
    "type": "config",
    "volume": {
      "size": "10",
      "used": "0.33"
    },
    "nodes": [
      {
        "id": "7422f7331b714ac39aa647a1ec968d33no02",
        "name": "dds-32f4_config_node_2",
        "status": "normal",
        "role": "Primary",
        "spec_code": "dds.mongodb.c6.large.2.config",
        "availability_zone": "bbb"
      },
      {
        "id": "9e3b343151044eda91ddb8a42ae5cbefno02",
        "name": "dds-32f4_config_node_3",
        "status": "normal",
        "role": "Hidden",
        "spec_code": "dds.mongodb.c6.large.2.config",
        "availability_zone": "bbb"
      },
      {
        "id": "c0053ca460ac4889841ffb14a886ec54no02",
```

```
        "name": "dds-32f4_config_node_1",
        "status": "normal",
        "role": "Secondary",
        "spec_code": "dds.mongodb.c6.large.2.config",
        "availability_zone": "bbb"
      }
    ]
  },
  "enterprise_project_id": "0",
  "time_zone": "",
  "actions": [
    "CREATE"
  ],
  "tags": [
    {
      "key": "dds001",
      "value": "dds001"
    }
  ]
},
"total_count": 3
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.5 Scaling Up Storage Space

API Description

This API is used to scale up the storage space of a DB instance.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/enlarge-volume
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/enlarge-volume

Table 5-45 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-46 Parameter description

Name	Type	Mandator y	Description
volume	Object	Yes	Explanation: The detailed information about the volume request. For more information, see Table 5-47 . Constraints: N/A Value range: N/A Default value: N/A
is_auto_pay	Boolean	No	Explanation: Whether the order is automatically paid from your account when you scale up the storage of a yearly/monthly DB instance. This parameter does not affect the payment mode of automatic renewal. Constraints: N/A Value range: • true: indicates that the order is automatically paid from the account. • false: indicates that the order is manually paid from the account. The default value is false. Default value: false

Table 5-47 Data structure description of the volume field

Name	Type	Mandator y	Description
group_id	String	No	Explanation: The role ID. Constraints: • This parameter is not specified for replica set instances. Value range: For a cluster instance, this parameter is set to the ID of the shard group. Default value: N/A

Name	Type	Mandatory	Description
size	String	Yes	Explanation: The requested disk capacity. The value must be an integer multiple of 10 and greater than the current storage space. Constraints: N/A Value range: • In a cluster instance, this parameter indicates the storage space of shard nodes. Value range: 10 GB to 5,000 GB when the shard node has fewer than 8 vCPUs. 10 GB to 10,000 GB when the shard node has 8 or more vCPUs. • In a replica set instance, this parameter indicates the disk capacity of the DB instance to be expanded. The value range is from 10 GB to 5,000 GB when the instance has fewer than 8 vCPUs. The value range is from 10 GB to 10,000 GB when the instance has 8 or more vCPUs. • In a single node instance, this parameter indicates the disk capacity of the DB instance to be expanded. The value range is from 10 GB to 1,000 GB. Default value: N/A

Name	Type	Mandator y	Description
node_ids	Array of strings	No	Explanation: This parameter is required when the disk capacity of the read replica of a replica set instance is expanded. Only one element can be transferred in the list. Constraints: N/A Value range: N/A Default value: N/A

Example Request

- Scaling up the storage space of a cluster instance to 20 GB
POST <https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume>

```
{
  "volume" : {
    "group_id" : "1b0c008adbcb495c81a3d5762a02a2abgr02",
    "size" : 20
  }
}
```
- Scaling up the storage space of a replica set instance to 20 GB
POST <https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume>

```
{
  "volume" : {
    "size" : 20
  }
}
```
- Scaling up the storage space of a single node instance to 20 GB
POST <https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume>

```
{
  "volume" : {
    "size" : 20
  }
}
```
- Scaling up the storage space of a read replica in a replica set instance to 20 GB
POST <https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume>

```
{
  "volume" : {
    "size" : 20,
    "node_ids" : [ "8f643d252d834a4c916b2db4322f9955in02" ]
  }
}
```

Response Parameters

- Parameter description

Table 5-48 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Explanation: The task ID. Value range: N/A
order_id	String	No	Explanation: The order ID. This parameter is returned only when the storage capacity of a yearly/monthly DB instance is expanded. Value range: N/A

- Response example

```
{
  "job_id" : "04efe8e2-9255-44ae-a98b-d87cae411890"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.6 Adding Nodes for a Cluster Instance

API Description

This API is used to add nodes for a specified cluster instance.

Restrictions

- This API supports both yearly/monthly and pay-per-use DB instances.
- Only the mongos and shard nodes can be added.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/enlarge

- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/enlarge

Table 5-49 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-50 Parameter description

Name	Type	Mandatory	Description
type	String	Yes	Explanation: Type of the object to be scaled. Constraints: N/A Value range: - Set the value to mongos if mongos nodes are to be added. - Set the value to shard if shard nodes are to be added. Default value: N/A
spec_code	String	Yes	Explanation: The resource specification code. For details about how to obtain the resource specification code, see the flavors.spec_code parameter in Querying Database Specifications . Constraints: N/A Value range: N/A Default value: N/A
num	String	Yes	Explanation: The number of mongos or shard nodes to be added. Constraints: A cluster instance supports up to 32 mongos nodes and 32 shard nodes. Value range: N/A Default value: N/A

Name	Type	Mandatory	Description
volume	Object	No	Explanation: The volume information. For more information, see Table 5-51. Constraints: - This parameter is not transferred when the mongos nodes are to be added. - This parameter is mandatory when the shard nodes are to be added. NOTE If multiple shards are added at a time, the shards must have the same specifications and disk capacity. Value range: N/A Default value: N/A
is_auto_pay	Boolean	No	Explanation: Whether the order is automatically paid from your account when you add nodes to a yearly/monthly DB instance. This parameter does not affect the payment mode of automatic renewal. Constraints: N/A Value range: true: indicates that the order is automatically paid from the account. false: indicates that the order is manually paid from the account. The default value is false. Default value: false

Table 5-51 volume field data structure description

Name	Type	Mandatory	Description
size	String	Yes	Explanation: The disk capacity of all new shards. Constraints: N/A Value range: 10 GB to 5,000 GB when the shard node has fewer than 8 vCPUs. 10 GB to 10,000 GB when the shard node has 8 or more vCPUs. Default value: N/A

Example Request

- Adding one mongos node whose **spec_code** is set to **dds.mongoddb.c6.medium.4.mongos**

```
{
  "type": "mongos",
  "spec_code": "dds.mongoddb.c6.medium.4.mongos",
  "num": 1
}
```
- Adding one shard group whose **spec_code** is set to **dds.mongoddb.c6.medium.4.mongos** and storage space is 330 GB.

```
{
  "type": "shard",
  "spec_code": "dds.mongoddb.c6.medium.4.shard",
  "num": 1,
  "volume": {
    "size": 330
  }
}
```

Response Parameters

- Parameter description

Table 5-52 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Explanation: Indicates the task ID. Value range: N/A

Name	Type	Mandatory	Description
order_id	String	No	Explanation: The order ID. This parameter is returned only when the nodes of a yearly/monthly DB instance are added. Value range: N/A

- Response example

```
{
  "job_id": "4008c8914b624785a02ab7966d4d"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.7 Modifying DB Instance Specifications

API Description

This API is used to modify the instance specifications in the same or different instance series.

NOTICE

Services will be interrupted for 5 to 10 minutes when you modify DB instance specifications. Exercise caution when performing this operation.

Change Rules

Considering the stability and performance of DDS DB instances, you can change the DB instance class according to the rules listed in [Table 5-53](#). Exercise caution when performing this operation.

Table 5-53 Change rules

Original Specification	Target Specification	Supported
General-purpose	General-purpose	√

Original Specification	Target Specification	Supported
	Enhanced	×
	Enhanced II	√
Enhanced	General-purpose	√
	Enhanced	×
	Enhanced II	√
Enhanced II	General-purpose	×
	Enhanced	×
	Enhanced II	√

 NOTE

√ indicates that an item is supported, and × indicates that an item is not supported.

Restrictions

- This API supports both yearly/monthly and pay-per-use DB instances.
- If you want to change the specifications to other specifications of the same series, the new specifications cannot be the same as the original specifications.
- Specifications can be modified only when the DB instance status is normal.
- The specifications of read replicas in a cluster instance cannot be changed.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/resize
- URI example
<https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/resize>

Table 5-54 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-55 Parameter description

Name	Type	Mandator y	Description
resize	Object	Yes	Explanation: The specification information. For more information, see Table 5-56 . Constraints: N/A Value range: N/A Default value: N/A
is_auto_pay	Boolean	No	Explanation: Whether the order is automatically paid from your account when you change the specifications of a yearly/monthly DB instance. This parameter does not affect the payment mode of automatic renewal. Constraints: This parameter is invalid when the instance specifications are scaled down. Value range: - When the specifications are scaled up, this parameter can be set to: true: indicates that the order is automatically paid from the account. false: indicates that the order is manually paid from the account. The default value is false. Default value: false

Table 5-56 Data structure description of the resize field

Name	Type	Mandatory	Description
target_type	String	No	Explanation: The object type: Constraints: • This parameter is mandatory for a cluster instance. To change the specifications of a mongos node, set this parameter to mongos. To change the specifications of a single shard or multiple shards in batches, set this parameter to shard. To change the specifications of a config node, set this parameter to config. • This parameter is not specified for replica set instances. If you modify the specifications of a read replica, the value is readonly. • This parameter is not specified for single node instances. Value range: • mongos • shard • config • readonly Default value: N/A

Name	Type	Mandatory	Description
target_id	String	No	Explanation: The ID of the node or instance whose specifications are to be modified. You can obtain the ID by calling the API used for querying instances. If you do not have an instance, you can call the API used for creating a DB instance. Constraints: N/A Value range: - For a cluster instance, when you change the specifications of a mongos node, the value is the mongos node ID. When you change the specifications of a single shard group, the value is the shard group ID. When you change the specifications of multiple shard groups in batches, this parameter is not specified. When you change the specifications of a config group, the value is the config group ID. - For a replica set instance, the value is the DB instance ID. If you modify the specifications of a read replica, the value is the read replica ID. - For a single node instance, the value is the DB instance ID. Default value: N/A

Name	Type	Mandatory	Description
target_ids	Array of strings	No	Explanation: IDs of the node groups whose specifications are to be modified, which can be obtained by calling the API for querying instances and details. If you do not have an instance, you can call the API used for creating a DB instance. Constraints: - For a cluster instance, this parameter is not transferred when the specifications of a mongos node are to be changed, when the specifications of a single shard group are to be changed, or when the specifications of a config group are to be changed. When you change the specifications of multiple shard groups in batches, the value is the IDs of the shard groups. A maximum of 16 shard groups can be selected in batches. - This parameter is not specified for replica set instances. - This parameter is not specified for single node instances. Value range: N/A Default value: N/A

Name	Type	Mandatory	Description
target_spec_code	String	Yes	Explanation: The resource specification code of the new specification. For details about how to obtain the value, see the response values of flavors.spec_code in Querying Database Specifications . Constraints: N/A Value range: N/A Default value: N/A

Example Request

- Modifying the mongos specifications in a cluster instance

```
{
  "resize": {
    "target_type": "mongos",
    "target_id": "a742c13a284949adad177672e8a0f01cno02",
    "target_spec_code": "dds.mongodb.c6.large.4.mongos"
  }
}
```

- Modifying the shard specifications in a cluster instance

```
{
  "resize": {
    "target_type": "shard",
    "target_id": "aeeb40a704904977ad78993d138ec942gr02",
    "target_spec_code": "dds.mongodb.c6.large.4.shard"
  }
}
```

- Modifying the config specifications in a cluster instance

```
{
  "resize": {
    "target_type": "config",
    "target_id": "10a1c330537b42c1a9b3f7a5ebcda35egr02",
    "target_spec_code": "dds.mongodb.c6.xlarge.2.config"
  }
}
```

- Modifying specifications of a replica set or a single node instance

```
{
  "resize": {
    "target_id": "aeeb40a704904977ad78993d138ec942in02",
    "target_spec_code": "dds.mongodb.c6.medium.4.repset"
  }
}
```

- Modifying the specifications of multiple shard groups in a cluster instance in batches

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3eain02/resize
{
  "resize" : {
```

```
"target_type" : "shard",  
"target_ids" : [ "aeeb40a704904977ad78993d138ec942gr02",  
"5cbbb49b8f88424590a8a7b744b2dcf0gr02", "0407115681454784b1446c15590e42f0gr02" ],  
"target_spec_code" : "dds.mongodb.c6.large.4.shard"  
}  
}
```

Response Parameters

- Parameter description

Table 5-57 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Explanation: The task ID. Value range: N/A
order_id	String	No	Explanation: The order ID. This parameter is returned only when the specifications of a yearly/monthly DB instance are changed. Value range: N/A

- Response example

```
{  
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5"  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.8 Performing a Primary/Secondary Switchover in a Replica Set Instance

API Description

This API is used to perform a primary/secondary switchover in a replica set instance.

Restrictions

- This API supports only DDS replica sets.
- This operation cannot be performed on frozen or abnormal instances.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/switchover
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/switchover

Request Parameters

Parameter description

Table 5-58 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Response Parameters

- Parameter description

Table 5-59 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Explanation: The task ID. Value range: N/A

- Response example

```
{  
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5"  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.9 Enabling or Disabling SSL

API Description

This API is used to enable or disable SSL.

Restrictions

- This operation cannot be performed on frozen or abnormal instances.
- The DB instance must be restarted to make changes take effect. Exercise caution when enabling or disabling SSL.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/switch-ssl
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/switch-ssl

Table 5-60 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-61 Parameter description

Name	Type	Mandatory	Description
ssl_option	String	Yes	Explanation: Whether to enable or disable SSL. Constraints: N/A Value range: - The value 0 indicates that SSL is disabled by default. - The value 1 indicates that SSL is enabled by default. Default value: N/A

Example Request

Disabling SSL for a DB instance (SSL is disabled by default.)

```
{
  "ssl_option": "0"
}
```

Response Parameters

- Parameter description

Table 5-62 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Explanation: The workflow ID. Value range: N/A
ssl_option	String	Yes	Explanation: Whether to enable or disable SSL. Value range: - The value 0 indicates that SSL is disabled by default. - The value 1 indicates that SSL is enabled by default.

- Response example

```
{
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5",
  "ssl_option": "0"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.10 Modifying a DB Instance Name

API Description

This API is used to modify a DB instance name.

Restrictions

The name of the DB instance that is being created or fails to be created cannot be modified.

URI

- URI format

PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/modify-name

- URI example

https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/modify-name

Table 5-63 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-64 Parameter description

Name	Type	Mandator y	Description
new_instanc e_name	String	Yes	Explanation: New instance name. The instance name can be the same as an existing name. Constraints: The instance name must contain 4 to 64 characters and must start with a letter. It is case sensitive and can contain letters, digits, hyphens (-), and underscores (_). It cannot contain other special characters. Value range: N/A Default value: N/A

Example Request

Changing an instance name to **myNewName**

```
{  
  "new_instance_name": "myNewName"  
}
```

Response Parameters

- Response example

```
{}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.11 Changing an Instance Description

API Description

This API is used to modify the description of an instance.

Restrictions

Description of deleted instances cannot be modified.

URI

- URI format
PUT `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/remark`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin02/remark`

Table 5-65 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-66 Request body parameters

Parameter	Mandatory	Type	Description
remark	Yes	String	Explanation: Instance remarks Constraints: The length cannot exceed 64 characters. The carriage return character and the following special characters are not supported >!"&'= Value range: N/A Default value: N/A

Example Request

Changing an instance description to **test**

```
{  
  "remark": "test"  
}
```

Response Parameters

Response example

```
{}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.12 Changing a Database Port

API Description

This API is used to change a database port.

Restrictions

- This operation cannot be performed on frozen or abnormal instances.
- The DB instance must be restarted to make changes take effect. Exercise caution when modifying the database port.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/modify-port
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/modify-port

Table 5-67 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-68 Parameter description

Name	Type	Mandatory	Description
port	Integer	Yes	Explanation: The port number. Constraints: N/A Value range: Value range: 2100 to 65535 (excluding 12017 and 33071) Default value: N/A

Example Request

Changing a database port number to **8888**

```
{  
  "port": 8888  
}
```

Response Parameters

- Parameter description

Table 5-69 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Explanation: The workflow ID. Value range: N/A
port	Integer	Yes	Explanation: The port number. Value range: N/A

- Response example

```
{  
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5",  
  "port": 8888  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.13 Changing a Security Group

API Description

This API is used to change the security group associated with a DB instance.

Restrictions

- Abnormal instances do not support this operation.
- Please confirm the modified security group policy. This policy may affect the current instance connection, causing the connection interruption.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/modify-security-group
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/modify-security-group

Table 5-70 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID. Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details. If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-71 Parameter description

Name	Type	Mandatory	Description
security_group_id	String	Yes	Definition Security group ID list. Constraints You can add up to 10 security group IDs for each instance and separate them with commas (,). Range N/A Default Value N/A

Example Request

Changing the security group associated with an instance (The ID of the new security group is 73bed21a-708b-4985-b697-a96d0e0d2b39.)

```
{
  "security_group_id": "73bed21a-708b-4985-b697-a96d0e0d2b39"
}
```

Response Parameters

- Parameter description

Table 5-72 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Definition Task ID. Range N/A
security_group_id	String	Yes	Definition Security group ID list. Range N/A

- Response example

```
{
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5",
  "security_group_id": "73bed21a-708b-4985-b697-a96d0e0d2b39"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.14 Binding an EIP

API Description

This API is used to bind an EIP to a node in a DB instance.

Restrictions

- This operation cannot be performed on frozen or abnormal instances.
- The shard and config nodes of a cluster instance, the read-only node of a replica set, and the hidden node do not support this operation.
- Multiple EIPs cannot be bound to the same node.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/nodes/{node_id}/bind-eip
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/nodes/4709a6332ce348718b5675aadb5e2bccno02/bind-eip

Table 5-73 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Name	Type	IN	Mandatory	Description
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
node_id	string	path	Yes	Definition The node ID. Constraints N/A Range • Select the mongos node in a cluster instance. • Select the primary or secondary node in a replica set instance. Default Value N/A

Request Parameters

- Parameter description

Table 5-74 Parameter description

Name	Type	Mandatory	Description
public_ip_id	String	Yes	Definition The ID of the EIP. Constraints N/A Range N/A Default Value N/A

Name	Type	Mandatory	Description
public_ip	String	Yes	Definition EIP. Constraints N/A Range N/A Default Value N/A

Example Request

Binding an EIP to a node in a DB instance

```
{
  "public_ip": "10.145.51.128",
  "public_ip_id": "45da4782-e0c8-4aa4-a290-b8740014f710"
}
```

Response Parameters

- Parameter description

Table 5-75 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Definition Task ID. Range N/A
node_name	String	Yes	Definition The node name. Range N/A
node_id	String	Yes	Definition The node ID. Range N/A

Name	Type	Mandatory	Description
public_ip_id	String	Yes	Definition The ID of the EIP. Range N/A
public_ip	String	Yes	Definition EIP. Range N/A

- Response example

```
{
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5",
  "node_id": "52a4c096bb1f455d8d866956a959519eno02",
  "node_name": "mongodb-8977_mongos_node_1",
  "public_ip": "10.145.51.128",
  "public_ip_id": "45da4782-e0c8-4aa4-a290-b8740014f710"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.15 Unbinding an EIP

API Description

This API is used to unbind an EIP from a node in a DB instance.

Restrictions

- Frozen instances do not support this operation.
- This operation can be performed only on a node with an EIP assigned.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/nodes/{node_id}/unbind-eip
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/nodes/4709a6332ce348718b5675aadb5e2bccno02/unbind-eip

Request Parameters

Parameter description

Table 5-76 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
node_id	string	path	Yes	Definition The node ID. Constraints N/A Range N/A Default Value N/A

Response Parameters

- Parameter description

Table 5-77 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Definition Task ID. Range N/A
node_name	String	Yes	Definition The node name. Range N/A
node_id	String	Yes	Definition The node ID. Range N/A

- Response example

```
{
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5",
  "node_id": "52a4c096bb1f455d8d866956a959519eno02",
  "node_name": "mongodb-8977_mongos_node_1"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.16 Changing a Private IP Address

API Description

This API is used to change the private IP address of a DB instance.

Restrictions

- This operation cannot be performed on frozen or abnormal instances.
- An in-use IP address cannot be used as the new private IP address of a DB instance.
- Changing the private IP address will cause the original database connection address to become invalid. If an EIP has been bound to the DB instance, do not unbind the EIP when the private IP address is being changed.
- This operation is not allowed if connection address switchover is enabled.

- Currently, only the IPv4 address is supported.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/modify-internal-ip
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/modify-internal-ip

Table 5-78 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandator y	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-79 Parameter description

Name	Type	Mandator y	Description
new_ip	String	Yes	Definition New IP address. Range - It must be in an available VPC CIDR block. - Only IPv4 addresses are supported. Range N/A Default Value N/A

Name	Type	Mandator y	Description
node_id	String	Yes	Definition The node ID. Constraints N/A Range N/A Default Value N/A

Example Request

Changing the private IP address of a DB instance, including **new_ip** and **node_id**

```
{
  "node_id": "52a4c096bb1f455d8d866956a959519eno02",
  "new_ip": "192.168.0.133"
}
```

Response Parameters

- Parameter description

Table 5-80 Parameter description

Name	Type	Mandator y	Description
job_id	String	Yes	Definition Task ID. Range N/A
node_id	String	Yes	Definition The node ID. Range N/A
new_ip	String	Yes	Definition The new private IP address. Range N/A

- Response example

```
{
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5",
}
```

```
"node_id":"52a4c096bb1f455d8d866956a959519eno02",  
"new_ip":"192.168.0.133"  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.17 Creating Shard or Config IP Addresses of a Cluster Instance

API Description

This API is used to create the IP addresses of shard or config nodes.

Restrictions

- Frozen instances do not support this operation.
- DB instances associated with the IPv6 subnet do not support this operation.
- If the IP address is enabled, restart the nodes for the setting to take effect.
- Cluster instances of Community Edition 3.4 and 4.0 are supported.
- This function cannot be disabled after being enabled.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/create-ip
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/create-ip

Table 5-81 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-82 Parameter description

Name	Type	Mandato ry	Description
type	String	Yes	Definition Cluster instance type. Constraints - When adding a shard group, set the value to shard. - When adding a config group, set the value to config. Range N/A Default Value N/A
target_id	String	No	Definition Shard group ID. Constraints CAUTION - If the shard or config IP address is added for the first time, leave this parameter empty. - If a shard IP address has been added to a DB instance, you need to specify this parameter to add an IP address to the new shard group. Range N/A Default Value N/A

Name	Type	Mandatory	Description
password	String	Yes	Definition The password for enabling this function for a cluster. Constraints Enter a strong password to improve security, preventing security risks such as brute force cracking. CAUTION This password cannot be changed. Exercise caution when performing this operation. Range The value must be 8 to 32 characters in length and contain uppercase letters (A to Z), lowercase letters (a to z), digits (0 to 9), and special characters, such as ~!@#%^*_-=+? Default Value N/A

Example Request

- Creating the config IP address of a cluster instance
POST <https://dds.cn-north-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/520c58ba00a3497e97ce0b9604874dd6in02/create-ip>

```
{
  "type": "config",
  "password": "*****"
}
```
- Creating the shard IP address of a cluster instance for the first time
POST <https://dds.cn-north-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/520c58ba00a3497e97ce0b9604874dd6in02/create-ip>

```
{
  "type": "shard",
  "password": "*****"
}
```
- Creating the IP address for a newly-added shard group
POST <https://dds.cn-north-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/520c58ba00a3497e97ce0b9604874dd6in02/create-ip>

```
{
  "type": "shard",
  "target_id": "91bac9f23ead42e19013333e05f44829gr02",
  "password": "*****"
}
```

Response Parameters

- Parameter description
None
- Example response
None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.18 Configuring Cross-CIDR Access for a Replica Set

API Description

This API is used to configure cross-CIDR access for a replica set instance.

Restrictions

Only replica set instances are supported.

URI

- URI format
POST `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/client-network`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/client-network`

Table 5-83 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-84 Parameter description

Name	Type	Mandatory	Description
client_network_ranges	Array of strings	Yes	Definition CIDR block where the client is located Constraints NOTE • Cross-CIDR access is required only when the CIDR blocks of the client and the replica set instance are different. For example, if the client CIDR block is 192.168.0.0/16 and the replica set instance's CIDR block is 172.16.0.0/24, add the CIDR block 192.168.0.0/16 so that the client can access the replica set instance. This function is available only for replica sets. • For example, if the source network segment is 192.168.0.0/xx, the value of xx must range from 8 to 32. Range N/A Default Value N/A

Example Request

Configuring access across CIDR blocks for a replica set instance

```
{
  "client_network_ranges":["192.168.0.0/16"]
}
```

Response Parameters

None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.19 Querying AZs to Which an Instance Can Be Migrated

API Description

This API is used to query the AZs to which instances can be migrated.

Restrictions

- To use this API, contact related personnel.
- DDS Community Edition clusters and replica sets support this operation.
- Cross-AZ instances do not support this operation.
- DB instances created using an IPv6 subnet do not support this operation.
- Read replicas or inactive standby nodes in a replica set instance do not support this operation.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/migrate/az
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/migrate/az

Request Parameters

Parameter description

Table 5-85 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Response Parameters

- Parameter description

Table 5-86 Parameter description

Name	Type	Mandatory	Description
az_list	Array of objects	Yes	Definition AZ information. For more information, see Table 5-87 . Range N/A

Table 5-87 az_list field data structure description

Name	Type	Mandatory	Description
code	String	Yes	Definition The AZ ID. Range N/A
description	String	Yes	Definition AZ description. Range N/A
status	String	Yes	Definition Status of the current AZ. Range • ENABLED: indicates that the AZ (group) is available. • DISABLED: indicates that the AZ (group) is unavailable.

- Example response

```
{
  "az_list": [
    {
      "code": "az3xahz",
      "description": "AZ 3",
      "status": "DISABLED"
    }
    {
      "code": "az1xahz,az2xahz,az3xahz",
      "description": "AZ 1, AZ 2, AZ 3",
      "status": "ENABLED"
    }
  ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.20 Migrating a DB Instance to Another AZ

API Description

This API is used to migrate a DB instance to another AZ.

NOTICE

Service will be interrupted for up to 60 seconds while the AZ is being changed. The time required to change an AZ depends on the amount of data to be migrated. The entire migration process may take an hour. You are advised to use the HA connection to access the instance or configure your client to automatically reconnect to the instance.

Restrictions

- DDS Community Edition clusters and replica sets support this operation.
- Cross-AZ instances do not support this operation.
- DB instances created using an IPv6 subnet do not support this operation.
- Read replicas or inactive standby nodes in a replica set instance do not support this operation.
- If a cluster instance has read replicas associated, the instance cannot be migrated to another AZ.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/migrate
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/migrate

Table 5-88 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-89 Parameter description

Name	Type	Mandatory	Description
target_azs	String	Yes	Definition Single-AZ or multi-AZ to which the VM is migrated. Constraints N/A Range The value is obtained from the code field in the response body of the API in Querying AZs to Which an Instance Can Be Migrated . Default Value N/A

Example Request

- Migrating a DB instance from one AZ to another AZ

```
{
  "target_azs": "az1xahz"
}
```
- Migrating a DB instance from a single AZ to multiple AZs

```
{
  "target_azs": "az1xahz,az2xahz,az3xahz"
}
```

Response Parameters

- Parameter description

Table 5-90 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Definition The task ID. Range N/A

- Example response

```
{
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.5.21 Adding Nodes to a Replica Set Instance

API Description

This API is used to add nodes to a specified replica set instance.

Restrictions

- This API supports both yearly/monthly and pay-per-use DB instances.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/replicaset-node
- URI example
https://dds.cn-north-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/e73893ef73754465a8bd2e0857bbf13ein02/replicaset-node

Table 5-91 Path parameters

Name	Mandatory	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Name	Mandatory	Type	Description
instance_id	Yes	String	Definition Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints N/A Range N/A Default Value N/A

Table 5-92 Request header parameters

Name	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-93 Request body parameters

Name	Mandatory	Type	Description
num	Yes	Integer	Definition Number of nodes to be added to a replica set instance. Constraints • If a replica set instance has three nodes, two or four nodes can be added. • If a replica set instance has five nodes, two nodes can be added. • Nodes cannot be added to a replica set instance with seven nodes. Range N/A Default Value N/A
is_auto_pay	No	Boolean	Definition Whether the order is automatically paid from your account when you add nodes to a yearly/monthly DB instance. This parameter does not affect the payment mode of automatic renewal. Constraints N/A Range • true: The order is automatically paid from the account. • false: The order is manually paid from the account. Default Value false

Example Request

Adding two nodes to a specified replica set instance

```
POST https://dds.cn-north-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/e73893ef73754465a8bd2e0857bbf13ein02/replicaset-node
```

```
{  
  "num" : 2  
}
```

Response Parameters

- Parameter description

Table 5-94 Response body parameters

Name	Type	Description
job_id	String	Definition Task ID. This parameter is returned only for pay-per-use DB instances. Range N/A
order_id	String	Definition Order ID. This parameter is returned only when yearly/monthly DB instances are created. Range N/A

- Example response

```
{  
  "job_id" : "6ad4eb1f-73bd-4876-aa31-aa9a1e41c4bc"  
}
```

Status Code

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

Error Code

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

5.5.22 Adding a Read Replica to an Instance

API Description

This API is used to add read replicas to DDS instances.

Restrictions

- This API can only be used to add read replicas to replica set instances and cluster instances.
- A maximum of five read replicas can be added to a replica set instance.
- In a cluster instance, up to five read replicas can be added to a shard.

- In a cluster instance, read replicas can be added to only one shard at a time.
- The synchronization delay cannot be set for cluster instances. The default value is 0.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/readonly-node
- URI example
https://dds.cn-north-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/readonly-node

Table 5-95 Request parameters

Name	Mandatory	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	String	Definition Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints N/A Range N/A Default Value N/A

Table 5-96 Request header parameters

Name	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-97 Request body parameters

Name	Mandatory	Type	Description
spec_code	Yes	String	Definition The resource specification code. For details about how to obtain the value, see the parameter value in Querying Database Specifications . Example: dds.mongodb.c6.large.4.rr Constraints N/A Range N/A Default Value N/A

Name	Mandatory	Type	Description
num	Yes	Integer	Definition Number of read replicas to be added. Constraints N/A Range 1–5 Default Value N/A
delay	No	Integer	Definition Synchronization delay. Constraints This parameter cannot be set for cluster instances. Range 0 to 1,200 ms Default Value 0
is_auto_pay	No	Boolean	Definition Whether the order is automatically paid from your account when you add read replicas to a yearly/monthly DB instance. This parameter does not affect the payment mode of automatic renewal. Constraints N/A Range true: The order is automatically paid from the account. false: The order is manually paid from the account. Default Value false

Example Request

Adding one read replica who **spec_code** is set to **dds.mongodb.c6.large.4.rr**, and **delay** is set to **0**

```
POST https://dds.cn-north-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/readonly-node

{
  "spec_code": "dds.mongodb.c6.large.4.rr",
  "num" : 1,
  "delay" : 0
}
```

Response Parameters

Table 5-98 Response body parameters

Name	Type	Description
job_id	String	Definition Task ID. This parameter is returned only for pay-per-use DB instances. Range N/A
order_id	String	Definition Order ID. This parameter is available only when nodes of a yearly/monthly DB instance are added. Range N/A

Example Response

```
{
  "job_id" : "4008c8914b624785a02ab7966d4d"
}
```

Status Code

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

Error Code

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

5.6 Connection Management

5.6.1 Querying Sessions of an Instance Node

API Description

This API is used to query sessions of instance nodes.

Restrictions

This function is available for DB instances of Community Edition 3.4 or later.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/nodes/{node_id}/sessions
- URI example
https://ap-southeast-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/nodes/520c58ba00a3497e97ce0b9604874dd6no02/sessions

Request Parameters

Parameter description

Table 5-99 Request parameters

Parameter	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Parameter	Type	IN	Mandatory	Description
project_id	string	path	Yes	Definition Project ID of a tenant in a region. Obtain the project ID by following the instructions in Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
node_id	string	path	Yes	Definition Node ID. Constraints - For a cluster instance, you can select any mongos, shard, or config node. - For a replica set instance, you can select the primary or secondary node. Range N/A Default Value N/A

Table 5-100 Query parameters

Parameter	Type	Mandatory	Description
offset	Integer	No	Definition Index offset. Constraints If offset is set to <i>N</i> , the query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value must be a number but cannot be a negative number. Range N/A Default Value 0
limit	Integer	No	Definition Number of records to be queried. Constraints N/A Range [1, 100] Default Value 10 (indicating that 10 records are returned)
plan_summary	String	No	Definition The description of an execution plan. Constraints N/A Range If this parameter is left empty, sessions in which plan_summary is empty are queried. You can also specify an execution plan, for example, COLLSCAN IXSCAN FETCH SORT LIMIT SKIP COUNT COUNT_SCAN TEXT PROJECTION . Default Value N/A

Parameter	Type	Mandatory	Description
type	String	No	Definition Operation type. Constraints N/A Range If this parameter is left empty, sessions in which type is empty are queried. You can also specify an operation type, for example, none update insert query command getmore remove killcursors. Default Value N/A
namespace	String	No	Definition Namespace. Constraints If this parameter is left blank, the sessions in which namespace is empty are queried. You can also specify the value based on the service requirements. Range N/A Default Value N/A
cost_time	Integer	No	Definition Running time, in μs. Constraints If this parameter is left empty, the sessions in which cost_time is empty are queried. You can also set this parameter based on the service requirements, indicating that the sessions in which the value of cost_time exceeds the specified value are queried. Range N/A Default Value N/A

Response Parameters

- Parameter description

Table 5-101 Response body parameters

Parameter	Type	Mandatory	Description
total_count	Integer	Yes	Definition The total number of records. Range N/A
sessions	Array of objects	Yes	Definition The detailed information. For details, see the QuerySessionResponse table. Range N/A

Table 5-102 Data structure description of the session field

Parameter	Type	Description
id	String	Definition The session ID. Range N/A
active	Boolean	Definition Whether the current session is active. If the value is " true ", the session is active. If the value is " false ", the session is inactive. Range N/A
operation	String	Definition Operation. Range N/A
type	String	Definition Operation type. Range N/A

Parameter	Type	Description
cost_time	String	Definition Running time, in μ s. Range N/A
plan_summary	String	Definition The description of an execution plan. Range N/A
host	String	Definition Host. Range N/A
client	String	Definition Client address. Range N/A
description	String	Definition Indicates the connection description. Range N/A
namespace	String	Definition Namespace. Range N/A
db	String	Definition Name of the database that is being operated. Range N/A
user	String	Definition Username. Range N/A

Example Response

```
{  
  "total_count" : 1,  
}
```

```
"sessions" : [ {
  "id" : "shard_1:7201646",
  "active" : true,
  "operation" : "{\"getMore\":\"4.9473050217983027E18\",\"collection\":\"$cmd.aggregate\", \"batchSize\":\"101.0\", \"lsid\":{\"id\":{\"$binary\":{\"base64\":\"9FhcBFVeTzafCH8BUZrLjQ\\=\\=\", \"subType\":\"03\"}}, \"uid\":{\"$binary\":{\"base64\":\"O0CMtIVltQN4IsEOsJdrPL8s7jv5xwh5a/A5Qfvs2A8\\=\", \"subType\":\"00\"}}, \"$clusterTime\":{\"clusterTime\":{\"$timestamp\":{\"t\":\"1.614047961E9\", \"i\":\"1.0\"}}, \"signature\":{\"hash\":{\"$binary\":{\"base64\":\"HxUWu68VyfvQFivWjHQDdj/3YQ\\=\", \"subType\":\"00\"}}, \"keyId\":\"6.9312672235666801E18\"}}, \"$client\":{\"driver\":{\"name\":\"PyMongo\"}, \"version\":\"3.6.1\"}, \"os\":{\"type\":\"Linux\", \"name\":\"Linux\", \"architecture\":\"x86_64\"}, \"version\":\"4.18.0-147.5.1.0.el69.eulerosv2r9.x86_64\"}, \"platform\":\"CPython 3.7.4.final.0\", \"mongos\":{\"host\":\"host-172-16-61-110:8635\", \"client\":\"127.0.0.1:33420\", \"version\":\"4.0.3\"}}, \"$configServerState\":{\"opTime\":{\"ts\":{\"$timestamp\":{\"t\":\"1.614047961E9\", \"i\":\"1.0\"}}, \"t\":\"2.0\"}}, \"$db\":\"admin\"},
  "type" : "getmore",
  "cost_time" : "25",
  "plan_summary" : "COLLSCAN",
  "host" : "host-172-16-27-182:8635",
  "client" : "172.16.41.233:50700",
  "description" : "conn20",
  "namespace" : "admin.$cmd.aggregate",
  "db" : "admin",
  "user" : "root"
} ]
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.6.2 Killing Sessions of an Instance Node

Description

This API is used to kill sessions of an instance node.

Restrictions

- This function is available for DB instances of Community Edition 3.4 or later.
- Inactive sessions cannot be terminated.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/nodes/{node_id}/session
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/nodes/520c58ba00a3497e97ce0b9604874dd6no02/session

Table 5-103 Request parameters

Parameter	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. Obtain the project ID by following the instructions in Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
node_id	string	path	Yes	Definition Node ID. Constraints - For a cluster instance, you can select any mongos, shard, or config node. - Select the primary or secondary node in a replica set instance. Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-104 Request body parameters

Parameter	Type	Mandator y	Description
sessions	Array of strings	Yes	Definition The IDs of sessions to be terminated. Constraints N/A Range For details, see the session ID returned in Table 5-102 . Default Value N/A

Response Parameters

```
{}
```

Example Request

```
POST https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/nodes/  
520c58ba00a3497e97ce0b9604874dd6no02/session  
{  
  "sessions" : [ "34631", "34703" ]  
}
```

Example Response

None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.6.3 Querying the Number of Connections to an Instance Node

Description

This API is used to query the number of connections from each client to DDS DB instances.

Restrictions

Frozen instances do not support this operation.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/conn-statistics
- URI example
https://dds.ap-southeast1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/conn-statistics?node_id=51a90da2cfc846688abcdd23861077b5no02

Request Parameters

Parameter description

Table 5-105 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Name	Type	IN	Mandator y	Description
instance_id	string	path	Yes	Definition Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints N/A Range N/A Default Value N/A
node_id	string	query	No	Definition The node ID. Constraints N/A Range N/A Default Value If this parameter is left blank, the number of connections of all nodes that can be connected in the instance is queried by default.

Response Parameters

- Response parameters

Table 5-106 Response body parameters

Parameter	Type	Mandator y	Description
total_conne ctions	Integer	Yes	Definition The total number of connections, including internal and external connections. Range N/A

Parameter	Type	Mandatory	Description
total_inner_connections	Integer	Yes	Definition The total number of internal connections. Range N/A
total_outer_connections	Integer	Yes	Definition The total number of external connections. Range N/A
inner_connections	Array of objects	Yes	Definition The internal connection statistics array. Up to 200 records are supported. For details, see Table 5-107 . Range N/A
outer_connections	Array of objects	Yes	Definition The external connection statistics array. Up to 200 records are supported. For details, see Table 5-107 . Range N/A

Table 5-107 Data structure description of the inner_connections and outer_connections fields

Parameter	Type	Mandatory	Description
client_ip	String	Yes	Definition The IP address of the client connected to the instance or node. Range N/A

Parameter	Type	Mandatory	Description
count	Integer	Yes	Definition The number of connections corresponding to the IP address. Range N/A

Example Request

- Querying the connection statistics of all nodes in a DB instance
GET https://dds.ap-southeast1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/conn-statistics
- Querying the connection statistics of a node in a DB instance
GET https://dds.ap-southeast1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/conn-statistics?node_id=51a90da2cfc846688abcdd23861077b5no02

Example Response

Status code: 200

Success.

```
{
  "total_connections" : 75,
  "total_inner_connections" : 50,
  "total_outer_connections" : 25,
  "inner_connections" : [ {
    "client_ip" : "10.10.10.24",
    "count" : 9
  }, {
    "client_ip" : "9.3.185.42",
    "count" : 6
  }, {
    "client_ip" : "10.10.4.156",
    "count" : 3
  } ],
  "outer_connections" : [ {
    "client_ip" : "10.10.10.25",
    "count" : 11
  }, {
    "client_ip" : "9.3.185.46",
    "count" : 8
  }, {
    "client_ip" : "10.10.4.157",
    "count" : 4
  } ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7 Backup and Restoration

5.7.1 Creating a Manual Backup

Description

This API is used to create a manual backup for a DB instance.

URI

- URI format
POST /v3/{project_id}/backups
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/backups

Table 5-108 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	string	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Name	Type	Mandator y	Description
project_id	string	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-109 backup field data structure description

Name	Type	Mandato ry	Description
backup	Object	Yes	Definition The backup parameter objects For more information, see Table 5-109 . Constraints N/A Range N/A Default Value N/A

Name	Type	Mandatory	Description
instance_id	String	Yes	Definition Instance ID, which can be obtained by calling the API described in Querying Instances and Details. If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints N/A Range N/A Default Value N/A
name	String	Yes	Definition The manual backup name. Constraints The value must be 4 to 64 characters in length and start with a letter (from A to Z or from a to z). It is case-sensitive and can contain only letters, digits (from 0 to 9), hyphens (-), and underscores (_). Range N/A Default Value N/A

Name	Type	Mandatory	Description
description	String	No	Definition The manual backup description. Constraints The value can include a maximum of 256 characters and cannot contain the following special characters: > <"&'= Range N/A Default Value N/A

Example Request

Creating a manual backup whose name is **mybackup1** and description is **The first Manual backup**

```
{
  "backup": {
    "instance_id": "a89dab5e39394eccbdb77b19d57b0180in02",
    "name": "mybackup1",
    "description": "The first Manual backup"
  }
}
```

Response Parameters

- Parameter description

Table 5-110 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	Definition The ID of the asynchronous manual backup task. Range N/A
backup_id	String	Yes	Definition Manual backup ID Range N/A

Example Response

```
{
  "job_id": "a03b1b8a-b756-467c-8a49-38720c3d23ec",
  "backup_id": "bf9ee62a7f7044c583c6765c916c36edbr02"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.2 Deleting a Manual Backup

Description

This API is used to delete a manual backup for a DB instance.

URI

- URI format
DELETE https://{Endpoint}/v3/{project_id}/backups/{backup_id}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/backups/8d9586c40b33449a815518d4635a2cd9br02

Request Parameters

Parameter description

Table 5-111 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
backup_id	string	path	Yes	The backup file ID.

Response Parameters

- Parameter description

Table 5-112 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	The task ID.

- Response example

```
{
  "job_id": "fcaab90b-960d-4441-b73d-a5b2532c5ec5"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.3 Querying the Backup List

Description

This API is used to query backups based on specified conditions.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/backups?
instance_id={instance_id}&backup_id={backup_id}&backup_type={backup_type}&offset={offset}&limit={limit}&begin_time={begin_time}&end_time={end_time}&mode={mode}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/97b026aa9cc4417888c14c84a1ad9860/backups?
instance_id=c0c9f155c7b7423a9d30f0175998b63bin01&offset=0&limit=10&begin_time=2018-08-06 10:41:14&end_time=2018-08-16 10:41:14

Table 5-113 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	string	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .

Name	Type	Mandatory	Description
instance_id	string	No	The instance ID, which can be obtained by calling the API for querying instances. If you do not have an instance, you can call the API used for creating an instance.
backup_id	string	No	The backup ID. If the backup ID belongs to an automated incremental backup, the instance ID must be specified.
backup_type	string	No	The backup type. • Auto: automated full backup • Manual: manual full backup • Incremental: automated incremental backup • If this parameter is not transferred, all full backups, including automated and manual full backups, are queried by default. When the value of this field is Incremental, the instance ID must be transferred.
offset	Integer	No	The index position. The query starts from the next instance creation time indexed by this parameter under a specified project. If offset is set to N, the resource query starts from the N +1 piece of data. The value must be greater than or equal to 0 . If this parameter is not transferred, offset is set to 0 by default, indicating that the query starts from the latest created DB instance.
limit	Integer	No	The maximum allowed number of backups to be queried. The value ranges from 1 to 100. If this parameter is not transferred, the first 100 DB instances are queried by default.

Name	Type	Mandatory	Description
begin_time	string	No	The start time of the query. The format is yyyy-mm-dd hh:mm:ss . The value is in UTC format. NOTE When end_time is not empty, begin_time is mandatory.
end_time	string	No	The end time of the query. The format is "yyyy-mm-dd hh:mm:ss". The value is in UTC format. NOTE When begin_time is not empty, end_time is mandatory.
mode	string	No	The DB instance mode. Valid value: • Sharding • ReplicaSet • Single

Request Parameters

None

Response Parameters

- Parameter description

Table 5-114 Parameter description

Name	Type	Mandatory	Description
backups	Array of objects	Yes	The backup list. For more information, see Table 5-115 .
total_count	Integer	Yes	The total number of queried records.

Table 5-115 Data structure description of the backups field

Name	Type	Mandatory	Description
id	String	Yes	The backup ID.

Name	Type	Mandatory	Description
name	String	Yes	The backup name.
instance_id	String	Yes	The ID of the DB instance from which the backup was created. You can obtain the ID by calling the API for querying DB instances. If you do not have an instance, you can call the API used for creating an instance.
instance_name	String	Yes	The name of the DB instance for which the backup is created.
datastore	Object	Yes	The database version. For more information, see Table 5-116 .
type	String	Yes	The backup type. • Auto: automated full backup • Manual: manual full backup • Incremental: automated incremental backup
begin_time	String	Yes	The backup start time. The format of the start time is yyyy-mm-dd hh:mm:ss . The value is in UTC format.
end_time	String	Yes	The backup end time. The format of the end time is yyyy-mm-dd hh:mm:ss . The value is in UTC format.
status	String	Yes	The backup status. Valid value: • BUILDING: Backup in progress • COMPLETED: Backup completed • FAILED: Backup failed • DISABLED: Backup being deleted
size	Long	Yes	The backup size in KB.
description	String	Yes	The backup description.

Table 5-116 Data structure description of the datastore field

Name	Type	Mandatory	Description
type	String	Yes	The DB engine. Valid value: DDS-Community .
version	String	Yes	The database version. Versions 5.0, 4.4, 4.2, 4.0, and 3.4 are supported. The value can be 5.0, 4.4, 4.2, 4.0, or 3.4 .

- Response example

```
{
  "backups": [
    {
      "id": "43e4feaab48f11e89039fa163ebaa7e4br01",
      "name": "backup-test",
      "instance_id": "43e4feaab48f11e89039fa163ebaa7e4br01",
      "instance_name": "cluster-test",
      "datastore": {
        "type": "DDS-Community",
        "version": "3.4"
      },
      "type": "auto",
      "begin_time": "2018-08-06 12:41:14",
      "end_time": "2018-08-06 12:43:14",
      "status": "COMPLETED",
      "size": 2803,
      "description": "backup description"
    }
  ],
  "total_count": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.4 Querying an Automated Backup Policy

Description

This API is used to query an automated backup policy.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/backups/policy
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/97b026aa9cc4417888c14c84a1ad9860/instances/cc6345c64cec47499182467ea0dd432ain02/backups/policy

Request Parameters

- Parameter description

Table 5-117 Request parameters

Name	Type	IN	Man dato ry	Description
X-Auth-Token	string	header	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dato ry	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

- Example request

Enabling backup policies, including automated and incremental backup policies:

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin02/backups/policy
{
  "backup_policy" : {
    "keep_days" : 7,
    "start_time" : "19:00-20:00",
    "period" : "1,2,4,5,6",
    "enable_incremental_backup" : true
  }
}
```

Enabling an automated backup policy but disabling an incremental backup policy:

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin02/backups/policy
{
  "backup_policy" : {
    "keep_days" : 7,
    "start_time" : "19:00-20:00",
    "period" : "1,2,4,5,6",
    "enable_incremental_backup" : false
  }
}
```

Disabling backup policies, including automated and incremental backup policies:

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin02/backups/policy
{
  "backup_policy" : {
    "keep_days" : 0
  }
}
```

Response Parameters

- Parameter description

Table 5-118 Parameter description

Name	Type	Mandatory	Description
backup_policy	Object	Yes	The backup policy object, including the backup retention period (days) and start time. For more information, see Table 5-119 .

Table 5-119 backup_policy field data structure description

Name	Type	Mandatory	Description
keep_days	Integer	Yes	The number of days to retain the backup files.
start_time	String	No	The backup time window. Automated backups will be triggered during the backup time window.
period	String	No	The backup cycle configuration. Data will be automatically backed up on the selected days every week.
enable_incremental_backup	Boolean	No	Whether to enable incremental backup. true : The incremental backup policy is enabled. false : The incremental backup policy is disabled.

- Response example

Status code: 200

Success.

```
{  "backup_policy": {    "keep_days": 7,    "start_time": "19:00-20:00",    "period": "1,2,4,5,6",    "enable_incremental_backup": true  }}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.5 Setting an Automated Backup Policy

Description

This API is used to set an automated backup policy.

URI

- URI format
PUT `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/backups/policy`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/97b026aa9cc4417888c14c84a1ad9860/instances/cc6345c64cec47499182467ea0dd432ain02/backups/policy`

Table 5-120 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-121 Parameter description

Name	Type	Mandatory	Description
backup_policy	Object	Yes	The backup policy object, including the backup retention period (days) and start time. For more information, see Table 5-122 .

Table 5-122 Data structure description of the backup_policy field

Name	Type	Mandatory	Description
keep_days	String	No	The number of days to retain the generated backup files. Either keep_days or enable_incremental_backup must be transferred. The value ranges from 0 to 732. If the value is 0, backup policies are disabled, including automated and incremental backup policies.
start_time	String	No	The backup time window. Automated backups will be triggered during the backup time window. This parameter is mandatory if the automated backup policy is enabled. This parameter is not transferred if the automated backup policy is disabled. The value must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to 00. Example value: 23:00-00:00

Name	Type	Mandator y	Description
period	String	No	The backup cycle configuration. Data will be automatically backed up on the selected days every week. Value range: The value is a list of digits separated by commas (.). Each digit indicates a day of the week. The restrictions on the backup retention period are as follows: • This parameter is not transferred if the retention period is set to 0. • If you set the retention period to 1 to 6 days, data is automatically backed up each day of the week. Set the parameter value to 1,2,3,4,5,6,7. • If you set the retention period to 7 to 732 days, select at least one day of the week for the backup cycle. Example value: 1,2,3,4

Name	Type	Mandator y	Description
enable_incremental_backup	Boolean	No	Whether to enable incremental backup. If this parameter is not transferred, the incremental backup status remains unchanged. After incremental backup is enabled, the system automatically performs an incremental backup. The values and constraints of incremental backup are as follows: ● false: Incremental backup is disabled. If incremental backup is disabled, the previous incremental backups will be deleted. ● true: Incremental backup is enabled. After incremental backup is enabled, a full backup is triggered.

Example Request

- Enabling or modifying the automated backup policy and enabling the incremental backup policy:

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
3d39c18788b54a919bab633874c159dfin02/backups/policy
```

```
{  
  "backup_policy" : {  
    "keep_days" : 9,  
    "start_time" : "08:15-09:15",  
    "period" : "1,4,5,6,7",  
    "enable_incremental_backup" : true  
  }  
}
```

- Enabling or modifying the automated backup policy and disabling the incremental backup policy:

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
3d39c18788b54a919bab633874c159dfin02/backups/policy
```

```
{  
  "backup_policy" : {  
    "keep_days" : 9,  
    "start_time" : "08:15-09:15",  
    "period" : "1,4,5,6,7",  
    "enable_incremental_backup" : false  
  }  
}
```

- Enabling or modifying the automated backup policy only, and retaining the status of the incremental backup policy:

PUT <https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin02/backups/policy>

```
{
  "backup_policy" : {
    "keep_days" : 9,
    "start_time" : "08:15-09:15",
    "period" : "1,4,5,6,7"
  }
}
```

- Enabling the incremental backup policy: This request can be delivered only when the automated full backup policy is enabled. The same rule applies to disabling the incremental backup policy.

PUT <https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin02/backups/policy>

```
{
  "backup_policy" : {
    "enable_incremental_backup" : true
  }
}
```

- Disabling backup policies, including automated and incremental backup policies:

PUT <https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin02/backups/policy>

```
{
  "backup_policy" : {
    "keep_days" : 0
  }
}
```

Response Parameters

None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.6 Restoring Data to a New DB Instance

Description

This API is used to restore a backup to a new DB instance.

Restrictions

- This API supports restoring backups to both the yearly/monthly and pay-per-use DB instances.
- The database type of the destination DB instance must be the same as that of the source DB instance.

- Currently, only replica set instances and cluster instances can be restored to a new instance and to any point in time.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/97b026aa9cc4417888c14c84a1ad9860/instances

Table 5-123 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-124 Parameter description

Name	Type	Mandatory	Description
name	String	Yes	The DB instance name. The instance name can be the same as an existing name. The instance name must contain 4 to 64 characters and must start with a letter. It is case sensitive and can contain letters, digits, hyphens (-), and underscores (_). It cannot contain other special characters.
datastore	Object	Yes	The database information. For details, see Table 5-125 .
region	String	Yes	The region ID. The value cannot be empty.
availability_zone	String	Yes	AZ ID.
vpc_id	String	Yes	VPC ID. For details about how to obtain this parameter value, see "Virtual Private Cloud" in the <i>Virtual Private Cloud API Reference</i> . The value cannot be empty. The string length and whether the string complying with UUID regular expression rules are verified.
subnet_id	String	Yes	Subnet ID. For details about how to obtain this parameter value, see "Subnet" in the <i>Virtual Private Cloud API Reference</i> .

Name	Type	Mandatory	Description
security_group_id	String	Yes	Specifies the ID list of the security groups which a specified DB instance belongs to. - You can add up to 10 security group IDs for each instance and separate them with commas (,). - You can obtain it in either of the following ways: - For details about how to obtain this parameter value, see "Security Group" in the <i>Virtual Private Cloud API Reference</i>.
port	String	No	Database access port. Value range: 2100 to 65535 (excluding 12017 and 33071) If this parameter is not transferred, the port of the created DB instance is 8635 by default.
password	String	No	Database password. The value must be 8 to 32 characters in length and contain uppercase letters (A to Z), lowercase letters (a to z), digits (0 to 9), and special characters, such as ~!@#%^*_-=+? Enter a strong password to improve security, preventing security risks such as brute force cracking. If this parameter is not transferred, set a password for the instance before connecting to the instance. For details, see Resetting the Administrator Password.

Name	Type	Mandator y	Description
disk_encryption_id	String	No	The key ID used for disk encryption. The string must comply with UUID regular expression rules. If this parameter is not transferred, disk encryption is not performed.
mode	String	Yes	DB instance type. Cluster and replica set instances are supported. The value can be: • Sharding • ReplicaSet
configurations	Array of objects	No	Parameter group configuration information. For more information, see Table 5-126 . If this parameter is not transferred, the default parameter group is used.
flavor	Array of objects	Yes	Instance specifications. For more information, see Table 5-127 . For details about how to obtain the value, see the parameter value in Querying Database Specifications .
backup_strategy	Object	No	Advanced backup policy. For more information, see Table 5-128 .
enterprise_project_id	String	No	Enterprise project ID. • This parameter is not transferred for users who have not enabled the enterprise multi-project service. • If this parameter is not transferred for a user who has enabled the enterprise multi-project service, the value is the default enterprise project.

Name	Type	Mandator y	Description
ssl_option	String	No	Whether to enable or disable SSL. Valid value: • The value 0 indicates that SSL is disabled by default. • The value 1 indicates that SSL is enabled by default. If this parameter is not transferred, SSL is enabled by default.
dss_pool_id	String	No	The dedicated storage ID of the DeC user. The value is left blank by default. Only DeC users can set this parameter.
server_group_policies	Array of strings	No	The names of the policies associated with the ECS group of the DeC user. Available values include: • anti-affinity indicates that anti-affinity deployment is enabled for the DDS instance. To ensure high availability, the primary, secondary, and hidden nodes are created on different physical machines. If this parameter is not transferred for DeC users, anti-affinity deployment is disabled by default. Only DeC users can set this parameter.
tags	Array of objects	No	The tag list. A maximum of 20 tags can be added for each instance. For details, see Table 5-129 .
charge_info	Object	No	Billing mode, which includes yearly/monthly and pay-per-use. The default billing mode is pay-per-use. For details, see Table 5-130 .

Table 5-125 Data structure description of field **datastore**

Parameter	Type	Mandatory	Description
type	String	Yes	Database type. The value is DDS-Community .
version	String	Yes	Database version. Versions 5.0, 4.4, 4.2, 4.0, and 3.4 are supported. The value can be 5.0, 4.4, 4.2, 4.0, or 3.4 .
storage_engine	String	Yes	The storage engine. DDS supports the WiredTiger and RocksDB storage engines. If the database version is 4.2 or later, the storage engine is RocksDB and the value is rocksDB.

Table 5-126 Data structure description of the configurations field

Parameter	Type	Mandatory	Description
type	String	Yes	The node type. Valid value: - For a cluster instance, the value can be mongos, shard, or config. - For a replica set instance, the value is replica. - For a single node instance, the value is single. Enumerated values: mongos shard config replica single
configuration_id	String	Yes	Parameter group ID

Table 5-127 Data structure of the flavor field

Name	Type	Mandator y	Description
type	String	Yes	The node type. Valid value: • For a cluster instance, the value can be mongos, shard, or config. • For a replica set instance, the value is replica. • For a single node instance, the value is single.
num	String	Yes	The node quantity. Valid value: • In a cluster instance, the number of mongos nodes ranges from 2 to 32. • config: The value is 1. • replica: The value is 1. • single: The value is 1.
storage	String	No	Disk type. Valid value: ULTRAHIGH, which indicates the type SSD. This parameter is valid for the shard and config nodes of a cluster instance and for replica set instances. This parameter is invalid for mongos nodes. Therefore, you do not need to specify the storage space for mongos nodes.

Name	Type	Mandator y	Description
size	String	No	The disk size. The value must be a multiple of 10. The unit is GB. • In a cluster instance, the shard size ranges from 10 GB to 2000 GB and must be greater than or equal to the disk size of the original instance. The config size can only be 20 GB. This parameter is invalid for mongos nodes. Therefore, you do not need to specify the storage space for mongos nodes. • In a replica set instance, the disk size ranges from 10 GB to 3000 GB and must be greater than or equal to the disk size of the original instance. • In a single node instance, the disk size ranges from 10 GB to 1000 GB and must be greater than or equal to the disk size of the original instance.
spec_code	String	Yes	The resource specification code. For details about how to obtain the code, see the value of spec_code in Querying Database Specifications.

Table 5-128 backup_strategy field data structure description

Name	Type	Mandator y	Description
start_time	String	Yes	The backup time window. Automated backups will be triggered during the backup time window. The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to 00. Example value: 23:00-00:00
keep_days	String	No	The number of days to retain the generated backup files. The value range is from 0 to 732. • If this parameter is set to 0, the automated backup policy is not set. • If this parameter is not transferred, the automated backup policy is enabled by default. Backup files are stored for seven days by default.

Table 5-129 Data structure description of field **tags**

Parameter	Type	Mandatory	Description
key	String	Yes	The tag key. It can contain a maximum of 36 Unicode characters. The key cannot be left blank or an empty string. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).
value	String	Yes	The tag value. It can contain a maximum of 43 Unicode characters. The value can be an empty string. The character set is as follows: A-Z, a-z, 0-9, periods (.), hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).

Table 5-130 Data structure of the charge_info field

Parameter	Type	Mandatory	Description
charge_mode	String	Yes	Billing mode. Value range: • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.
period_type	String	No	Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • month: The service is subscribed by month. • year: The service is subscribed by year.

Parameter	Type	Mandatory	Description
period_num	Integer	No	This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • If period_type is set to month, the parameter value ranges from 1 to 9. • If period_type is set to year, the parameter value ranges from 1 to 3.
is_auto_renew	Boolean	No	Whether automatic renewal is enabled for yearly/monthly instances. The renewal period is the same as the original period and the order will be automatically paid during the subscription renewal. Value range: • true: indicates that the subscription is automatically renewed. • false: indicates that the subscription is not automatically renewed. The default value is false.
is_auto_pay	Boolean	No	Payment method. When creating a yearly/monthly DB instance, you can specify whether to automatically pay with your account. This parameter does not affect the payment method of automatic renewal. Value range: • true: indicates that the order is automatically paid from the account. • false: indicates that the fee is manually paid from the account. This payment method is used by default.

 NOTE

The values of **region** and **availability_zone** are used as examples.

Example Request

- Restoring a backup to a new cluster instance:

```
{
  "name": "test-cluster-01",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.2",
    "storage_engine": "wiredTiger"
  },
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "password": "*****",
  "mode": "Sharding",
  "configurations": [
    {
      "type": "mongos",
      "configuration_id": "acb288dbd1174f26a8960b45591bd98apr02"
    },
    {
      "type": "shard",
      "configuration_id": "5bca546f0be64b038124ef9cedd1bfa1pr02"
    },
    {
      "type": "config",
      "configuration_id": "4d123b3ba8294921802b11bf4d8c5735pr02"
    }
  ],
  "flavor": [
    {
      "type": "mongos",
      "num": "2",
      "spec_code": "dds.mongodb.c6.medium.4.mongos"
    },
    {
      "type": "shard",
      "num": 2,
      "storage": "ULTRAHIGH",
      "size": 20,
      "spec_code": "dds.mongodb.c6.medium.4.shard"
    },
    {
      "type": "config",
      "num": 1,
      "storage": "ULTRAHIGH",
      "size": 20,
      "spec_code": "dds.mongodb.c6.large.2.config"
    }
  ],
  "backup_strategy": {
    "start_time": "08:15-09:15",
    "keep_days": "8"
  },
  "ssl_option": "1",
  "dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",
  "server_group_policies": [
    "anti-affinity"
  ],
  "tags": [
    {
      "key": "dds001",
      "value": "dds001"
    }
  ]
}
```

- Restoring a backup to a new replica set instance:

```
{
  "name": "test-replicaset",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "storage_engine": "wiredTiger"
  },
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "password": "*****",
  "mode": "ReplicaSet",
  "configurations": [
    {
      "type": "replica",
      "configuration_id": "f17e3aad778440fbb68603c8c9032003pr02"
    }
  ],
  "flavor": [
    {
      "type": "replica",
      "num": "1",
      "storage": "ULTRAHIGH",
      "size": "30",
      "spec_code": "dds.mongodb.s2.medium.4.shard"
    }
  ],
  "backup_strategy": {
    "start_time": "08:15-09:15",
    "keep_days": "8"
  },
  "ssl_option": "1",
  "tags": [{
    "key": "dds001",
    "value": "dds001"
  }]
}
```

- Restoring a backup to a new single node instance:

```
{
  "name": "test-singlenode",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.2",
    "storage_engine": "wiredTiger"
  },
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
  "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007",
  "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
  "password": "*****",
  "mode": "Single",
  "configurations": [
    {
      "type": "single",
      "configuration_id": "b8e962e66ede47609a94cba591735b49pr02"
    }
  ],
  "flavor": [
    {
      "type": "single",
      "num": "1",
      "storage": "ULTRAHIGH",
      "size": "30",
      "spec_code": "dds.mongodb.c6.medium.4.single"
    }
  ]
}
```

```
],
"backup_strategy": {
  "start_time": "08:15-09:15",
  "keep_days": "8"
},
"ssl_option": "1",
"tags": [{
  "key": "dds001",
  "value": "dds001"
}]
}
```

- Restoring a backup to a new replica set instance at a point in time:

```
{
  "name": "replica-liuyunj1",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.2",
    "storage_engine": "wiredTiger"
  },
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "dcdadabc-efed-4518-8b34-4af66fcd97e7",
  "subnet_id": "4a9348f2-f232-4700-a440-2f1641d80960",
  "security_group_id": "c57b9db2-cccb-4c0d-b058-7ea51dda0c99",
  "mode": "ReplicaSet",
  "flavor": [
    {
      "type": "replica",
      "num": 1,
      "storage": "ULTRAHIGH",
      "size": 100,
      "spec_code": "dds.mongodbc6.large.2.repset"
    }
  ],
  "backup_strategy": {
    "start_time": "08:00-09:00",
    "keep_days": "8"
  },
  "ssl_option": "1",
  "tags": [{
    "key": "dds001",
    "value": "dds001"
  }]
}
```

Response Parameters

- Parameter description

Table 5-131 Parameter description

Name	Type	Mandatory	Description
id	String	No	The DB instance ID.
name	String	No	Instance name, which is the same as the request parameter.

Name	Type	Mandatory	Description
datastore	Object	No	Database information, which is the same as the request parameter. For more information, see Table 5-132 .
created	String	No	Creation time, which is in the yyyy-mm-dd hh:mm:ss format.
status	String	No	The DB instance status. The value is creating .
region	String	No	Region ID, which is the same as the request parameter.
availability_zone	String	No	AZ ID, which is the same as the request parameter.
vpc_id	String	No	VPC ID, which is the same as the request parameter.
subnet_id	String	No	Subnet ID, which is the same as the request parameter.
security_group_id	String	No	Specifies the ID list of the security groups which a DB instance belongs to, which is the same as the request parameter.
port	Integer	No	Database access port.
disk_encryption_id	String	No	The ID of the disk encryption key. It is the same as the request parameter.
mode	String	No	Instance type, which is the same as the request parameter.
configurations	Array of objects	No	Parameter group configuration information. For details, see Table 5-133 .

Name	Type	Mandatory	Description
flavor	Array of objects	No	Instance specification, which is the same as the request parameter. For more information, see Table 5-127 .
backup_strategy	Object	No	Advanced backup policy, which is the same as the request parameter. For more information, see Table 5-128 .
enterprise_project_id	String	No	Enterprise project ID. If the value is 0 , the resource belongs to the default enterprise project.
dss_pool_id	String	No	The DSS storage pool ID of the DeC user.
job_id	String	No	The ID of the workflow for creating a DB instance.
ssl_option	String	No	Indicates whether to enable SSL, which functions the same as the request parameter.
tags	Array of objects	No	Tag list, which is the same as the request parameter. For details, see Table 5-136 .
order_id	String	No	The ID of the order for creating an instance. This parameter is returned only when you create a yearly/monthly instance.
charge_info	Object	No	Billing mode, which is the same as the request parameter. For details, see Table 5-137 .

Table 5-132 Data structure description of field **datastore**

Parameter	Type	Mandatory	Description
type	String	Yes	Database type. The value is DDS-Community .
version	String	Yes	Database version. Versions 5.0, 4.4, 4.2, 4.0, and 3.4 are supported. The value can be 5.0, 4.4, 4.2, 4.0, or 3.4 .
storage_engine	String	Yes	The storage engine. DDS supports the WiredTiger and RocksDB storage engines. If the database version is 4.2 or later, the storage engine is RocksDB and the value is rocksDB.

Table 5-133 Data structure description of the configurations field

Parameter	Type	Mandatory	Description
type	String	Yes	The node type. Valid value: - For a cluster instance, the value can be mongos, shard, or config. - For a replica set instance, the value is replica. - For a single node instance, the value is single. Enumerated values: mongos shard config replica single
configuration_id	String	Yes	Parameter group ID

Table 5-134 Data structure of the flavor field

Name	Type	Mandatory	Description
type	String	Yes	The node type. Valid value: - For a cluster instance, the value can be mongos, shard, or config. - For a replica set instance, the value is replica. - For a single node instance, the value is single.
num	String	Yes	Number of nodes or groups. Valid value: - If the value of type is mongos, num indicates the number of mongos nodes in the cluster instance. The value ranges from 2 to 16. - If the value of type is shard, num indicates the number of shard groups in the cluster instance. The value ranges from 2 to 16. - If the value of type is config, num indicates the number of config groups in the cluster instance. The value can only be 1. - If the value of type is replica, num indicates the number of replica nodes in the replica set instance. The value can be 3, 5, or 7. - If the value of type is single, num indicates the number of nodes in a single node instance. The value can only be 1.
storage	String	No	Disk type.

Name	Type	Mandatory	Description
size	String	No	Disk size. This parameter is mandatory for all nodes except mongos. This parameter is invalid for the mongos nodes. The value must be a multiple of 10. The unit is GB. - For a cluster instance, the storage space of a shard node can be 10 to 2,000 GB, and the config storage space is 20 GB. This parameter is invalid for mongos nodes. Therefore, you do not need to specify the storage space for mongos nodes. - For a replica set instance, the value ranges from 10 to 3000. - For a single node instance, the value ranges from 10 to 1000.

Name	Type	Mandatory	Description
spec_code	String	Yes	Resource specification code. For details about how to obtain the code, see the value of response parameter spec_code in Querying Database Specifications. In a cluster instance, multiple specifications need to be specified. All specifications must be of the same series, that is, general-purpose (s6), enhanced (c3), or enhanced II (c6). Example: • dds.mongodb.s6.large.4.mongos and dds.mongodb.s6.large.4.config belong to the same specification series. • dds.mongodb.s6.large.4.mongos and dds.mongodb.c3.large.4.config are not of the same specification series.

Table 5-135 Data structure of the backup_strategy field

Name	Type	Mandatory	Description
start_time	String	Yes	The backup time window. Automated backups will be triggered during the backup time window. The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to 00. • If this parameter is not specified, the default backup time window is set to 00:00-01:00. Example value: 23:00-00:00
keep_days	String	No	The number of days to retain the generated backup files. The value range is from 0 to 732. • If this parameter is set to 0, the automated backup policy is not set. • If this parameter is not specified, the automated backup policy is enabled by default. Backup files are stored for seven days by default.

Table 5-136 Data structure description of field **tags**

Parameter	Type	Mandatory	Description
key	String	Yes	The tag key. It can contain a maximum of 36 Unicode characters. The key cannot be left blank or an empty string. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).
value	String	Yes	The tag value. It can contain a maximum of 43 Unicode characters. The value can be an empty string. The character set is as follows: A-Z, a-z, 0-9, periods (.), hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).

Table 5-137 Data structure of the charge_info field

Parameter	Type	Mandatory	Description
charge_mode	String	Yes	Billing mode. Value range: • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.
period_type	String	No	Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • month: The service is subscribed by month. • year: The service is subscribed by year.

Parameter	Type	Mandatory	Description
period_num	Integer	No	This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: • If period_type is set to month, the parameter value ranges from 1 to 9. • If period_type is set to year, the parameter value ranges from 1 to 3.
is_auto_renew	Boolean	No	Whether automatic renewal is enabled for yearly/monthly instances. The renewal period is the same as the original period and the order will be automatically paid during the subscription renewal. Value range: • true: indicates that the subscription is automatically renewed. • false: indicates that the subscription is not automatically renewed. The default value is false.
is_auto_pay	Boolean	No	Payment method. When creating a yearly/monthly DB instance, you can specify whether to automatically pay with your account. This parameter does not affect the payment method of automatic renewal. Value range: • true: indicates that the order is automatically paid from the account. • false: indicates that the fee is manually paid from the account. This payment method is used by default.

 NOTE

The values of **region** and **availability_zone** are used as examples.

- Response example

Cluster instance:

```
{
  "id": "39b6a1a278844ac48119d86512e0000bin02",
  "name": "test-cluster-01",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "storage_engine": "wiredTiger"
  },
  "created": "2019-01-16 09:34:36",
  "status": "creating",
  "region": "aaa",
  "availability_zone": "az1xahz",
  "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
  "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
  "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
  "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
  "mode": "Sharding",
  "configurations": [
    {
      "type": "mongos",
      "configuration_id": "acb288dbd1174f26a8960b45591bd98apr02"
    },
    {
      "type": "shard",
      "configuration_id": "5bca546f0be64b038124ef9cedd1bfa1pr02"
    },
    {
      "type": "config",
      "configuration_id": "4d123b3ba8294921802b11bf4d8c5735pr02"
    }
  ],
  "flavor": [
    {
      "type": "mongos",
      "num": "2",
      "spec_code": "dds.mongodb.c6.medium.4.mongos"
    },
    {
      "type": "shard",
      "num": "2",
      "storage": "ULTRAHIGH",
      "spec_code": "dds.mongodb.c6.medium.4.shard",
      "size": "20"
    },
    {
      "type": "config",
      "num": "1",
      "storage": "ULTRAHIGH",
      "spec_code": "dds.mongodb.c6.large.2.config",
      "size": "20"
    }
  ],
  "backup_strategy": {
    "start_time": "08:15-09:15",
    "keep_days": "8"
  },
  "enterprise_project_id": "",
  "ssl_option": "1",
  "dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",
}
```

```
"job_id": "c010abd0-48cf-4fa8-8cbc-090f093eaa2f",
"tags": [{
  "key": "dds001",
  "value": "dds001"
}]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.7 Obtaining the Link for Downloading a Backup File

Description

This API is used to obtain the link for downloading a backup file.

Restrictions

The backup download link is valid within 15 minutes after being updated.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/backups/download-file?
instance_id={instance_id}&backup_id={backup_id}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/97b026aa9cc4417888c14c84a1ad9860/
backups/download-file?
instance_id=befb1cfe1f96403780396b0c54f85d11in02&backup_id=bd062e1af2
d248b3bb4cd3dbb4183888br02

NOTE

You can obtain a backup ID from the API in [Querying the Backup List](#).

Request Parameters

Parameter description

Table 5-138 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	String	head er	Yes	User token obtained from IAM. For details, see Authentication .

Name	Type	IN	Mandatory	Description
X-Language	String	header	No	Language
project_id	String	path	Yes	Project ID. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
backup_id	String	query	Yes	Backup ID.

Response Parameters

- Parameter description

Table 5-139 Parameter description

Name	Type	Mandatory	Description
files	Array of objects	Yes	The list of backup files. For more information, see Table 5-140 .
bucket	String	Yes	The name of the bucket where the file is located.

Table 5-140 Data structure description of the files field

Name	Type	Mandatory	Description
name	String	Yes	File name.
size	Long	Yes	Indicates the file size in KB.
download_link	String	Yes	The link for downloading the backup file.

Name	Type	Mandatory	Description
link_expired_time	String	Yes	The link expiration time. The format is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, the time zone offset of UTC is shown as +0000 .

- Response example

```
{
  "files": [
    {
      "name": "43e4feaab48f11e89039fa163ebaa7e4br02.xxx",
      "size": 2803,
      "download_link": "https://obs.domainname.com/rdsbucket.username.1/xxxxxx",
      "link_expired_time": "2018-08-016T10:15:14+0000"
    }
  ],
  "bucket": "rdsbucket.bucketname"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.8 Querying the Restoration Time Ranges

Description

This API is used to query the restoration time range of a DB instance.

Restrictions

Currently, this API only supports replica set instances and cluster instances 4.0.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/restore-time
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/instances/d5833c2854a4486cb7960f829269e211in02/restore-time?date=2020-12-12

Request Parameters

Parameter description

Table 5-141 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	User token obtained from IAM. For details, see Authentication .
Content-Type	string	header	Yes	MIME type of the request body. You are advised to use the default value application/json . For APIs used to upload objects or images, the value can vary depending on the flow type.
X-Language	string	header	No	Language
project_id	string	path	Yes	Project ID. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
date	string	query	Yes	The date to be queried. The value is in the yyyy-mm-dd format, and the time zone is UTC.

Response Parameters

- Parameter description

Table 5-142 Parameter description

Name	Type	Mandatory	Description
restore_time	Array of objects	Yes	The restoration time ranges. For details, see Table 5-143 .

Table 5-143 restore_time description

Name	Type	Mandatory	Description
start_time	Long	Yes	The start time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.
end_time	Long	Yes	The end time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.

- Response example

```
{
  "restore_time": [
    {
      "start_time": 1607731200000,
      "end_time": 1607756414000
    },
    {
      "start_time": 1607756825000,
      "end_time": 1607761999000
    },
    {
      "start_time": 1607762943000,
      "end_time": 1607817599000
    }
  ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.9 Obtaining the List of Databases That Can Be Restored

Description

This API is used to obtain the list of databases that can be restored.

Restrictions

This API applies only to replica sets.

URI

- URI format
GET `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/restore-database?restore_time={restore_time}&offset={offset}&limit={limit}`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/instances/d5833c2854a4486cb7960f829269e211in02/restore-database?restore_time=1607689584000&limit=10&offset=1`

Table 5-144 Request parameters

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	User token obtained from IAM. For details, see Authentication .
X-Language	String	No	Language
project_id	String	Yes	Project ID. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
restore_time	String	Yes	Specifies the restoration time point. The value is a UNIX timestamp, in milliseconds. The time zone is UTC.
offset	Integer	No	Specifies the index position. • The value must be greater than or equal to 0. • If this parameter is not transferred, the value is 0 by default.
limit	Integer	No	Specifies the upper limit of the number of queried records. • The value ranges from 1 to 100. • If this parameter is not transferred, the first 100 records are queried by default.

Request Parameters

None

Response Parameters

- Parameter description

Table 5-145 Parameter description

Name	Type	Mandatory	Description
databases	Array of String	Yes	Indicates the database list. Each element in the list indicates a database.
total_count	Integer	Yes	Indicates the total number of databases.

- Response example

```
{
  "databases": [
    "test_db"
  ],
  "total_count": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.10 Obtaining the List of Database Collections That Can Be Restored

Description

This API is used to obtain the list of databases collections that can be restored.

Restrictions

This API applies only to replica sets.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/restore-collection?
db_name={db_name}&restore_time={restore_time}&offset={offset}&limit={limit}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/

instances/d5833c2854a4486cb7960f829269e211in02/restore-collection?
db_name=mydbx&restore_time=1607689584000&limit=10&offset=0

Table 5-146 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	User token obtained from IAM. For details, see Authentication .
X-Language	String	No	Language
project_id	String	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
db_name	String	Yes	Specifies the database name.
restore_time	String	Yes	Specifies the restoration time point. The value is a UNIX timestamp, in milliseconds. The time zone is UTC.
offset	Integer	No	Specifies the index position. • The value is an integer greater than or equal to 0. • If this parameter is not transferred, the value is 0 by default.
limit	Integer	No	Specifies the upper limit of the number of queried records. • The value ranges from 1 to 100. • If this parameter is not transferred, the first 100 records are queried by default.

Request Parameters

None

Response Parameters

- Parameter description

Table 5-147 Parameter description

Name	Type	Mandatory	Description
collections	Array of objects	Yes	Indicates the list of collections. Each element in the list indicates a collection.
total_count	Integer	Yes	Indicates the total number of collections.

Table 5-148 Parameter description

Name	Type	Mandatory	Description
name	String	Yes	Indicates the collection name.

- Response example

```
{
  "collections": [
    "dds-test"
  ],
  "total_count": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.11 Restoring Data to the Original DB Instance

Description

- This API is used to restore data to the original DB instance.
- If a cluster DB instance have read replicas associated, backup data can only be restored to a new DB instance.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/recovery

- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/instances/recovery`

Table 5-149 Request parameters

Name	Type	IN	Mandator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
X-Language	string	head er	No	Language
project_id	string	path	Yes	Project ID. To obtain the project ID, see Obtaining a Project ID .

Request Parameters

- Parameter description

Table 5-150 Parameter description

Name	Type	Mandator y	Description
source	Object	Yes	The instance from which the backup was created For details, see Table 5-151 .
target	Object	Yes	The instance to which the backup is restored. For details, see Table 5-152 .

Table 5-151 source field data structure description

Name	Type	Mandatory	Description
instance_id	String	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
type	String	No	The restoration mode. Enumerated values: • backup: indicates using backup files for restoration. In this mode, type is optional and backup_id is mandatory. • timestamp: indicates the point-in-time restoration mode. In this mode, type is mandatory and restore_time is mandatory.
backup_id	String	No	The ID of the backup to be restored. This parameter must be specified when the backup file is used for restoration.
restore_time	String	No	The point in time that data is restored in the UNIX timestamp. The unit is millisecond and the time zone is UTC. NOTE This parameter takes effect only for replica set instances.

Table 5-152 target field data structure description

Name	Type	Mandatory	Description
instance_id	String	Yes	Specifies ID of the DB instance to be restored from a backup. You can call the API for querying DB Instances to obtain the DB instance ID. If you do not have an instance, you can call the API used for creating an instance.

Example Request

- Using a backup to restore data to the original DB instance whose ID is d8e6ca5a624745bcb546a227aa3ae1cfin02

```
{
  "source": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin02",
    "type": "backup",
    "backup_id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe"
  },
  "target": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin02"
  }
}
```
- Restoring data to a point in time (applicable to replica set instances and cluster instances 4.0) (The original DB instance ID is d8e6ca5a624745bcb546a227aa3ae1cfin02.)

```
{
  "source": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin02",
    "type": "timestamp",
    "restore_time": 1532001446987
  },
  "target": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin02"
  }
}
```

Response Parameters

- Parameter description

Table 5-153 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	ID of the asynchronous task for the restore operation.

- Response example

```
{
  "job_id": "a03b1b8a-b756-467c-8a49-38720c3d23ec"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.12 Restoring Databases and Tables to a Point in Time

Description

This API is used to restore databases and tables at a point in time.

Restrictions

This API applies only to replica sets.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/restore/collections
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/instances/d5833c2854a4486cb7960f829269e211in02/restore/collections

Table 5-154 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
X-Language	string	head er	No	Language
project_id	string	path	Yes	Project ID. To obtain the project ID, see Obtaining a Project ID .
instance_id	string	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.

Request Parameters

- Parameter description

Table 5-155 Parameter description

Name	Type	Mandatory	Description
restore_collections	Array of objects	Yes	The database information. For details, see Table 5-156 .

Table 5-156 restore_collections data structure description

Name	Type	Mandatory	Description
database	String	Yes	Database name.
collections	Array of objects	No	The collection information. For details, see Table 5-157 .
restore_database_time	String	No	The database restoration time point. This parameter is mandatory for database-level restoration, The value is a UNIX timestamp, in milliseconds. The time zone is UTC.

Table 5-157 collections data structure description

Name	Type	Mandatory	Description
old_name	String	Yes	The table name before the restoration.
new_name	String	No	The table name after the restoration.
restore_collection_time	String	Yes	The collection restoration time point. The value is a UNIX timestamp, in milliseconds. The time zone is UTC.

Example Request

- Restoring a database-level backup (The database name is **test**.)

```
{
  "restore_collections": [
    {
      "database": "test",
      "restore_database_time": 1607762955000
    }
  ]
}
```
- Restoring a collection-level backup (The table name before the restoration is **test**.)

```
{
  "restore_collections": [
    {
      "database": "test",
      "collections": [
        {
          "old_name": "test",
          "restore_collection_time": 1607762955000
        }
      ]
    }
  ]
}
```

Response Parameters

- Parameter description

Table 5-158 Parameter description

Name	Type	Mandato ry	Description
job_id	String	Yes	ID of the asynchronous task for the restore operation.

- Response example

```
{
  "job_id": "a03b1b8a-b756-467c-8a49-38720c3d23ec"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.7.13 Stopping a Backup

Description

This API is used to stop a backup in case of an emergency.

Restrictions

This API is available only for DB instances in the **Backing up** or **Uploading backup** state.

URI

- URI format
PUT `https://{Endpoint}/v3/{project_id}/backups/{backup_id}`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/backups/ca8cb4638f3d42bfa6e942464339be89br14`

Table 5-159 Request parameters

Parameter	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. Obtain the project ID by following the instructions in Obtaining a Project ID .
backup_id	string	path	Yes	Backup ID.

Request Parameters

- Parameter description

Table 5-160 Parameter description

Parameter	Type	Mandatory	Description
action	String	Yes	Operation. stop indicates the operation for stopping a backup.

- Example request

```
{
  "action": "stop"
}
```

Response Parameters

- Parameter description

Table 5-161 Parameter description

Parameter	Type	Description
job_id	String	ID of the workflow for stopping a backup.

- Example response

```
{
  "job_id": "b52cc59d-e1e2-4e63-bb00-7694e126f66a"
}
```

Status Code

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

Error Code

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

5.7.14 Deleting Manual Backups in Batches

Function

This API is used to delete manual backups of a DB instance in batches.

URI

DELETE https://{Endpoint}/v3/{project_id}/instances/backups

Table 5-162 Request parameters

Name	Type	IN	Mandatory	Description
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .

Request Parameters

Table 5-163 Request header parameters

Name	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. For details, see Authentication .

Table 5-164 Request body parameters

Name	Mandatory	Type	Description
backup_ids	Yes	Array of strings	IDs of manual backups to be deleted in batches. No more than 10 manual backups can be deleted at a time.

Response Parameters

None

Example Request

Deleting the manual backup whose ID is
b1eaeb36d03946c988e806db91e5e4fbbr02

```
{
  "backup_ids" : [ "b1eaeb36d03946c988e806db91e5e4fbbr02" ]
}
```

Example Response

None

Status Code

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

Error Code

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

5.8 Parameter Configuration

5.8.1 Obtaining Parameter Templates

Description

This API is used to obtain parameter templates, including all databases' default parameter templates and user-created parameter templates.

Restrictions

This API applies only to DDS Community Edition.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/configurations

- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/configurations?offset=0&limit=100

Table 5-165 Request parameters

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	String	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Table 5-166 Query parameters

Parameter	Type	Mandatory	Description
offset	Integer	No	Definition The index position. Constraints The value must be a number. Range The value cannot be a negative number. Default Value 0 : The query starts from the first data record.
limit	Integer	No	Definition Number of records displayed on each page. Constraints N/A Range 1 to 100 Default Value 100

Request Parameters

None

Response Parameters

- Parameter description

Table 5-167 Response body parameters

Name	Type	Description
total_count	Integer	Definition The total number of queried records. Range N/A

Name	Type	Description
configurations	Array of objects	Definition The parameter template list. For details, see Table 5-168 . Range N/A

Table 5-168 Data structure description of the configurations field

Parameter	Type	Description
id	String	Definition Parameter template ID. Range N/A
name	String	Definition Parameter template name. Range N/A
description	String	Definition Parameter template description. Range N/A
datastore_version	String	Definition Database version. Range N/A
datastore_name	String	Definition Database type. Range N/A

Parameter	Type	Description
node_type	String	Definition Node type of the parameter template. Range • mongos: the mongos node type. • shard: the shard node type. • config: the config node type. • replica: the replica set type. • readonly: the read replica type of a replica set instance. • shard_readonly: the read replica type of a cluster instance. • single: the single node type.
created	String	Definition Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Range N/A
updated	String	Definition Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Range N/A
user_defined	Boolean	Definition Indicates whether the parameter template is created by users. Range • false: The parameter template is a default parameter template. • true: The parameter template is a custom template.

- Response example

```
{
  "total_count" : 1,
  "configurations" : [ {
    "id" : "07fc12a8e0e94df7a3fcf53d0b5e1605pr01",
```

```
"name" : "test1",
"description" : "",
"datastore_name" : "mongos",
"node_type" : "shard",
"datastore_version" : "4.0",
"created" : "2017-01-01T10:00:00",
"updated" : "2017-01-01T10:00:00",
"user_defined" : true
} ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.8.2 Creating a Parameter Template

Description

This API is used to create a parameter template and configure the name, description, DB engine, and parameter values in the parameter template.

Restrictions

- This API applies only to DDS Community Edition.
- The name of the custom parameter template is case-sensitive and must be different from the name of an existing or a default parameter template.
- The value of **parameter_values** in the parameter template must be within the default value range of the specified database version. For details about the range of parameter values, see **Editing a Parameter Template** in *Document Database Service User Guide*.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/configurations
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/configurations

Table 5-169 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-170 Request body parameters

Parameter	Type	Mandatory	Description
name	String	Yes	Definition Parameter template name. Constraints The template name can contain 1 to 64 characters. Only letters (case-sensitive), digits, hyphens (-), underscores (_), and periods (.) are allowed. Range N/A Default Value N/A
description	String	Yes	Definition Parameter template description. Constraints The description can consist of up to 256 characters. It cannot contain carriage returns or any of the following special characters: > ! < " & ' = Range N/A Default Value The value is left blank by default.
parameter_values	Map<String, String>	Yes	Definition Mapping between parameter names and parameter values. You can customize parameter values based on the parameters in the default parameter template. Constraints N/A Range N/A Default Value N/A

Parameter	Type	Mandatory	Description
datastore	Object	Yes	Definition Database object. For details, see Table 5-171 . Constraints N/A Range N/A Default Value N/A

Table 5-171 Data structure description of the datastore field

Name	Type	Mandatory	Description
node_type	String	Yes	Definition Node type of parameter template node_type. Constraints N/A Range ● mongos: the mongos node type. ● shard: the shard node type. ● config: the config node type. ● replica: the replica set type. ● readonly: the read replica type of a replica set instance. ● shard_readonly: the read replica type of a cluster instance. ● single: the single node type. Default Value N/A

Name	Type	Mandatory	Description
version	String	Yes	Definition Database version. Constraints N/A Range The value can be 5.0, 4.4, 4.2, 4.0 , and 3.4 . Default Value N/A

Example Request

Creating a parameter template in which **name** is set to **myparameter**, **node_type** is set to **shard**, **version** is set to **3.4**, and the maximum number of connections is set to **10**

```
{
  "name" : "myparameter",
  "description" : "parameter1",
  "datastore" : {
    "node_type" : "shard",
    "version" : "3.4"
  },
  "parameter_values" : {
    "max_connections" : "10"
  }
}
```

Response Parameters

- Parameter description

Table 5-172 Response body parameters

Name	Type	Description
configuration	ParamGroupInfoResult object	Definition The parameter template list. Range N/A

Table 5-173 configuration field data structure description

Name	Type	Description
id	String	Definition Parameter template ID Range N/A
name	String	Definition Parameter template name Range N/A
description	String	Definition Parameter template description. Range N/A
datastore_version	String	Definition Database version. Range N/A
datastore_name	String	Definition Database type. Range N/A
created	String	Definition Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Range N/A

Name	Type	Description
updated	String	Definition Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Range N/A

- Response example

```
{
  "configuration": {
    "id": "7b4e07852bd54016906e89461b3182cdpr02",
    "name": "myparameter",
    "description": "parameter1",
    "datastore_version": "3.4",
    "datastore_name": "mongodb",
    "created": "2018-09-19T02:54:21",
    "updated": "2018-09-19T02:54:21"
  }
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.8.3 Deleting a Parameter Template

Description

This API is used to delete a specified parameter template.

Restrictions

- This API applies only to DDS Community Edition.
- Default parameter templates cannot be deleted.

URI

- URI format
DELETE https://{Endpoint}/v3/{project_id}/configurations/{config_id}

- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/configurations/7a8d539ba30f43adaf1b16d08b1df4bdpr02

Table 5-174 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	String	header	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	String	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
config_id	String	path	Yes	Definition Parameter template ID. Constraints N/A Range N/A Default Value N/A

Request Parameters

None

Response Parameters

None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.8.4 Obtaining Details About a Parameter Template

Description

This API is used to obtain parameter details of a specified parameter template.

Restrictions

This API applies only to DDS Community Edition.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/configurations/{config_id}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/configurations/7a8d539ba30f43adaf1b16d08b1df4bdpr02

Table 5-175 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	String	header	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Name	Type	IN	Mandatory	Description
project_id	String	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
config_id	String	path	Yes	Definition Parameter template ID. Constraints N/A Range N/A Default Value N/A

Request Parameters

None

Response Parameters

- Parameter description

Table 5-176 Response body parameters

Name	Type	Description
id	String	Definition The parameter template ID. Range N/A

Name	Type	Description
name	String	Definition Parameter template name. Range N/A
datastore_version	String	Definition Database version. Range N/A
datastore_name	String	Definition Database type. Range N/A
description	String	Definition The parameter template description. Range N/A
created	String	Definition Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Range N/A

Name	Type	Description
updated	String	Definition Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Range N/A
parameters	Array of objects	Definition The parameters defined by users based on the default parameter templates. For details, see Table 5-177 . Range N/A

Table 5-177 Data structure description of the parameters field

Name	Type	Description
name	String	Definition The parameter name. Range N/A
value	String	Definition The parameter value. Range N/A
description	String	Definition The parameter description. Range N/A

Name	Type	Description
type	String	Definition Parameter type. Range - integer - string - boolean - float - list
value_range	String	Definition Value range. Range - For the integer type, the value ranges from 0 to 1. - For the boolean type, the value is true or false.
restart_required	Boolean	Definition Whether the instance needs to be restarted. Range - If the value is true, restart is required. - If the value is false, restart is not required.
readonly	Boolean	Definition Whether the parameter is read-only. Range - If the value is true, the parameter is read-only. - If the value false, the parameter is not read-only.

- Response example

```
{
  "id": "07fc12a8e0e94df7a3fcf53d0b5e1605pr01",
  "name": "paramsGroup-test",
  "description": "",
  "datastore_name": "mongodb",
```

```
"datastore_version": "4.0",
"created": "2017-01-01T10:00:00",
"updated": "2017-01-01T10:00:00",
"parameters": [
  {
    "name": "cursorTimeoutMillis",
    "type": "integer",
    "value": 600000,
    "description": "Specify the expiration time of idle cursors. DDS will delete idle cursors.",
    "value_range": "600000-1000000",
    "restart_required": false,
    "readonly": false
  }
]
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.8.5 Modifying a Parameter Template

Description

This API is used to modify parameters in a specified parameter template, including the parameter names, descriptions, and values.

Restrictions

- This API applies only to DDS Community Edition.
- Default parameter templates cannot be modified.
- The modified parameter template name must be different from the name of an existing or a default parameter template.
- The parameter values to be modified must be within the default value range of the specified database version.

URI

- URI format
PUT https://{Endpoint}/v3/{project_id}/configurations/{config_id}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/configurations/7a8d539ba30f43adaf1b16d08b1df4bdpr02

Table 5-178 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	String	header	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	String	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
config_id	String	path	Yes	Definition Parameter template ID. Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-179 Parameter description

Name	Mandatory	Type	Description
name	No	String	The parameter template name. It contains a maximum of 64 characters and can contain only letters, digits, hyphens (-), underscores (_), and periods (.). If this parameter is not transferred, the parameter template name is not changed. The parameter template name, parameter template description, parameter name, and parameter value mapping cannot be all empty.
description	No	String	Parameter template description. It contains a maximum of 256 characters and does not support special characters !<>=&"" If this parameter is not transferred, the parameter template description is not changed.
parameter_values	No	Map<String,String>	Mapping between parameter names and parameter values. You can customize parameter values based on the parameters in the default parameter template.

Example Request

Modifying a specified parameter template, including the name and the maximum number of connections to **10**

```
{
  "description": "test",
  "parameter_values": {
    "max_connections": "10"
  }
}
```

Response Parameters

None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.8.6 Applying a Parameter Template

Description

This API is used to change a parameter template for a specified DB instance.

URI

- URI format
PUT [https://{Endpoint}/v3/{project_id}/configurations/{config_id}/apply](#)
- URI example
[https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/configurations/7a8d539ba30f43adaf1b16d08b1df4bdpr02/apply](#)

Table 5-180 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	String	header	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Name	Type	IN	Mandatory	Description
project_id	String	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
config_id	String	path	Yes	Definition Parameter template ID. Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-181 Request body parameters

Name	Mandatory	Type	Description
entity_ids	Yes	Array of strings	Instance IDs, group IDs, or node IDs. You can call the API used for querying instances and details to obtain the value. If you do not have an instance, you can call the API used for creating an instance. - If the DB instance type is cluster and the shard or config parameter template is to be changed, the value is the group ID. If the parameter template of the mongos node is changed, the value is the node ID. - If the DB instance to be changed is a replica set instance or a single node instance, the value is the instance ID.

Example Request

Applying a parameter template whose **entity_ids** is **73ea2bf70c73497f89ee0ad4ee008aa2no02** to a specified DB instance

```
{
  "entity_ids": [
    "73ea2bf70c73497f89ee0ad4ee008aa2no02"
  ]
}
```

Response Parameters

- Parameter description

Table 5-182 Response body parameters

Name	Type	Description
job_id	String	Indicates the ID of the asynchronous task for applying a parameter template.

- Example response

```
{
  "job_id" : "bf26cf3c-d046-4080-bb45-f114be7afa5f"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.8.7 Obtaining Parameters of a Specified DB Instance

Description

This API is used to obtain information about parameters of a specified DB instance.

Restrictions

This API applies only to DDS Community Edition.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/configurations
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/f0ba99dd8a8249838a6007042d76b07ain02/configurations?entity_id=827697ee2f6040bd9fcf65586e3f7218gr02

Request Parameters

Parameter description

Table 5-183 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	User token obtained from IAM. For details, see Authentication .
Content-Type	string	header	Yes	MIME type of the request body. You are advised to use the default value application/json . For APIs used to upload objects or images, the value can vary depending on the flow type.
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .

Name	Type	IN	Mandatory	Description
instance_id	string	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.

Table 5-184 Query parameters

Parameter	Type	Mandatory	Description
entity_id	String	Yes	- Instance ID, group ID, or node ID. You can call the API used for querying instances and details to obtain the value. If you do not have an instance, you can call the API used for creating an instance. - If the DB instance type is cluster and the shard or config parameter template is obtained, the value is the group ID. If the parameter template of the mongos node is obtained, the value is the node ID. - If the DB instance type is a replica set instance or a single node instance, the value is the instance ID.

Response Parameters

- Parameter description

Table 5-185 Response body parameters

Name	Type	Description
datastore_version	String	Database version.
datastore_name	String	Database type.

Name	Type	Description
created	String	Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
updated	String	Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
parameters	Array of objects	Indicates the parameters defined by users based on the default parameter templates. For details, see Table 5-186 .

Table 5-186 Data structure description of the parameters field

Name	Type	Description
name	String	The parameter name.
value	String	Parameter value.
value_range	String	The value range. For example, the value of the Integer type ranges from 0 to 1 , and the value of the Boolean type is true or false .
restart_required	Boolean	Whether the instance needs to be restarted. • If the value is true, restart is required. • If the value is false, restart is not required.
readonly	Boolean	Whether the parameter group is read-only. • If the value false, the parameter is not read-only. • If the value is true, the parameter is read-only.
type	String	The parameter type. The value can be integer , string , boolean , float , or list .
description	String	The parameter description.

- Response example

```
{
  "datastore_version" : "4.0",
  "datastore_name" : "mongos",
  "created" : "2017-01-01T10:00:00",
  "updated" : "2017-01-01T10:00:00",
  "parameters" : [ {
    "name" : "cursorTimeoutMillis",
    "value" : 600000,
    "restart_required" : false,
    "readonly" : false,
    "description": "Specify the expiration time of idle cursors. DDS will delete idle cursors.",
    "value_range" : "600000-1000000"
  } ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.8.8 Modifying Parameters of a Specified DB Instance

Description

This API is used to modify the parameters of a specified DB instance. The parameters can be the parameter template of a DB instance, group, or node.

URI

- URI format
PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/configurations
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/375d8d8fad1f43039e23d3b6c0f60a19/instances/9136fd2a9fcd405ea4674276ce36dae8in02/configurations

Table 5-187 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-188 Request body parameters

Name	Mandatory	Type	Description
entity_id	Yes	String	Definition Instance ID, group ID, or node ID. You can call the API used for querying instances and details to obtain the value. If you do not have an instance, you can call the API used for creating a DB instance . Constraints N/A Range - If the DB instance type is cluster and the shard or config parameter template is to be changed, the value is the group ID. If the parameter template of the mongos node is changed, the value is the node ID. - If the DB instance type is replica set or single node, the value is the instance ID. Default Value N/A
parameter_values	Yes	Map<String,String>	Definition Mapping between parameter names and parameter values. You can customize parameter values based on the parameters in the default parameter template. Constraints N/A Range N/A Default Value N/A

Example Request

Changing the maximum number of connections to a specified DB instance to **10**

```
{
  "entity_id" : "73ea2bf70c73497f89ee0ad4ee008aa2no02",
  "parameter_values" : {
    "max_connections" : "10"
  }
}
```

Response Parameters

- Parameter description

Table 5-189 Response body parameters

Parameter	Type	Description
job_id	String	Definition The ID of the asynchronous task for modifying instance parameters. Range N/A
restart_required	Boolean	Definition Check whether the instance, group, or node needs to be restarted after parameter modification. Range - If the value is false, the instance does not need to be restarted. - If the value is true, the instance needs to be restarted.

- Response example

```
{
  "job_id" : "bf26cf3c-d046-4080-bb45-f114be7afa5f",
  "restart_required" : false
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9 Log Information Queries

5.9.1 Querying Database Slow Logs (New)

API Description

This API is used to query slow logs by keyword or database table name.

Restrictions

- Operators (such as **&&**, **||**, **AND**, **OR**, **NOT**, *****, **?**, **:**, **>**, **<**, **=**, **≥**, and **≤**) contained in raw logs cannot be used to search for logs.
- A maximum of 100 records can be queried on each page.
- Slow query logs can be stored for a maximum of 30 days.

URI

- URI format
POST `https://{Endpoint}/v3.1/{project_id}/instances/{instance_id}/slow-logs`

Table 5-190 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-191 Parameter description

Name	Type	Mandatory	Description
start_time	String	Yes	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. CAUTION The start time cannot be 30 days earlier than the current time.
end_time	String	Yes	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The end time cannot be later than the current time.
limit	Integer	Yes	Number of logs to be queried each time. The maximum value is 100 .

Name	Type	Mandatory	Description
line_num	String	No	Sequence number of a log event. This parameter is not required for the first query, but is required for the next page query. The value can be obtained from the response of the last query. NOTE The current query starts from the next log of line_num, excluding the log of line_num.
operate_type	String	No	Statement type. If this parameter is left empty, all statement types are queried. Its value can be any of the following: • insert • query • update • remove • getmore • command • killcursors
node_id	String	No	Node ID. For details, see Table 5-43. If this parameter is left blank, all nodes in the instance can be queried. Nodes that can be queried: Shard nodes in a cluster instance. All nodes in a replica set or single node instance.
keywords	Array of strings	No	Full-text log search based on multiple keywords, indicating that all keywords are matched. • Only fuzzy search by keyword prefix is supported. A maximum of 10 keywords are supported. • Each keyword can contain a maximum of 512 characters.

Name	Type	Mandatory	Description
database_keywords	Array of strings	No	Fuzzy search for logs based on multiple database keywords, indicating that at least one keyword is matched. - Only fuzzy search by keyword prefix is supported. A maximum of 10 keywords are supported. - Each keyword can contain a maximum of 64 characters.
collection_keywords	Array of strings	No	Fuzzy search for logs based on multiple database table name keywords, indicating that at least one keyword is matched. - Only fuzzy search by keyword prefix is supported. A maximum of 10 keywords are supported. - Each keyword can contain a maximum of 128 characters.
max_cost_time	Integer	No	Logs can be searched based on the maximum execution duration. Unit: ms
min_cost_time	Integer	No	Logs can be searched based on the minimum execution duration. Unit: ms

Example Request

Querying slow logs of a DB instance by keyword, in which **limit** is set to **100**, **max_cost_time** is set to **100**, and **min_cost_time** is set to **50**

```
{
  "start_time" : "2022-09-06T10:41:14+0800",
  "end_time" : "2022-09-16T10:41:14+0800",
  "limit" : 100,
  "line_num" : "1595659490239433658",
  "operate_type" : "query",
  "node_id" : "dbd0b65ed0c34125a0b04d4e5ba67e66no02",
  "keywords" : [ "response", "oplog" ],
  "database_keywords" : [ "testDB" ],
  "collection_keywords" : [ "testCollection" ],
  "max_cost_time" : 100,
  "min_cost_time" : 50
}
```

Response Parameters

- Parameter description

Table 5-192 Parameter description

Name	Type	Description
slow_logs	Array of objects	Slow log information. For details, see Table 5-193 .

Table 5-193 Data structure description of field **slowLogDetail**

Name	Type	Description
node_name	String	Node name.
node_id	String	Node ID.
whole_message	String	Statement.
operate_type	String	Statement type.
cost_time	Integer	Execution time. Unit: ms
lock_time	Integer	Lock wait time. Unit: μ s
docs_returned	Integer	Number of returned documents.
docs_scanned	Integer	Number of scanned documents.
database	String	Name of the database which the log belongs to.
collection	String	Name of the database table which the log belongs to.
log_time	String	UTC time when a log is generated. The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
line_num	String	Sequence number of a log event.

- Example response

```
{
  "slow_logs" : [ {
    "node_name" : "Test_replica_node_2",
    "node_id" : "dbd0b65ed0c34125a0b04d4e5ba67e66no02",
    "whole_message" : "{\"responseLength\": 230, \"ts\": {\"$date\": 1605480486800}, \"ninserted\": 1, \"locks\": {\"oplog\": {\"acquireCount\": {\"w\": 1}}, \"Global\": {\"acquireCount\": {\"r\": 3, \"w\": 2}}, \"Collection\": {\"acquireCount\": {\"w\": 2}}, \"Database\": {\"acquireCount\": {\"w\": 3}}}, \"numYield\": 0, \"ns\":
```

```
\ "geographySpace.tiles\{}",
  "operate_type" : "query",
  "cost_time" : 60,
  "lock_time" : 10,
  "docs_returned" : 60,
  "docs_scanned" : 70,
  "database" : "testDB",
  "collection" : "testCollection",
  "log_time" : "2022-09-15T22:49:38.643000Z",
  "line_num" : "1595659490239433659"
} ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9.2 Obtaining Links for Downloading Slow Query Logs

Description

This API is used to obtain links for downloading slow query logs.

Restrictions

The link for downloading slow query logs is valid within 15 minutes after being updated.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/slowlog-download
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/6ade8143870047b8999aba8f1891b48ein02/slowlog-download

Table 5-194 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-195 Parameter description

Name	Type	Mandatory	Description
file_name_list	Array of strings	No	The list of the names of the files to be downloaded.
node_id_list	Array of strings	No	The node ID list. If this parameter is left blank, all nodes in the instance can be queried. For details, see the id value in the nodes data structure table in section "Querying Instances" in the <i>DDS API Reference</i>. Nodes that can be queried: • Shard nodes in a cluster. • All nodes in a replica set or single node instance.

Example Request

Obtaining the link for downloading slow query logs based on the file name list or node ID list

```
{
  "file_name_list":
  ["0541c9f81e80d2201fccc00b92ad6ec0_052f8a12dfed43fbb27c2020e3c3c507no02_slowlog_20201117104809"],
  "node_id_list":["052f8a12dfed43fbb27c2020e3c3c507no02"]
}
```

Response Parameters

- Parameter description

Table 5-196 Parameter description

Name	Type	Description
list	List	The links for downloading slow query logs. For details, see Table 5-197.

Name	Type	Description
status	String	The status of links for downloading slow query logs. • FINISH: The download link has been generated. • CREATING: A file is being generated and the download link is to be prepared. • FAILED: Log files fail to be prepared.
count	Integer	The number of links for downloading slow query logs.

Table 5-197 Data structure description of the list field

Name	Type	Description
node_name	String	The node name.
file_name	String	The name of the generated file for downloading slow query logs.
status	String	The status of the current link. • SUCCESS: The download link has been generated. • EXPORTING: A file is being generated and the download link is to be prepared. • FAILED: Log files fail to be prepared.
file_size	String	The file size in KB.
file_link	String	The download link. NOTE The download link is valid within 15 minutes after being updated. After the update time expires, the download link will be obtained again.
update_at	Long	The update time.

- Response example

```
{
  "list": [
    {
      "node_name": "dds-2a78_replica_node_3",
      "file_name":
"054bc9f81e80d2201fccc00b92ad6ec0_ca327a60b3084fa79ce072d7299b905ano02_slowlog"
```

```
{
  "20201117060412",
  "status": "SUCCESS",
  "file_size": "0",
  "file_link": "https://
rdsbucket.xxxxr.obs.xxxxx.myhuaweicloud.com:443/054bc9c1f680d55c1f36c006e5a9f67b_slowlog_download_20200515080614589?
AWSAccessKeyId=1BQ38TBCQHAVQXBUMUTC&Expires=1589530200&response-cache-control=no-cache%2Cno-store&Signature=Fgi4%2BLOJ9frAXyOkz5hRoW5O%2BUM%3D",
  "update_at": 1605593100566
}
],
"status": "FINISH",
"count": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9.3 Showing Original Slow Logs

Description

This API is used to configure Show Original Log.

Restrictions

Abnormal instances do not support this operation.

URI

- URI format
PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/slowlog-desensitization/{status}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/slowlog-desensitization/off

Request Parameters

Parameter description

Table 5-198 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
Content-Type	string	head er	Yes	MIME type of the request body. You are advised to use the default value application/json . For APIs used to upload objects or images, the value can vary depending on the flow type.
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	string	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
status	string	path	Yes	Enabling or disabling Slow Original Log. The value can be on or off .

Response Parameters

Response example

```
{}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9.4 Querying Database Error Logs (New)

API Description

This API is used to query database error logs.

Restrictions

- Operators &, ||, AND, OR, NOT, *, ?, :, >, <, =, ≥, and ≤ cannot be used to search for logs.

- A maximum of 100 records can be queried on each page, and logs can be stored for a maximum of 30 days.

URI

- URI format
POST https://{Endpoint}/v3.1/{project_id}/instances/{instance_id}/error-logs

Table 5-199 Request parameters

Name	Type	IN	Mandator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. Obtain the project ID by following the instructions in Obtaining a Project ID .
instance_id	string	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.

Request Parameters

- Parameter description

Table 5-200 Parameter description

Name	Type	Mandator y	Description
start_time	String	Yes	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. CAUTION The start time cannot be 30 days earlier than the current time.

Name	Type	Mandator y	Description
end_time	String	Yes	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The end time cannot be later than the current time.
limit	Integer	Yes	Number of logs to be queried each time. The maximum value is 100 .
line_num	String	No	Sequence number of a log event. This parameter is not required for the first query, but is required for the next page query. The value can be obtained from the response of the last query. The current query starts from the next log of line_num , excluding the log of line_num .
severity	String	No	Log level. If this parameter is left blank, logs of all levels can be queried. Enumerated values: • Warning • Error
search_type	String	No	Log query mode, which must be used together with line_num . The log of line_num is used as the start point. • If this parameter is set to backwards, logs of the limit size on the previous page are queried. • If this parameter is set to forwards, logs of the limit size on the next page are queried. • If this parameter is not specified, the default value forwards is used. Enumerated values: • backwards • forwards

Name	Type	Mandator y	Description
node_id	String	No	Node ID. If this parameter is left blank, all nodes in the instance can be queried. For details, see id in Table 5-43 . Nodes that can be queried: • Shard nodes in a cluster instance. • All nodes in a replica set or single node instance.
keywords	Array of strings	No	Full-text log search based on multiple keywords, indicating that all keywords are matched. • Only fuzzy search by keyword prefix is supported. A maximum of 10 keywords are supported. • Each keyword can contain a maximum of 512 characters.

- Example request

```
{
  "start_time" : "2023-01-06T10:41:14+0800",
  "end_time" : "2023-01-09T13:41:14+0800",
  "limit" : 100,
  "line_num" : "1595659490239433658",
  "severity" : "Warning",
  "search_type" : "forwards",
  "node_id" : "dbd0b65ed0c34125a0b04d4e5ba67e66no02",
  "keywords" : ["Unable", "NETWORK"]
}
```

Response Parameters

- Parameter description

Table 5-201 Parameter description

Name	Type	Description
error_logs	Array of objects	Error log details. For details, see Table 5-202 .

Table 5-202 Data structure description of field **error_log_list**

Name	Type	Description
node_name	String	Node name.

Name	Type	Description
node_id	String	Node ID.
raw_message	String	Error description.
severity	String	Log level.
log_time	String	UTC time when a log is generated. The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
line_num	String	Sequence number of a log event.

- Response example

```
{
  "error_logs" : [ {
    "node_name" : "Test_replica_node_2",
    "node_id" : "dbd0b65ed0c34125a0b04d4e5ba67e66no02",
    "raw_message" : "W NETWORK [ShardServerCatalogCacheLoader-214] Unable to
reach primary for set shard_2",
    "severity" : "Warning",
    "log_time" : "2023-01-09T12:55:39.398+0000",
    "line_num" : "1595659490239433659"
  } ]
}
```

Status Code

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

Error Code

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

5.9.5 Obtaining Links for Downloading Error Logs

Description

This API is used to obtain links for downloading error logs.

Restrictions

The link for downloading error logs is valid within 15 minutes after being updated.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/errorlog-download

- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/6ade8143870047b8999aba8f1891b48ein02/errorlog-download`

Table 5-203 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-204 Parameter description

Name	Type	Mandatory	Description
file_name_list	Array of strings	No	The list of the names of the files to be downloaded.
node_id_list	Array of strings	No	The node ID list. If this parameter is left blank, all nodes in the instance can be queried. For details, see the id value in the nodes data structure table in section "Querying Instances" in the <i>DDS API Reference</i>. Nodes that can be queried: - mongos, shard, and config nodes in a cluster. - All nodes in a replica set or single node instance.

Example Request

Obtaining the link for downloading error logs based on the file name list or node ID list

```
{
  "file_name_list": [
    "0541c9f81e80d2201fcc00b92ad6ec0_052f8a12dfed43fbb27c2020e3c3c507no02_errorlog_20201117104809"
  ],
  "node_id_list": [
    "052f8a12dfed43fbb27c2020e3c3c507no02"
  ]
}
```

Response Parameters

- Parameter description

Table 5-205 Parameter description

Name	Type	Description
list	List	The list of error log download links. For details, see Table 5-206.

Name	Type	Description
status	String	The status of the error log download link. • FINISH: The download link has been generated. • CREATING: A file is being generated and the download link is to be prepared. • FAILED: Log files fail to be prepared.
count	Integer	The number of error log links.

Table 5-206 list field data structure description

Name	Type	Description
node_name	String	The node name.
file_name	String	The name of the generated file for downloading error logs.
status	String	The status of the current link. • SUCCESS: The download link has been generated. • EXPORTING: A file is being generated and the download link is to be prepared. • FAILED: Log files fail to be prepared.
file_size	String	The file size in KB.
file_link	String	The download link. NOTE The download link is valid within 15 minutes after being updated. After the update time expires, the download link will be obtained again.
update_at	Long	The update time.

- Response example

```
{
  "list": [
    {
      "node_name": "node_1",
      "file_name":
"054bc9c1f680d55c1f36c006e5a9f67b_errorlog_download_20200515080614589",
      "status": "SUCCESS",
      "file_size": "0",
```

```
{
  "file_link": "https://
rdsbucket.opxxx.svc.rds.xxxx.southeast.ur.obs.xxxx.xxxx.com:443/054bc9c1f680d55c1f36c
006e5a9f67b_errorlog_download_20200515080614589?
AWSAccessKeyId=1BQ38TBCQHAVQXBUMUTC&Expires=1589530200&response-cache-
control=no-cache%2Cno-store&Signature=Fgi4%2BLOJ9frAXyOkz5hRoW5O%2BUM%3D",
  "update_at": 1589529991385
},
{
  "status": "FINISH",
  "count": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9.6 Configuring SQL Audit

Description

This API is used to configure a policy for SQL audit logs.

Restrictions

This operation cannot be performed on frozen or abnormal instances.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/auditlog-policy
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/5cecca4c20e04146862651b8d385f26ain02/auditlog-policy

Table 5-207 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-208 Parameter description

Name	Type	Mandator y	Description
keep_days	Integer	Yes	The number of days for storing audit logs. The value can be 0 or ranges from 7 to 732. • 0: indicates that SQL audit is disabled. • 7 to 732: indicates the retention days for audit logs after SQL audit is enabled.
reserve_audi tlogs	String	No	This parameter is valid only when SQL audit is disabled. • true (default value): indicates that historical audit logs are retained when SQL audit is disabled. • false: indicates that existing historical audit logs are deleted when SQL audit is disabled.
audit_scope	String	No	This parameter is valid only when the audit log policy is enabled. If this parameter is left blank or set to all , all audit log policies are enabled by default. Audit scope: Enter the database or collection name. Use commas (,) to separate multiple databases or collections. If the name contains a comma (,), add a dollar sign (\$) before the comma to distinguish it from the separators. Enter a maximum of 1024 characters. The value cannot contain spaces or the following special characters "[] { } () : ?". The dollar sign (\$) can be used only in escape mode.

Name	Type	Mandator y	Description
audit_types	Array of strings	No	This parameter is valid only when the audit log policy is enabled. If this parameter is left blank, all audit log policies are enabled by default. Specifies the audit type. The value is auth, insert, delete, update, query, or command.

Example Request

- Enabling or updating SQL Audit, setting the retention period to 7 days, and setting **audit_scope** to **all**

```
{
  "keep_days": 7,
  "audit_scope": "all",
  "audit_types": [
    "insert"
  ]
}
```

- Disabling SQL Audit and deleting existing historical audit logs

```
{
  "keep_days": 0,
  "reserve_auditlogs": false
}
```

Response Parameters

Response example

```
{}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9.7 Querying SQL Audit Policy

Description

This API is used to query the policy for SQL audit logs.

URI

- URI format
GET `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/auditlog-policy`

- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/5cecca4c20e04146862651b8d385f26ain02/auditlog-policy

Request Parameters

Parameter description

Table 5-209 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Response Parameters

- Parameter description

Table 5-210 Parameter description

Name	Type	Description
keep_days	Integer	The number of days for storing audit logs. The value is 0 when SQL audit is disabled.
audit_scope	String	The audit scope.
audit_types	Array of strings	The audit type.

- Response example

```
{
  "keep_days":7,
  "audit_scope":"all",
  "audit_types":["insert"]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9.8 Obtaining the Audit Log List

Description

This API is used to obtain an audit log list.

URI

- URI format
GET `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/auditlog?start_time={start_time}&end_time={end_time}&offset={offset}&limit={limit}`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/056538411200d4cd2f79c003c7606412/instances/65d3fe0c50984b35bc1a36e9b7c7de98in02/auditlog?start_time=2020-12-06T09:00:00+0800&end_time=2020-12-10T18:00:15+0800&offset=0&limit=33`

Table 5-211 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	User token obtained from IAM. For details, see Authentication .
X-Language	String	No	Language
project_id	String	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	Yes	The instance ID, which can be obtained by calling the API for querying instances. If you do not have an instance, you can call the API used for creating an instance.
node_id	String	No	The ID of the node whose audit logs are to be queried. If this parameter is not transferred, the audit logs of all nodes are queried by default. The audit logs of cluster instances are distributed on mongos nodes.
start_time	String	Yes	The start time. The format of the start time is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Name	Type	Mandatory	Description
end_time	String	Yes	The end time. The format of the end time is "yyyy-mm-ddThh:mm:ssZ" and the end time must be later than the start time. The time span cannot be longer than 30 days. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
offset	Integer	No	The index position. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	Integer	No	The number of records to be queried. • The value ranges from 1 to 100. • If this parameter is not transferred, the first 100 DB instances are queried by default.

Request Parameters

None

Response Parameters

- Parameter description

Table 5-212 Parameter description

Name	Type	Description
audit_logs	Array of objects	The audit log details. For details about audit logs, see Table 5-213 .
total_record	Integer	The total number of records.

Table 5-213 audit_logs description

Name	Type	Description
node_id	String	The node ID.

Name	Type	Description
id	String	The audit log ID.
name	String	The audit log file name.
size	Long	The size of the audit log in byte.
start_time	String	The start time of the audit log. The format is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
end_time	String	The end time of the audit log. The format is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

- Response example

```
{
  "audit_logs": [
    {
      "id": "10190012aae94b38a10269b8ad025fc1no02_1607681849871",
      "name":
"0a84b6e97780d3271fd0c00f2db42932_audit_log_65d3fe0c50984b35bc1a36e9b7c7de98in0
2_10190012aae94b38a10269b8ad025fc1no02_1607681849871",
      "size": 24735174,
      "node_id": "10190012aae94b38a10269b8ad025fc1no02",
      "start_time": "2020-12-11T18:14:49+0800",
      "end_time": "2020-12-11T18:17:25+0800"
    }
  ],
  "total_record": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.9.9 Obtaining Links for Downloading Audit Logs

Description

This API is used to obtain the link for downloading audit logs.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/auditlog-links
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/2870a411522849aa901cd4351c96a3b7in02/auditlog-links

Table 5-214 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-215 Parameter description

Name	Type	Mandatory	Description
ids	Array of strings	Yes	The list of audit logs. A maximum of 50 audit log IDs are allowed in the list.

Example Request

Obtaining the link for downloading audit logs based on the audit log ID list

```
{
  "ids": ["10190012aae94b38a10269b8ad025fc1no02_1607681849871",
    "12390012aae94b38a10269b8ad025fc1no02_1607681849871"]
}
```

Response Parameters

- Parameter description

Table 5-216 Parameter description

Name	Type	Description
links	Array of strings	Indicates the list of audit log download links. The validity period is 5 minutes.

- Response example

```
{
  "links": ["https://obs.domainname.com/ddsbucket.username.1/xxxxxx", "https://obs.domainname.com/ddsbucket.username.2/xxxxxx"]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.10 Tag Management

5.10.1 Querying Resources by Tag

Description

This API is used to query the specified DB instances by tag.

Restrictions

A maximum of 20 tags can be added to a DB instance. The tag key must be unique.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/action
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/action

Table 5-217 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Request Parameters

- Parameter description

Table 5-218 Parameter description

Name	Type	Mandator y	Description
offset	String	No	Definition The index position. The query starts from the next piece of data indexed by this parameter. Constraints • If action is set to count, this parameter is not transferred. • If action is set to filter, this parameter must be a positive integer. Range N/A Default Value 0 . The default value is 0, indicating that the query starts from the first piece of data.
limit	String	No	Definition The number of resources to be queried. Constraints • If action is set to count, this parameter is not transferred. • If action is set to filter, the value range is from 1 to 100. Range 1 to 100 Default Value 100 . If this parameter is not transferred, the first 100 DB instances are queried by default.

Name	Type	Mandator y	Description
action	String	Yes	Definition The operation identifier. Constraints • If action is set to filter, instances are queried by tag filtering criteria. • If action is set to count, only the total number of records is returned. Range • count • filter Default Value N/A
matches	Array of objects	No	Definition The search field. Constraints • If the value is left blank, the query is not based on the instance name or instance ID. • If the value is not empty, see Table 5-220. Range N/A Default Value N/A
tags	Array of objects	No	Definition Tag. For details, see Table 5-219 . Constraints A maximum of 20 keys are supported. Range N/A Default Value N/A

Table 5-219 tags field data structure description

Name	Type	Mandato ry	Description
key	String	Yes	Definition The tag key. Constraints • The key cannot be empty and contains 1 to 128 single-byte characters. • The key can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: _./=+-@ • Do not enter labels starting with _sys_, which are system labels. NOTE The character set of this parameter is not verified in the search process. Range N/A Default Value N/A
values	Array of strings	Yes	Definition Lists the tag values. Constraints • The value can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: _./=+-@ • The value can be empty or null and contains 0 to 255 single-byte characters. Range N/A Default Value If the values are null, it indicates querying any value. The values are in OR relationship.

Table 5-220 matches field description

Name	Type	Mandatory	Description
key	String	Yes	Definition Search field name. Constraints N/A Range • instance_name: indicating that the query is based on the instance name. • instance_id: indicating that the query is based on the instance ID. Default Value N/A
value	String	Yes	Definition The name or ID of the DB instance to be matched. You can call the API for querying DB instances to obtain the DB instance name or ID. If you do not have an instance, you can call the API used for creating a DB instance . Constraints N/A Range N/A Default Value N/A

Example Request

- Querying 1 to 100 specified DB instances by tag

```
{
  "offset": "100",
  "limit": "100",
  "action": "filter",
  "matches": [
    {
      "key": "instance_name",
      "value": "test-single"
    }
  ],
  "tags": [
    {
      "key": "key1",
      "values": [
        "value1",
```

```
        "value2"
      ]
    }
  ]
}
```

- Querying the total number of resources by instance name or ID

```
{
  "action": "count",
  "tags": [
    {
      "key": "key1",
      "values": [
        "value1",
        "value2"
      ]
    },
    {
      "key": "key2",
      "values": [
        "value1",
        "value2"
      ]
    }
  ],
  "matches": [
    {
      "key": "instance_name",
      "value": "test-single"
    },
    {
      "key": "instance_id",
      "value": "958693039f284d6ebfb177375711072ein02"
    }
  ]
}
```

Response Parameters

- Parameter description

Table 5-221 Parameter description

Name	Type	Description
instances	Array of objects	Definition The instance list. For details, see Table 5-222 . Range N/A
total_count	Integer	Definition The total number of queried records. Range N/A

Table 5-222 instance field data structure description

Name	Type	Description
instance_id	String	Definition Instance ID, which can be obtained by calling the API for querying instances . If you do not have an instance, you can call the API used for creating a DB instance . Range N/A
instance_name	String	Definition The DB instance name. Range N/A
tags	Array of objects	Definition The tag list. If there is no tag in the list, tags is taken as an empty array. For more information, see Table 5-223 . Range N/A

Table 5-223 tags field data structure description

Name	Type	Description
key	String	Definition The tag key. Range • The key cannot be empty and contains 1 to 128 single-byte characters. • The key can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: _./=+-@ • Do not enter labels starting with _sys_, which are system labels. • It is case-sensitive and can contain digits, letters, underscores (_), and hyphens (-).
value	String	Definition The tag value. Range • The value can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: _./=+-@ • The value can be empty or null and contains 0 to 255 single-byte characters. • It is case-sensitive and can contain digits, letters, underscores (_), periods (.), and hyphens (-).

- Response example
Return specified DB instances by tag.

```
{
  "instances": [
    {
      "instance_id": "2acbf2223caf3bac3c33c6153423c3ccin02",
      "instance_name": "test-single",
      "tags": [
        {
          "key": "key1",
          "value": "value1"
        }
      ]
    }
  ]
}
```

```
    },  
    {  
      "key": "key2",  
      "value": "value1"  
    }  
  ]  
}  
]  
}
```

Number of returned records.

```
{  
  "total_count": 4  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.10.2 Adding or Deleting Resource Tags in Batches

Description

This API is used to add or delete tags of the specified instance in batches.

Restrictions

- A maximum of 20 tags can be added to a DB instance. The tag key must be unique.
 - If the request body contains duplicated keys, an error message will be reported when the API is called.
 - If the key in the request body is the same as an existing key in the specified instance, the value of the **value** parameter that corresponds to the existing key is overwritten.
- If tags to be deleted do not exist, the operation is considered to be successful by default. The character set of the tags will not be checked. The tag structure in the request body cannot be missing, and the key cannot be left blank or an empty string.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/tags/action
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/tags/action

Table 5-224 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-225 Parameter description

Name	Type	Mandatory	Description
action	String	Yes	The operation identifier. Valid value: • create: indicates to add tags. • delete: indicates to delete tags.
tags	Array of objects	Yes	The tag list. For more information, see Table 5-226 . NOTE When you delete tags, do not check the character set of this parameter.

Table 5-226 tags field data structure description

Name	Type	Mandatory	Description
key	String	Yes	The tag key. • The key cannot be empty and contains 1 to 128 single-byte characters. • The key can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: <code>_./=+-@</code> • Do not enter labels starting with <code>_sys_</code>, which are system labels. Character set: 0-9, A-Z, a-z, "_", and "-".

Name	Type	Mandatory	Description
value	String	No	The tag value. - The key can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: <code>_:/=+-@</code> - The value can be empty or null and contains 0 to 255 single-byte characters. Character set: 0-9, A-Z, a-z, "_", ".", and "-". - If action is set to create, this parameter is mandatory. - If action is set to delete, this parameter is optional. NOTE If value is specified, tags are deleted by key and value. If value is not specified, tags are deleted by key.

Example Request

- Adding two tags in batches

```
{
  "action": "create",
  "tags": [
    {
      "key": "key1",
      "value": "value1"
    },
    {
      "key": "key",
      "value": "value3"
    }
  ]
}
```

- Deleting two tags in batches

```
{
  "action": "delete",
  "tags": [
    {
      "key": "key1"
    },
    {
      "key": "key2",
      "value": "value3"
    }
  ]
}
```

Response Parameters

```
{}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.10.3 Querying Resource Tags

Description

This API is used to query tags of a specified resource.

Restrictions

A maximum of 20 tags can be added to a DB instance. The tag key must be unique.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/tags
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/tags

Request Parameters

Parameter description

Table 5-227 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Response Parameters

- Parameter description

Table 5-228 Parameter description

Name	Mandatory	Type	Description
tags	Yes	Array of objects	The tag list. For more information, see Table 5-229 .

Table 5-229 tags field data structure description

Name	Mandatory	Type	Description
key	Yes	String	The tag key. • The key cannot be empty and contains 1 to 128 single-byte characters. • The key can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: <code>._:/=+-@</code> • Do not enter labels starting with <code>_sys_</code>, which are system labels. Character set: 0-9, A-Z, a-z, "_", and "-".
value	Yes	String	The tag value. • The value can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: <code>._:/=+-@</code> • The value can be empty or null and contains 0 to 255 single-byte characters. Character set: 0-9, A-Z, a-z, "_", ".", and "-".

• Response example

```
{
  "tags": [
    {
      "key": "key1",
      "value": "value1"
    },
    {
      "key": "key2",
      "value": "value2"
    }
  ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.10.4 Querying Tags in a Specified Project

Description

This API is used to query all tags of instances in a specified project.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/tags
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/tags

Table 5-230 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Request Parameters

None

Response Parameters

- Parameter description

Table 5-231 Parameter description

Name	Mandatory	Type	Description
tags	Yes	Array of objects	The tag list. For more information, see Table 5-232 .

Table 5-232 tags field data structure description

Name	Mandatory	Type	Description
key	Yes	String	The tag key. - The key cannot be empty and contains 1 to 128 single-byte characters. - The key can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: _./=+-@ - Do not enter labels starting with _sys_, which are system labels. Character set: 0-9, A-Z, a-z, "_", and "-".
values	Yes	Array of strings	Lists the tag values. - The value can contain UTF-8 letters (including Chinese characters), digits, spaces, and the following characters: _./=+-@ - The value can be empty or null and contains 0 to 255 single-byte characters. Character set: 0-9, A-Z, a-z, "_", and "-".

- Response example

```
{
  "tags": [
    {
      "key": "key1",
      "values": [
        "value1",
        "value2"
      ]
    },
    {
      "key": "key2",
      "values": [
        "value1",
        "value2"
      ]
    }
  ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11 Managing Databases and Users

5.11.1 Creating a Database User

Description

This API is used to create a database user for a specified instance.

Restrictions

- This API applies only to DDS Community Edition.
- This operation is not allowed if the DB instance is in any of the following statuses: creating, changing instance class, changing port, frozen, restarting, or abnormal.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/db-user
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/f032c0db12d147ef87317efdfacbbe15in02/db-user

Table 5-233 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-234 Parameter description

Name	Type	Mandatory	Description
user_name	String	Yes	The database username. • The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.). • The username cannot be an internal reserved username, such as <code>drsFull</code> or <code>drsIncremental</code>.
user_pwd	String	Yes	The password of the database user. • The value must be 8 to 32 characters in length and contain uppercase letters (A to Z), lowercase letters (a to z), digits (0 to 9), and special characters, such as <code>~!@#%^*-_+=?</code> • Enter a strong password to improve security, preventing security risks such as brute force cracking.
roles	Array of Object	Yes	The role of the database user. For details, see Table 5-235 . roles restricts the permissions of the account. If an empty array is specified, the account does not have any permission.
db_name	String	No	The database where the new user is located. The default value is "admin" . The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).

Table 5-235 roles field data structure description

Name	Type	Mandatory	Description
role_db_name	String	Yes	The name of the database to which the role granted to the new user belongs. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).
role_name	String	Yes	The name of the role granted to the new user. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).

Example Request

Creating a user **testDb** for DB instance **test**

```
{
  "user_name": "test",
  "user_pwd": "*****",
  "roles": [{
    "role_db_name": "testDb",
    "role_name": "testRole"
  }],
  "db_name": "test_db"
}
```

Response Parameters

- Response example
{}

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.2 Creating a Database Role

Description

This API is used to create a database role for a specified instance.

Restrictions

- This API applies only to DDS Community Edition.
- This operation is not allowed if the DB instance is in any of the following statuses: creating, changing instance class, changing port, frozen, restarting, or abnormal.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/db-role
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/659914406d2c4c76bce6a028ce8d8e0din02/db-role

Table 5-236 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-237 Parameter description

Name	Type	Mandatory	Description
role_name	String	Yes	The name of the role to be created. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).
roles	Array of objects	No	The list of roles inherited by the new role. For details, see Table 5-238 .
db_name	String	No	The name of the database to which the role belongs. The default value is admin . The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).

Table 5-238 roles field data structure description

Name	Type	Mandatory	Description
role_db_name	String	Yes	The name of the database to which an inherited role belongs. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).
role_name	String	Yes	The name of an inherited role. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).

Example Request

Creating a database role **testRole** for a specified instance

```
{
  "role_name": "testRole",
  "roles": [{
    "role_name": "readWrite",
    "role_db_name": "testDb"
  }],
  "db_name": "testDb"
}
```

Response Parameters

- Response example
{ }

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.3 Querying Details About Database Users

Description

This API is used to query details about database users.

Restrictions

- This API applies only to DDS Community Edition.
- This operation is not allowed if the DB instance is in any of the following statuses: creating, changing instance class, changing port, restarting, or abnormal.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/db-user/detail?offset={offset}&limit={limit}&user_name={user_name }&db_name={db_name}
- URI example
 - Querying details about database users
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/3527b6b16e7639b88930a360d2c4in02/db-user/detail
 - Querying the user list based on specified conditions.
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/3527b6b16e7639b88930a360d2c4in02/db-user/detail?offset=0&limit=100&user_name=test&db_name=testDb

Table 5-239 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	User token obtained from IAM. For details, see Authentication .
project_id	String	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	Yes	The instance ID, which can be obtained by calling the API for querying instances. If you do not have an instance, you can call the API used for creating an instance.
user_name	String	No	The username. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).

Name	Type	Mandatory	Description
db_name	String	No	The name of the database where the user is located. The default value is "admin". The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).
offset	Integer	No	The index position. The value must be greater than or equal to 0. If this parameter is not transferred, the value is 0 by default.
limit	Integer	No	The upper limit of the number of queried records. The value ranges from 1 to 100. If this parameter is not transferred, the first 100 DB instances are queried by default.

Request Parameters

None

Response Parameters

- Parameter description

Table 5-240 Parameter description

Name	Type	Mandatory	Description
users	String	Yes	The information about database users. CAUTION The return value is in the native format of the database and needs to be parsed by the user.
total_count	Integer	Yes	The total number of database users.

- Response example

```
{
  "total_count": 1,
  "users": "[{"inheritedPrivileges":{"resource":{"collection":"temproles","db":"admin"},"actions":["find"]},"roles":{"role":"root","db":"admin"},"inheritedRoles":{"role":"root","db":"admin"},"_id":"admin.rwuser","user"
```

```
\"::\"rwuser\\\",\\\"db\\\":\\\"admin\\\"}]]\"  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.4 Querying the Database Role List

Description

This API is used to query the database role list.

Restrictions

- This API applies only to DDS Community Edition.
- This operation is not allowed if the DB instance is in any of the following statuses: creating, changing instance class, changing port, restarting, or abnormal.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/db-roles?
role_name={role_name}&db_name={db_name}&offset={offset}&limit={limit}
- URI example
 - Querying the database role list
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/3527b6b16e7639b88930a360d2c4in02/db-roles
 - Querying the list of roles based on specified conditions:
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/3527b6b16e7639b88930a360d2c4in02/db-roles?
role_name=testRole&db_name=testDb&offset=0&limit=100

Table 5-241 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	User token obtained from IAM. For details, see Authentication .
project_id	String	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .

Name	Type	Mandatory	Description
instance_id	String	Yes	The instance ID, which can be obtained by calling the API for querying instances. If you do not have an instance, you can call the API used for creating an instance.
role_name	String	No	The role name. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).
db_name	String	No	The database name. The default value is "admin" . The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).
offset	Integer	No	The index position. The value must be greater than or equal to 0 . If this parameter is not transferred, the value is 0 by default.
limit	Integer	No	The upper limit of the number of queried records. The value ranges from 1 to 100. If this parameter is not transferred, the first 100 DB instances are queried by default.

Request Parameters

None

Response Parameters

- Parameter description

Table 5-242 Parameter description

Name	Type	Mandatory	Description
roles	String	Yes	The database role information. CAUTION The return value is in the native format of the database and needs to be parsed by the user.

Name	Type	Mandator y	Description
total_count	Integer	Yes	The total number of database roles.

- Response example

```
{
  "total_count": 1,
  "roles": "[{"privileges":{"resource":{"collection":"","db":"","admin"},"actions":["viewUser"]},"inheritedPrivileges":{"resource":{"collection":"","db":"","admin"},"actions":["viewUser"]},"role":"userAdmin","roles":["inheritedRoles":["isBuiltin":true,"db":"","admin"]}]"]
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.5 Changing the Password of a Database User

Description

This API is used to change the password of a database user

Restrictions

This operation cannot be performed on frozen or abnormal instances.

URI

- URI format
PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/reset-password
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/reset-password

Table 5-243 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-244 Parameter description

Name	Type	Mandato ry	Description
user_name	String	No	The database username. - The default value is rwuser. Users sharduser and csuser are also supported. - The value must be 1 to 64 characters in length and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), underscores (_), and periods (.).
user_pwd	String	Yes	The database password. - The value must be 8 to 32 characters in length and contain uppercase letters (A to Z), lowercase letters (a to z), digits (0 to 9), and special characters, such as ~!@#%^*_-=+? - Enter a strong password to improve security, preventing security risks such as brute force cracking.
db_name	String	No	The database name. The default value is admin .

Example Request

Changing the password of a database user

```
{
  "user_name": "rwuser",
  "user_pwd": "*****"
}
```

Response Parameters

- Response example
{ }

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.6 Checking the Password for Logging In to a Database

Description

This API is used to check the password for logging in to a database.

Restrictions

This operation cannot be performed on frozen or abnormal instances.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/check-password
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/check-password

Table 5-245 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-246 Parameter description

Name	Type	Mandato ry	Description
user_name	String	No	The database username. The default value is " rwuser ". The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).
user_pwd	String	Yes	The database password. The value must be 8 to 32 characters in length and contain uppercase letters (A to Z), lowercase letters (a to z), digits (0 to 9), and special characters, such as ~!@#%^*-_+=?
db_name	String	No	The database name. The default value is " admin ".

Example Request

Checking the password for logging in to a database

```
{
  "user_name": "rwuser",
  "user_pwd": "*****"
}
```

Response Parameters

- Response example
{ }

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.7 Querying Cluster Balancing Settings

Description

This API is used to query the data balancing settings of a DDS cluster, including whether balancing is enabled and the time window of balancing activities. The balancing activity time window information is returned only in DDS 4.0 and later versions.

Restrictions

Frozen instances do not support this operation.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/balancer
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/balancer

Request Parameters

Parameter description

Table 5-247 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Response Parameters

- Parameter description

Table 5-248 Response to the request for querying the balancing settings of a cluster

Name	Type	Mandatory	Description
is_open	Boolean	Yes	Whether cluster balancing is enabled.
active_window	Object	No	The activity time window. For details, see Table 5-249 .

Table 5-249 Activity time window response message

Name	Type	Mandatory	Description
start_time	String	No	The start time of the activity time window.
stop_time	String	No	The end time of the activity time window.

- Response example

```
{
  "is_open": true,
  "active_window": {
    "start_time": "00:00",
    "stop_time": "02:00"
  }
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.8 Enabling or Disabling Cluster Balancing

Description

This API is used to enable or disable cluster balancing.

Restrictions

Frozen instances do not support this operation.

URI

- URI format
PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/balancer/{action}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/balancer/start

Request Parameters

Parameter description

Table 5-250 Request parameters

Name	Type	IN	Mandatory	Description
X-Auth-Token	string	header	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	string	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
action	string	path	Yes	Enable or disable cluster balancer

Response Parameters

- Parameter description

Table 5-251 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	The workflow ID.

- Response example

```
{
  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5"
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.9 Setting the Activity Time Window for Cluster Balancing

Description

This API is used to set the activity time window for DDS cluster balancing.



NOTE

The UTC time is used. You need to convert the local time based on the time zone.

Restrictions

- Frozen instances do not support this operation.
- DDS 4.0 and later DB instances do not support this operation.

URI

- URI format
PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/balancer/active-window
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/cc6345c64cec47499182467ea0dd432ain02/balancer/active-window

Table 5-252 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Mandatory	Description
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-253 Parameter description

Name	Type	Mandatory	Description
start_time	String	No	The start time of the balancing activity time window. The format is HH:MM. If start_time is set, stop_time must be set. If neither of them is set, the setting of time window is canceled.

Name	Type	Mandatory	Description
stop_time	String	No	The end time of the balancing activity time window. The format is HH:MM. If stop_time is set, start_time must be set. If neither of them is set, the setting of time window is canceled.

Request example

- Setting the activity time window

```
{  "start_time":"00:00",  "stop_time":"02:00"}
```
- Canceling the activity time window setting

```
{}
```

Response Parameters

- Parameter description

Table 5-254 Parameter description

Name	Type	Mandatory	Description
job_id	String	Yes	The workflow ID.

- Response example

```
{  "job_id": "3711e2ad-5787-49bc-a47f-3f0b066af9f5"}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.10 Deleting a Database User

Description

This API is used to delete a database user of a specified instance.

Restrictions

- This API applies only to DDS Community Edition.
- The default user and the **rwuser** user cannot be deleted.
- This operation is not allowed if the DB instance is in any of the following statuses: creating, changing instance class, changing port, frozen, restarting, or abnormal.

URI

- URI format
DELETE `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/db-user`
- URI example
`https://ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/f032c0db12d147ef87317efdfacbbe15in02/db-user`

Table 5-255 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A

Name	Type	IN	Man dator y	Description
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-256 Parameter description

Name	Type	Mandat ory	Description
user_name	String	Yes	The name of the database user. The database user provided by the system cannot be deleted. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).
db_name	String	Yes	The database to which the user belongs. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).

- Request example

```
{
  "user_name": "test" ,
  "db_name": "test_db"
}
```

Response Parameters

Response example

```
{}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.11 Deleting a Database Role

Description

This API is used to delete the database role of a specified instance.

Restrictions

- This API applies only to DDS Community Edition.
- Default system roles cannot be deleted.
- This operation is not allowed if the DB instance is in any of the following statuses: creating, changing instance class, changing port, frozen, restarting, or abnormal.

URI

- URI format
DELETE https://{Endpoint}/v3/{project_id}/instances/{instance_id}/db-role
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/659914406d2c4c76bce6a028ce8d8e0din02/db-role

Table 5-257 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Explanation: User token obtained from IAM. For details, see Authentication . Constraints: N/A Value range: N/A Default value: N/A
project_id	string	path	Yes	Explanation: Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints: N/A Value range: N/A Default value: N/A
instance_id	string	path	Yes	Explanation: Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one. Constraints: N/A Value range: N/A Default value: N/A

Request Parameters

- Parameter description

Table 5-258 Parameter description

Name	Type	Mandatory	Description
role_name	String	Yes	The role name. The default database user of the system cannot be deleted. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), hyphens (-), and periods (.).
db_name	String	Yes	The name of the database to which the role belongs. The value must be 1 to 64 characters and can contain only letters (from A to Z or from a to z), digits (from 0 to 9), and underscores (_).

- Request example

```
{
  "role_name": "testRole",
  "db_name": "testDb"
}
```

Response Parameters

Response example

```
{}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.11.12 Querying Databases

API Description

This API is used to query databases.

Restrictions

- This API applies only to DDS Community Edition.

- This operation is not allowed if the DB instance is in any of the following statuses: creating, changing instance class, changing port, frozen, restarting, or abnormal.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/databases?offset={offset}&limit={limit}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/659914406d2c4c76bce6a028ce8d8e0din02/databases?offset=1&limit=10

Table 5-259 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	string	path	Yes	Instance ID, which can be obtained by calling the API described in Querying Instances and Details . If you do not have an instance, call the API described in Creating a DB Instance to create one.
offset	Integ er	path	No	Index offset. The value must be greater than or equal to 0 . If this parameter is not transferred, the value is 0 by default.
limit	Integ er	path	No	Maximum records to be queried. The value ranges from 1 to 100. If this parameter is not transferred, the first 100 DB instances are queried by default.

Request Parameters

None

Response Parameters

- Parameter description

Table 5-260 Response body parameters

Name	Type	Description
databases	Array of objects	Database list. For details, see Table 5-261 .
total_count	Integer	Total number.

Table 5-261 databases

Name	Type	Description
name	String	Database name. The names of the config and admin databases are not displayed.
data_size	String	Database logical size, in GB. The value contains two decimal places. The logical size refers to the size of data stored in a database, excluding the size of indexes and logs.
storage_size	String	Used storage space, in GB. The value contains two decimal places. The used storage space refers to the size of the physical space occupied by data files, log files, and index files on the disk.
collection_num	Integer	The number of collections in a database.

- Response example

```
{
  "databases" : [ {
    "name" : "dds-test",
    "data_size" : "3593",
    "storage_size" : "256",
    "collection_num" : "5"
  } ],
  "total_count" : 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.12 Quota Management

5.12.1 Querying Resource Quotas

Description

This API is used to query the DDS resource quotas of a tenant, including the cluster instance quota, single node instance quota, and replica set instance quota.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/quotas
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/quotas

Table 5-262 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	Definition User token obtained from IAM. For details, see Authentication . Constraints N/A Range N/A Default Value N/A

Name	Type	IN	Mandatory	Description
project_id	string	path	Yes	Definition Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A

Request Parameters

None

Response Parameters

- Parameter description

Table 5-263 Response body parameters

Parameter	Type	Mandatory	Description
quotas	Object	Yes	Quota information. For more information, see Table 5-264 .

Table 5-264 ShowResourcesListResponseBody

Parameter	Type	Mandatory	Description
resources	Objects	Yes	The resource objects. For more information, see Table 5-265 .

Table 5-265 ShowResourcesDetailResponseBody

Parameter	Type	Mandatory	Description
type	String	Yes	The quota resource type. Only the instance type is supported.
mode	String	Yes	The instance type. - If the value is Single, the quota information of a single node instance is displayed. - If the value is ReplicaSet, the quota information of a replica set instance is displayed. - If the value is Sharding, the quota information of a cluster instance is displayed.
quota	Integer	Yes	The existing quota.
used	Integer	Yes	The number of the used instances.

• Response example

```
{
  "quotas": {
    "resources": [ {
      "type": "instance",
      "mode": "Sharding",
      "quota": 80,
      "used": 6
    }, {
      "type": "instance",
      "mode": "ReplicaSet",
      "quota": 80,
      "used": 9
    }, {
      "type": "instance",
      "mode": "Single",
      "quota": 1000,
      "used": 5
    }
  ]
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.13 Database O&M

5.13.1 Obtaining the killOp Rule List

API Description

This API is used to obtain the killOp rule list.

Restrictions

- This API applies only to replica set and cluster instances.
- This API is available only for DDS 3.4 or later.
- This API is available only for an instance node with 4 or more vCPUs.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/kill-op-rule
- URI example

Table 5-266 Request parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
project_id	Yes	String	Project ID of a tenant in a region.
instance_id	Yes	String	Instance ID.

Table 5-267 Query parameters

Parameter	Mandatory	Type	Description
operation_types	No	String	SQL type. • insert: operation for inserting data. • update: operation for updating data. • query: operation for querying data. • command: command operation. • remove: operation for deleting data. • getmore: operation for obtaining more data.

Parameter	Mandatory	Type	Description
namespaces	No	String	Namespace of a table. The value is in the format of database_name or database_name.table_name. • This parameter can be left empty, indicating that this rule has no restrictions on table namespaces. • If this parameter is set to a database name, this rule applies to operations on all collections in the database. • If this parameter is set to a value in the format of database_name.collection_name, this rule only applies to operations on the collection.
status	No	String	The killOp rule status. • ENABLED: The rule is enabled. • DISABLED: The rule is disabled.
plan_summary	No	String	Execution plan. By default, this parameter is left blank, indicating that this rule has no restrictions on execution plans. • COLLSCAN • SORT_KEY_GENERATOR • SKIP • LIMIT • GEO_NEAR_2DSPHERE • GEO_NEAR_2D • AGGREGATE • OR

Parameter	Mandatory	Type	Description
offset	No	Integer	Index offset. If offset is set to N , the resource query starts from the $N+1$ piece of data. The default value is 0 , indicating that the query starts from the first piece of data. The value must be a positive number or 0 .
limit	No	Integer	Maximum records to be queried. • The value ranges from 1 to 100. • If this parameter is not transferred, the first 100 records are queried by default.

Request Parameters

- Parameter description
None
- Example request
None

Response Parameters

- Parameter description

Table 5-268 Response body parameters

Parameter	Type	Description
rules	Array of Table 5-269	List.
total_count	Integer	Total number.

Table 5-269 KillOpRule parameters

Parameter	Type	Description
id	String	ID of the killOp rule.

Parameter	Type	Description
operation_types	String	SQL type. A maximum of six statement types can be selected at a time. If multiple types are selected, the rule takes effect when any type is matched. • insert: operation for inserting data. • update: operation for updating data. • query: operation for querying data. • command: command operation. • remove: operation for deleting data. • getmore: operation for obtaining more data.
status	String	The killOp rule status. • ENABLED: The rule is enabled. • DISABLED: The rule is disabled.
namespaces	String	Namespace of a table. The value is in the format of database_name or database_name.table_name. If multiple namespaces are configured at the same time, the rule takes effect when any namespace is matched. • Currently, only one namespace can be configured. • This parameter can be left empty, indicating that this rule has no restrictions on table namespaces. • If this parameter is set to a database name, this rule applies to operations on all collections in the database. • If this parameter is set to a value in the format of database_name.collection_name, this rule only applies to operations on the collection.

Parameter	Type	Description
client_ips	String	Client IP address. • Only IPv4 is supported. • This parameter can be left empty, indicating that this rule has no restrictions on client IP addresses. • A maximum of five IP addresses can be configured at a time. If multiple IP addresses are configured, the rule takes effect when any IP address is matched.
plan_summary	String	Execution plan. By default, this parameter is left blank, indicating that this rule has no restrictions on execution plans. • COLLSCAN • SORT_KEY_GENERATOR • SKIP • LIMIT • GEO_NEAR_2DSPHERE • GEO_NEAR_2D • AGGREGATE • OR
max_concurrency	Integer	Maximum number of concurrent SQL statements. The value cannot be a negative number. This parameter can be left empty. The default value is 0, indicating that this rule has no restrictions on the maximum number of concurrent SQL statements. The value ranges from 1 to 100000.
secs_running	Integer	Maximum execution duration of a single SQL statement. The value cannot be a negative number. This parameter can be left empty. The default value is 0, indicating that this rule has no restrictions on the maximum execution duration of a single SQL statement. The unit is second. The value ranges from 2 to 86400.

Parameter	Type	Description
node_type	String	Node type. • mongos_shard indicates that this rule applies to both mongos and shard nodes. • mongos indicates that this rule only applies to the mongos node in a cluster. • shard indicates that this rule only applies to the shard node in a cluster. • replica indicates that this rule applies to replica sets.

- Example response

killOp rule list:

```
{
  "rules" : [ {
    "operation_types" : [ "query", "insert" ],
    "namespaces" : [ "db.collections" ],
    "client_ips" : [ "172.168.201.144" ],
    "status" : "ENABLED",
    "id" : "f6f2cea4-ce40-4d4c-9d2f-61253d215811",
    "plan_summary" : "COLLSCAN",
    "max_concurrency" : 0,
    "secs_running" : 5,
    "node_type" : "replica"
  } ],
  "total_count" : 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.13.2 Creating a killOp Rule

API Description

This API is used to create a killOp rule.

Restrictions

- This API applies only to replica set and cluster instances.
- This API is available only for DDS 3.4 or later.
- This API is available only for an instance node with 4 or more vCPUs.

- A maximum of 10 killOp rules can be created for a DB instance.
- The rule is disabled after being created.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/kill-op-rule
- URI example

Table 5-270 Request parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
project_id	Yes	String	Project ID of a tenant in a region.
instance_id	Yes	String	Instance ID.

Request Parameters

- Parameter description

Table 5-271 Query parameters

Parameter	Mandatory	Type	Description
operation_types	Yes	Array of strings	SQL type. A maximum of six statement types can be selected at a time. If multiple types are selected, the rule takes effect when any type is matched. • insert: operation for inserting data. • update: operation for updating data. • query: operation for querying data. • command: command operation. • remove: operation for deleting data. • getmore: operation for obtaining more data.

Parameter	Mandatory	Type	Description
namespaces	No	Array of strings	Namespace of a table. The value is in the format of database_name or database_name.table_name. If multiple namespaces are configured at the same time, the rule takes effect when any namespace is matched. • Currently, only one namespace can be configured. • This parameter can be left empty, indicating that this rule has no restrictions on table namespaces. • If this parameter is set to a database name, this rule applies to operations on all collections in the database. • If this parameter is set to a value in the format of database_name.collection_name, this rule only applies to operations on the collection.
client_ips	No	Array of strings	Client IP address. • Only IPv4 is supported. • This parameter can be left empty, indicating that this rule has no restrictions on client IP addresses. • A maximum of five IP addresses can be configured at a time. If multiple IP addresses are configured, the rule takes effect when any IP address is matched.

Parameter	Mandatory	Type	Description
plan_summary	No	String	Execution plan. By default, this parameter is left blank, indicating that this rule has no restrictions on execution plans. • COLLSCAN • SORT_KEY_GENERATOR • SKIP • LIMIT • GEO_NEAR_2DSPHERE • GEO_NEAR_2D • AGGREGATE • OR
max_concurrency	No	Integer	Maximum number of concurrent SQL statements. • The value cannot be a negative number. This parameter can be left empty. The default value is 0, indicating that this rule has no restrictions on the maximum number of concurrent SQL statements. The value ranges from 1 to 100000. • The values of max_concurrency and secs_running cannot be 0 at the same time.

Parameter	Mandatory	Type	Description
secs_running	No	Integer	Maximum execution duration of a single SQL statement. - This parameter can be left empty. The default value is 0, indicating that this rule has no restrictions on the maximum execution duration of a single SQL statement. The unit is second. The value ranges from 2 to 86400. - The values of secs_running and max_concurrency cannot be 0 at the same time.
node_type	Yes	String	Node type. mongos_shard indicates that this rule applies to both mongos and shard nodes. mongos indicates that this rule only applies to the mongos node in a cluster. shard indicates that this rule only applies to the shard node in a cluster. replica indicates that this rule applies to replica sets.

- Example request

```
{
  "operation_types" : [ "query", "insert" ],
  "namespaces" : [ "db.collections" ],
  "client_ips" : [ "172.168.201.144" ],
  "plan_summary" : "COLLSCAN",
  "max_concurrency" : 0,
  "secs_running" : 5,
  "node_type" : "replica"
}
```

Response Parameters

- Parameter description
None

- Example response
None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.13.3 Enabling or Disabling a killOp Rule

API Description

This API is used to enable or disable a killOp rule.

Restrictions

- This API applies only to replica set and cluster instances.
- This API is available only for DDS 3.4 or later.
- This API is available only for an instance node with 4 or more vCPUs.

URI

- URI format
PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/kill-op-rule
- URI example

Table 5-272 Request parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
project_id	Yes	String	Project ID of a tenant in a region.
instance_id	Yes	String	Instance ID.

Request Parameters

- Parameter description

Table 5-273 Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of strings	List of killOp rule IDs.

Parameter	Mandatory	Type	Description
action	Yes	String	Enable or disable a killOp rule. • enable: Enable a killOp rule. • disable: Disable a killOp rule.

- Example request

```
{
  "ids" : [ "7d2f36b4-6edb-4093-8c78-810b30232943" ],
  "action" : "enable"
}
```

Response Parameters

- Parameter description
None
- Example response
None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.13.4 Deleting a killOp Rule

API Description

This API is used to delete a killOp rule.

Restrictions

- This API applies only to replica set and cluster instances.
- This API is available only for DDS 3.4 or later.
- This API is available only for an instance node with 4 or more vCPUs.
- Only disabled rules can be deleted.
- An enabled rule cannot be deleted. To delete a rule, you must disable the rule by referring to [Enabling or Disabling a killOp Rule](#).

URI

- URI format
DELETE https://{Endpoint}/v3/{project_id}/instances/{instance_id}/kill-op-rule

- URI example

Table 5-274 Request parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
project_id	Yes	String	Project ID of a tenant in a region.
instance_id	Yes	String	Instance ID.

Request Parameters

- Parameter description

Table 5-275 Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of strings	List of killOp rule IDs.

- Example request

```
{
  "ids" : [ "7d2f36b4-6edb-4093-8c78-810b30232943" ]
}
```

Response Parameters

- Parameter description
None
- Example response
None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.13.5 Forcibly Promoting a Secondary Node to Primary

API Description

This API is used to promote a secondary node of a replica set, shard node, or config node to primary.

Restrictions

If the primary to secondary synchronization delay is long, this operation may fail.

URI

- URI format
POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/nodes/{node_id}/primary
- URI example

Table 5-276 Request parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
project_id	Yes	String	Project ID of a tenant in a region.
instance_id	Yes	String	Instance ID.
node_id	Yes	String	ID of the secondary node.

Request Parameters

- Parameter description
None
- Example request
None

Response Parameters

- Parameter description
None
- Example response
None

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

5.14 Task Management

5.14.1 Obtaining Information About a Task with a Specified ID

Description

This API is used to obtain information about a task with a specified ID in the task center.

Restrictions

- Currently, only asynchronous tasks in the task center of DDS Community Edition within one month can be queried.
- After a job is generated, it takes several seconds to query the job ID.
- The following asynchronous tasks can be queried: creating an instance (single node, replica set, or cluster), scaling up storage, changing instance class, adding nodes, restarting a node/instance, performing a primary/standby switchover, changing a private IP address, changing a security group, changing a database port, binding or unbinding an EIP, switching the SSL mode, changing an AZ, enabling the shard/config IP address, creating a physical backup/snapshot backup, restoration to a new instance using a backup, point-in-time recovery, database/table-level restoration to a specified time point, and adding read replicas.

URI

- URI format
GET /v3/{project_id}/jobs?id={id}
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/jobs?id=a9767ede-fe0f-4888-9003-e843a4c90514`

Request Parameters

Parameter description

Table 5-277 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
id	string	query	Yes	The task ID.

Response Parameters

- Normal response

Table 5-278 Parameter description

Name	Type	Mandatory	Description
job	Object	Yes	Task information. For details, see Table 5-279 .

Table 5-279 job field data structure description

Name	Type	Mandatory	Description
id	String	Yes	Task ID
name	String	Yes	Task name
status	String	Yes	Task execution status Valid value: • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task fails to be executed.
created	String	Yes	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
ended	String	Yes	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
progress	String	Yes	Task execution progress NOTE The execution progress (such as " 60% ", indicating the task execution progress is 60%) is displayed only when the task is being executed. Otherwise, "" is returned.

Name	Type	Mandatory	Description
instance	Object	Yes	Instance on which the task is executed. For details, see Table 5-280 .
fail_reason	String	Yes	Task failure information.

Table 5-280 instance field data structure description

Name	Type	Mandatory	Description
id	String	Yes	Instance ID
name	String	Yes	DB instance name

 NOTE

In the response example, some tasks in the task center are used as examples.

- Normal response example

A task is successfully executed.

```
{
  "job": {
    "id": "f85104b5-4a9c-4e0f-9505-fc5409d8f7ae",
    "name": "Create_MongoDB",
    "status": "Completed",
    "created": "2021-07-12T09:22:04+0000",
    "ended": "2021-07-12T10:10:13+0000",
    "progress": "",
    "instance": {
      "id": "d87f5b33049144ec95f0cab0a5f22cfbin02",
      "name": "dds-5ff4-sh"
    },
    "fail_reason": null
  }
}
```

A task is being executed:

```
{
  "job": {
    "id": "9d10bfd1-affb-49c3-b977-298950a8d6fa",
    "name": "Create_MongoDB",
    "status": "Running",
    "created": "2021-07-13T07:28:43+0000",
    "ended": "2021-07-13T07:28:53+0000",
    "progress": "9%",
    "instance": {
      "id": "cf538a2dd8ec4b26860b27060902712fin02",
      "name": "dds-3a98-wcc"
    },
    "fail_reason": null
  }
}
```

```
}  
}
```

A task fails to be executed:

```
{  
  "job": {  
    "id": "a03b1b8a-b756-467c-8a49-38720c3d23ec",  
    "name": "Restore_MongoDB_Replica",  
    "status": "Failed",  
    "created": "2021-07-13T04:55:58+0000",  
    "ended": "2021-07-13T05:20:04+0000",  
    "progress": "",  
    "instance": {  
      "id": "7beb15d5db9c4742b7c817789244844ein02",  
      "name": "lenn-v3-restore-4"  
    },  
    "fail_reason": "Failed to upgrade the DB Agent."  
  },  
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

6 API V3 (Unavailable Soon)

6.1 Querying All Instance Specifications

Description

This API is used to query all instance specifications in a specified region.

URI

- URI format
GET https://{Endpoint}/v3/{project_id}/flavors?
region={region}&engine_name={engine_name}
- URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/
flavors?region=ap-southeast-1&engine_name=DDS-Community

Request Parameters

Parameter description

Table 6-1 Request parameters

Name	Type	IN	Man dator y	Description
X-Auth-Token	string	head er	Yes	User token obtained from IAM. For details, see Authentication .
project_id	string	path	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .

Name	Type	IN	Man dator y	Description
region	string	query	No	The region where the DB instance is deployed. The region where the DB instance is deployed. Valid value:
engine_name	string	query	No	Database type The value is DDS-Community .

Response Parameters

- Parameter description

Table 6-2 Parameter description

Name	Type	Description
flavors	Array of objects	DB instance specification list. For more information, see Table 6-3 .

Table 6-3 flavors field data structure description

Name	Type	Description
engine_name	String	Engine name
type	String	Node type. DDS supports the following types of nodes: - mongos - shard - config - replica - single
vcpus	String	Number of vCPUs
ram	String	Memory size in GB

Name	Type	Description
spec_code	String	Resource specification code Example: dds.mongodb.c6.xlarge.2.shard NOTE • dds: indicates the DDS service. • dds.mongodb: indicates the DDS service. • c6.xlarge.2: indicates the node specification. It is a high-memory type. • shard: indicates the node type. • When querying the specifications, check whether the specifications are of the same series. The specification series includes general-purpose (s6), enhanced (c3), and enhanced II (c6). Example: • dds.mongodb.s6.large.4.mongos and dds.mongodb.s6.large.4.config belong to the same specification series. • dds.mongodb.s6.large.4.mongos and dds.mongodb.c3.large.4.config are not of the same specification series.
az_status	Object	The status of specifications in an AZ. Its value can be any of the following: • normal: indicates that the specification is on sale. • unsupported: indicates that the specification is not supported. • sellout: indicates that the specification is sold out.

 NOTE

In the example response, **az1**, **az2**, and **az3** in the **az_status** field are example values.

- **Response example**

```
{
  "flavors": [
    {
      "engine_name": "DDS-Community",
      "type": "mongos",
      "vcpus": "1",
      "ram": "4",
      "spec_code": "dds.mongodb.c6.medium.4.mongos",
```

```
    "az_status": {
      "az1": "normal",
      "az2": "normal",
      "az3": "normal"
    }
  },
{
  "engine_name": "DDS-Community",
  "type": "shard",
  "vcpus": "4",
  "ram": "8",
  "spec_code": "dds.mongodb.c6.xlarge.2.shard",
  "az_status": {
    "az1": "normal",
    "az2": "normal",
    "az3": "normal"
  }
},
{
  "engine_name": "DDS-Community",
  "type": "config",
  "vcpus": "2",
  "ram": "4",
  "spec_code": "dds.mongodb.c6.large.2.config",
  "az_status": {
    "az1": "normal",
    "az2": "normal",
    "az3": "normal"
  }
},
{
  "engine_name": "DDS-Community",
  "type": "replica",
  "vcpus": "1",
  "ram": "4",
  "spec_code": "dds.mongodb.c6.medium.4.repset",
  "az_status": {
    "az1": "normal",
    "az2": "normal",
    "az3": "normal"
  }
}
]
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

6.2 Querying Database Slow Logs

Description

This API is used to query database slow logs.

Restrictions

A maximum of 2000 records can be queried within the period specified by **start_date** and **end_date**.

URI

- URI format
GET `https://{Endpoint}/v3/{project_id}/instances/{instance_id}/slowlog?start_date={start_date}&end_date={end_date}`
- URI example
 - Query database slow query logs.
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/6ade8143870047b8999aba8f1891b48ein02/slowlog?start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800`
 - Query database slow query logs based on specified conditions.
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/6ade8143870047b8999aba8f1891b48ein02/slowlog?type=INSERT&offset=1&limit=20&node_id=a7c84462483642798cf159237343135fno06&start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800`

Table 6-4 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	User token obtained from IAM. For details, see Authentication .
project_id	String	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	Yes	The instance ID, which can be obtained by calling the API for querying instances. If you do not have an instance, you can call the API used for creating an instance.
start_date	String	Yes	The start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. CAUTION The start time is 31 days earlier than the current time.

Name	Type	Mandatory	Description
end_date	String	Yes	The end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Only slow query logs generated within the last month can be queried. NOTE The end time cannot be later than the current time.
node_id	String	No	The node ID. For details, see Table 5-43. If this parameter is left blank, all nodes in the instance can be queried. Nodes that can be queried: Shard nodes in a cluster instance. All nodes in a replica set or single node instance.
type	String	No	The statement type. If it is left blank, all statement types are queried. Valid value: • INSERT • QUERY • UPDATE • REMOVE • GETMORE • COMMAND • KILLCURSORS
offset	Integer	No	The index position. Its value range is [0, 1999]. If offset is set to <i>N</i>, the resource query starts from the N+1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.

Name	Type	Mandatory	Description
limit	Integer	No	The number of resources to be queried. The value ranges from 1 to 100. The default value is 10 , indicating that 10 records are returned by default. NOTE The sum of limit and offset values must be less than or equal to 2000.

Request Parameters

None

Response Parameters

- Parameter description

Table 6-5 Parameter description

Name	Type	Description
slow_log_list	Array of objects	The detailed information. For details, see Table 6-6 .
total_record	Integer	The total number of records.

Table 6-6 slow_log_list field data structure description

Name	Type	Description
node_name	String	The node name.
query_sample	String	The execution syntax.
type	String	The statement type.
time	String	The execution time.
lock_time	String	The lock wait time.
rows_sent	String	The number of sent rows.
rows_examined	String	The number of scanned rows.
database	String	The database which the slow log belongs to.
start_time	String	The time in the UTC format.

- Response example

```
{
  "slow_log_list": [
    {
      "node_name": "Test_replica_node_2",
      "query_sample": "{\"responseLength\": 230, \"ts\": {\"$date\": 1605480486800}, \"ninserted\": 1, \"locks\": {\"oplog\": {\"acquireCount\": {\"w\": 1}}, \"Global\": {\"acquireCount\": {\"r\": 3, \"w\": 2}}, \"Collection\": {\"acquireCount\": {\"w\": 2}}, \"Database\": {\"acquireCount\": {\"w\": 3}}}, \"numYield\": 0, \"ns\": \"geographySpace.tiles\"\", \"type\": \"REMOVE\", \"time\": \"101 ms\", \"lock_time\": \"10 us\", \"rows_sent\": \"0\", \"rows_examined\": \"0\", \"database\": \"geography\", \"start_time\": \"2020-11-15T22:49:38.643000Z\"}",
      "type": "REMOVE",
      "time": "101 ms",
      "lock_time": "10 us",
      "rows_sent": "0",
      "rows_examined": "0",
      "database": "geography",
      "start_time": "2020-11-15T22:49:38.643000Z"
    }
  ],
  "total_record": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

6.3 Querying Database Error Logs

Description

This API is used to query database error logs.

Restrictions

A maximum of 2000 records can be queried within the period specified by **start_date** and **end_date**.

URI

- URI format

GET https://{Endpoint}/v3/{project_id}/instances/{instance_id}/errorlog?
start_date={start_date}&end_date={end_date}

- URI example

- Querying database error logs

https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/6ade8143870047b8999aba8f1891b48ein02/errorlog?
start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800

- Querying database error logs based on specified conditions.
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/6ade8143870047b8999aba8f1891b48ein02/errorlog?type=WARNING&offset=1&limit=20&node_id=a7c84462483642798cf159237343135fno06&start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800`

Table 6-7 Parameter description

Name	Type	Mandatory	Description
X-Auth-Token	String	Yes	User token obtained from IAM. For details, see Authentication .
Content-Type	String	Yes	MIME type of the request body. You are advised to use the default value application/json . For APIs used to upload objects or images, the value can vary depending on the flow type.
project_id	String	Yes	Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID .
instance_id	String	Yes	The instance ID, which can be obtained by calling the API for querying instances. If you do not have an instance, you can call the API used for creating an instance.
start_date	String	Yes	The start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. CAUTION The start time is 31 days earlier than the current time.
end_date	String	Yes	The end time in the "yyyy-mm-ddThh:mm:ssZ" format. • T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. • Only error logs generated within the last month can be queried. NOTE The end time cannot be later than the current time.

Name	Type	Mandatory	Description
node_id	String	No	The node ID. For details, see Table 5-43 . If this parameter is left blank, all nodes in the instance can be queried. Nodes that can be queried: - mongos, shard, and config nodes in a cluster instance. - All nodes in a replica set or single node instance.
type	String	No	The statement type. If it is left blank, all statement types are queried. Valid value: - WARNING - ERROR
offset	Integer	No	The index position. Its value range is [0, 1999] . If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	Integer	No	The number of resources to be queried. The value ranges from 1 to 100. The default value is 10 , indicating that 10 records are returned by default. NOTE The sum of limit and offset values must be less than or equal to 2000.

Request Parameters

None

Response Parameters

- Parameter description

Table 6-8 Parameter description

Name	Type	Description
error_log_list	Array of objects	The detailed information. For details, see Table 6-9 .
total_record	Integer	The total number of records.

Table 6-9 error_log_list field data structure description

Name	Type	Description
node_name	String	The node name.
level	String	The log level.
time	String	The time in the UTC format.
content	String	The log content.

- Response example

```
{
  "error_log_list": [
    {
      "node_name": "Test_replica_node_2",
      "level": "WARNING",
      "time": "2020-12-15T08:53:01.868+0000",
      "content": "W NETWORK [LogicalSessionCacheReap] Unable to reach primary for set replica"
    }
  ],
  "total_record": 1
}
```

Status Code

For more information, see [Status Code](#).

Error Code

For more information, see [Error Code](#).

7 Examples

7.1 Querying the DB Instance List

Scenarios

This section describes how to call the API described in [Querying Instances and Details](#) to query all DDS DB instances of a tenant using pagination parameters.

Procedure

Step 1 Configure parameters **limit** and **offset**.

- API information
URI format: GET https://{Endpoint}/v3/{project_id}/instances?id={id}&name={name}&mode={mode}&datastore_type={datastore_type}&vpc_id={vpc_id}&subnet_id={subnet_id}&offset={offset}&limit={limit}
 - Obtain *{endpoint}* from Regions and Endpoints.
 - {limit} can be adjusted based on the DDS DB instance data.
 - For details, see [Querying Instances and Details](#).
- Example request
 - Instance list
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances?offset=0&limit=1

- Response example
Querying the instance list:

```
{
  "instances": [
    {
      "id": "8436a91546294036b75931e879882200in02",
      "name": "dds-efa6",
      "status": "normal",
      "port": 8635,
      "mode": "ReplicaSet",
      "region": "aaa",
```

```
"datastore": {
  "type": "DDS-Community",
  "version": "3.4"
},
"engine": "wiredTiger",
"created": "2019-01-17T07:05:52",
"updated": "2019-01-17T07:05:47",
"db_user_name": "rwuser",
"ssl": "1",
"vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
"subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
"security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",
"backup_strategy": {
  "start_time": "16:00-17:00",
  "keep_days": 7
},
"pay_mode": "0",
"maintenance_window": "02:00-06:00",
"groups": [
  {
    "type": "replica",
    "volume": {
      "size": "10",
      "used": "0.33"
    },
    "nodes": [
      {
        "id": "233eaac9c6f245c0bb9c2d21eea12d1bno02",
        "name": "dds-efa6_replica_node_2",
        "status": "normal",
        "role": "Primary",
        "private_ip": "192.168.0.174",
        "public_ip": "",
        "spec_code": "dds.mongodb.s2.medium.4.repset",
        "availability_zone": "bbb"
      },
      {
        "id": "d57d76d6320a4a7b86db82c317550c4ano02",
        "name": "dds-efa6_replica_node_1",
        "status": "normal",
        "role": "Hidden",
        "private_ip": "192.168.0.39",
        "public_ip": "",
        "spec_code": "dds.mongodb.s2.medium.4.repset",
        "availability_zone": "bbb"
      },
      {
        "id": "f46b0a1cf4d9400e9fd7af17f8742d37no02",
        "name": "dds-efa6_replica_node_3",
        "status": "normal",
        "role": "Secondary",
        "private_ip": "192.168.0.176",
        "public_ip": "",
        "spec_code": "dds.mongodb.s2.medium.4.repset",
        "availability_zone": "bbb"
      }
    ]
  }
],
"enterprise_project_id": "0",
"time_zone": "",
"actions": [
```

```
    ]  
  }  
],  
"total_count": 24  
}
```

Step 2 Collect query results.

1. Repeat [Step 1](#) until the returned query result is empty or the returned body does not contain the **instances** field. This indicates that all DDS instances have been queried.
2. Collect all of the queried DDS instances.

----End

7.2 Changing a DB Instance Name

Scenarios

This section is used to change an instance name by calling the API described in [Modifying a DB Instance Name](#).

Procedure

Change an instance name.

- API information
 - URI format
PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/modify-name
Obtain *{endpoint}* from Regions and Endpoints.
 - URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02/modify-name

For details, see [Modifying a DB Instance Name](#).

- Example request

```
{  
  "new_instance_name": "myNewName"  
}
```
- Response example

```
{}
```

7.3 Deleting a DB Instance

Scenarios

This section is used to describes how to delete a DDS DB instance by calling the API described in [Deleting a DB Instance](#).

Procedure

Delete a DDS DB instance.

- API information
 - URI format
DELETE https://{Endpoint}/v3/{project_id}/instances/{instance_id}
Obtain *{endpoint}* from Regions and Endpoints.
 - URI example
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/instances/9136fd2a9fcd405ea4674276ce36dae8in02

For details, see [Deleting a DB Instance](#).

- Example request
None
- Response example

```
{  
  "job_id": "252f11f1-2912-4c06-be55-1999bde659c5"  
}
```

8 Permissions Policies and Supported Actions

8.1 Introduction

This chapter describes fine-grained permissions management for your DDS. If your account does not need individual IAM users, then you may skip over this chapter.

By default, new IAM users do not have permissions assigned. You need to add a user to one or more groups, and attach permissions policies or roles to these groups. Users inherit permissions from the groups to which they are added and can perform specified operations on cloud services based on the permissions.

You can grant users permissions by using roles and policies. Roles are a type of coarse-grained authorization mechanism that defines permissions related to user responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

NOTE

Policy-based authorization is useful if you want to allow or deny the access to an API.

An account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. The permissions required for calling an API are determined by the actions supported by the API. Only users that have been granted permissions allowing the actions can call the API successfully. For example, if an IAM user queries DDS DB instances using an API, the user must have been granted permissions that allow the **dds:instance:list** action.

Supported Actions

DDS provides system-defined policies that can be directly used in IAM. You can also create custom policies and use them to supplement system-defined policies, implementing more refined access control. Operations supported by policies are specific to APIs. The following are common concepts related to policies:

- **Permission:** A statement in a policy that allows or denies certain operations.

- APIs: REST APIs that can be called in a custom policy.
- Actions: Added to a custom policy to control permissions for specific operations.
- IAM projects or enterprise projects: Type of projects in which policies can be used to grant permissions. A policy can be applied to IAM projects, enterprise projects, or both. Policies that contain actions supporting both IAM and enterprise projects can be assigned to user groups and take effect in both IAM and Enterprise Management. Policies that only contain actions supporting IAM projects can be assigned to user groups and only take effect for IAM. Such policies will not take effect if they are assigned to user groups in Enterprise Management.

For details about the custom actions supported by DDS, see [DDS Actions](#).

8.2 DDS Actions

Table 8-1 DB instance management actions

Permissions	APIs	Action	IAM Project	Enterprise Project
Creating a DB instance	POST /v3/{project_id}/instances	dds:instance:create vpc:vpcs:list vpc:vpcs:get vpc:subnets:get vpc:securityGroups:get vpc:ports:get	√	√
Querying DB instances	GET /v3/{project_id}/instances?id={id}&name={name}&mode={mode}&datastore_type={datastore_type}&vpc_id={vpc_id}&subnet_id={subnet_id}&offset={offset}&limit={limit}	dds:instance:list	√	√
Deleting a DB instance	DELETE /v3/{project_id}/instances/{instance_id}	dds:instance:deleteInstance	√	√

Permissions	APIs	Action	IAM Project	Enterprise Project
Restarting a DB instance	POST /v3/{project_id}/instances/{instance_id}/restart	dds:instance:reboot	√	√
Scaling up storage space	POST /v3/{project_id}/instances/{instance_id}/enlarge-volume	dds:instance:extendVolume	√	√
Adding nodes for a cluster instance	POST /v3/{project_id}/instances/{instance_id}/enlarge	dds:instance:extendNode vpc:vpcs:list vpc:vpcs:get vpc:subnets:get vpc:securityGroups:get vpc:ports:get	√	√
Modifying DB instance specifications	POST /v3/{project_id}/instances/{instance_id}/resize	dds:instance:modifySpec	√	√
Performing a primary/secondary switchover in a replica set instance.	POST /v3/{project_id}/instances/{instance_id}/switchover	dds:instance:switchover	√	√
Enabling or disabling SSL	POST /v3/{project_id}/instances/{instance_id}/switch-ssl	dds:instance:modifySSL	√	√
Changing a DB instance name	PUT /v3/{project_id}/instances/{instance_id}/modify-name	dds:instance:modify	√	√

Permissions	APIs	Action	IAM Project	Enterprise Project
Changing a database port	POST /v3/{project_id}/instances/{instance_id}/modify-port	dds:instance:modifyPort	√	√
Changing a security group	POST /v3/{project_id}/instances/{instance_id}/modify-security-group	dds:instance:modifySecurityGroup	√	√
Binding an EIP	POST /v3/{project_id}/nodes/{node_id}/bind-eip	dds:instance:bindPublicIp	√	√
Unbinding an EIP	POST /v3/{project_id}/nodes/{node_id}/unbind-eip	dds:instance:unbindPublicIp	√	√
Changing the private IP address of a DB instance.	POST /v3/{project_id}/instances/{instance_id}/modify-internal-ip	dds:instance:modifyVIP	√	√
Enabling shard or config IP addresses	POST /v3/{project_id}/instances/{instance_id}/create-ip	dds:instance:createIp	√	√
Querying AZs to which an instance can be migrated	GET /v3/{project_id}/instances/{instance_id}/migrate/az	dds:instance:migrate	√	√
Migrating a DB instance to another AZ	POST /v3/{project_id}/instances/{instance_id}/migrate	dds:instance:migrate	√	√

Table 8-2 Connection Management

Permissions	API	Action	IAM Project	Enterprise Project
Querying sessions of an instance node	GET /v3/{project_id}/nodes/{node_id}/sessions	dds:instance:session	√	√
Killing a session of an instance node	POST /v3/{project_id}/nodes/{node_id}/session	dds:instance:session	√	√
Querying the number of connections to an instance node	GET /v3/{projectId}/instances/{instance_id}/conn-statistics	dds:instance:list	√	√

Table 8-3 Backup and restoration

Permissions	APIs	Action	IAM Project	Enterprise Project
Creating a manual backup	POST /v3/{project_id}/backups	dds:instance:createManualBackup	√	√
Deleting a manual backup	DELETE /v3/{project_id}/backups/{backups_id}	dds:backup:delete	√	√
Querying the backup list	GET /v3/{project_id}/backups?instance_id={instance_id}&backup_id={backup_id}&backup_type={backup_type}&offset={offset}&limit={limit}&begin_time={begin_time}&end_time={end_time}&mode={mode}	dds:backup:list	√	√

Permissions	APIs	Action	IAM Project	Enterprise Project
Querying an automated backup policy	GET /v3/{project_id}/instances/{instance_id}/backups/policy	dds:instance:list	√	√
Setting an automated backup policy	PUT /v3/{project_id}/instances/{instance_id}/backups/policy	dds:instance:modifyBackupPolicy	√	√
Restoring data to a new DB instance	POST /v3/{project_id}/instances	dds:instance:create vpc:vpcs:list vpc:vpcs:get vpc:subnets:get vpc:securityGroups:get vpc:ports:get	√	√
Obtaining the link for downloading a backup file	GET /v3/{projectId}/backups/download-file	dds:backup:download	√	√
Querying restoration time ranges	GET /v3/{project_id}/instances/{instance_id}/restore-time	dds:instance:list	√	√
Obtaining the list of databases that can be restored	GET /v3/{project_id}/instances/{instance_id}/restore-database	dds:instance:list	√	√

Permissions	APIs	Action	IAM Project	Enterprise Project
Obtaining the list of databases collections that can be restored	GET /v3/{project_id}/instances/{instance_id}/restore-collection	dds:instance:list	√	√
Restoring data to the original DB instance	POST /v3/{project_id}/instances/recovery	dds:backup:refreshInstanceFromBackup	√	√
Restoring databases and tables to a point in time	POST /v3/{project_id}/instances/{instance_id}/restore/collections	dds:backup:refreshInstanceFromBackup	√	√

Table 8-4 Configuring parameters

Permissions	APIs	Action	IAM Project	Enterprise Project
Obtaining parameter templates	GET /v3/{project_id}/configurations	dds:param:list	√	√
Creating a parameter template	PUT /v3/{project_id}/configurations	dds:param:create	√	√
Deleting a parameter template	DELETE /v3/{project_id}/configurations/{config_id}	dds:param:delete	√	√

Permissions	APIs	Action	IAM Project	Enterprise Project
Obtaining details about a parameter template	GET /v3/{projectId}/configurations/{configId}	dds:param:list	√	√
Modifying a parameter template	PUT /v3/{project_id}/configurations/{config_id}	dds:param:modify	√	√
Applying a parameter template	PUT /v3/{project_id}/configurations/{config_id}/apply	dds:instance:modifyParameter	√	√
Obtaining information about parameters of a specified DB instance.	GET /v3/{project_id}/instances/{instance_id}/configurations	dds:param:list	√	√
Modifying parameters of a specified db instance	PUT /v3/{project_id}/instances/{instance_id}/configurations	dds:instance:modifyParameter	√	√

Table 8-5 Obtaining log information

Permissions	APIs	Action	IAM Project	Enterprise Project
Querying database slow logs	GET /v3/{project_id}/instances/{instance_id}/slowlog	dds:instance:list	√	√

Permissions	APIs	Action	IAM Project	Enterprise Project
Obtaining the link for downloading slow query logs	POST /v3/{project_id}/instances/{instance_id}/slowlog-download	dds:instance:list	√	√
Querying database error logs	GET /v3/{project_id}/instances/{instance_id}/errorlog	dds:instance:list	√	√
Obtaining the link for downloading error logs.	POST /v3/{project_id}/instances/{instance_id}/errorlog-download	dds:instance:list	√	√
Setting a policy for audit logs	POST /v3/{project_id}/instances/{instance_id}/auditlog-policy	dds:instance:modifyAuditLogSwitch	√	√
Querying the audit log policy	GET /v3/{project_id}/instances/{instance_id}/auditlog-policy	dds:instance:list	√	√
Querying the audit log list	GET /v3/{project_id}/instances/{instance_id}/auditlog	dds:instance:list	√	√
Obtaining the link for downloading audit logs.	POST /v3/{project_id}/instances/{instance_id}/auditlog-links	dds:instance:downloadAuditLog	√	√

Table 8-6 Tag management

Permissions	APIs	Action	IAM Project	Enterprise Project
Adding or deleting resource tags in batches	POST /v3/{project_id}/instances/{instance_id}/tags/action	dds:instance:modify	√	√
Querying resource tags	GET /v3/{project_id}/instances/{instance_id}/tags	dds:instance:list	√	√

Table 8-7 Database and account management

Permissions	APIs	Action	IAM Project	Enterprise Project
Creating a database user	POST /v3/{project_id}/instances/{instance_id}/db-user	dds:instance:createDatabaseUser	√	√
Creating a database role	POST /v3/{project_id}/instances/{instance_id}/db-role	dds:instance:createDatabaseRole	√	√
Deleting a database user	DELETE /v3/{project_id}/instances/{instance_id}/db-user	dds:instance:deleteDatabaseUser	√	√
Deleting a database role	DELETE /v3/{project_id}/instances/{instance_id}/db-role	dds:instance:deleteDatabaseRole	√	√
Changing the password of a database user	PUT /v3/{project_id}/instances/{instance_id}/reset-password	dds:instance:resetPasswd	√	√

Permissions	APIs	Action	IAM Project	Enterprise Project
Querying details about database users	GET /v3/{project_id}/instances/{instance_id}/db-user/detail? offset={offset}&limit={limit}&user_name={user_name }&db_name={db_name}	dds:instance: get	√	√
Querying the database role list	GET /v3/{project_id}/instances/{instance_id}/db-roles? role_name={role_name}&db_name={db_name}&offset={offset}&limit={limit}	dds:instance: get	√	√
Querying and setting the cluster balancer	GET /v3/{project_id}/instances/{instance_id}/balancer PUT /v3/{project_id}/instances/{instance_id}/balancer/{action} PUT /v3/{project_id}/instances/{instance_id}/balancer/active-window	dds:instance: balancer	√	√

 NOTE

The check mark (√) indicates that an action takes effect. The cross mark (x) indicates that an action does not take effect.

9 Appendix

9.1 Abnormal Request Results

- Abnormal responses

Table 9-1 Parameter description

Name	Type	Description
error_code	String	Specifies the error returned when a task submission exception occurs.
error_msg	String	Specifies the description of the error returned when a task submission exception occurs.

- Abnormal response example

```
{
  "error_code": "DBS.200001",
  "error_msg": "Parameter error"
}
```

9.2 Status Code

- Normal

Status Code	Message	Description
200	OK	Request succeeded.
202	Accepted	Asynchronous request submitted successfully.

- Abnormal

Status Code	Message	Description
304	Not modified	Request failed. Request parameters do not meet requirements.
400	Bad Request	Invalid request. The client should not repeat the request without modifications.
401	Unauthorized	The authorization information provided by the client is incorrect or invalid. Check the username and password.
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	Not Found	The requested resource cannot be found. The client should not repeat the request without modifications.
405	Method Not Allowed	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	This operation is not allowed because the instance is not a replica set instance.
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.
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.

Status Code	Message	Description
415	Unsupported Media Type	The server is unable to process the media format in the request.
422	Unprocessable Entity	The request is well-formed but is unable to be processed due to semantic errors.
500	Internal Server Error	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.
503	Service Unavailable	The requested service is invalid. The client should not repeat the request without modifications.

9.3 Error Code

If an error occurs in an API, no result is returned. You can locate the error cause based on the error codes of each API. When the invocation fails, an HTTP status code is returned. The returned message body contains the specific error code and information.

Error Code Description

Table 9-2 Error code description

Status Code	Error Code	Error Information	Description	Handling Measure
400	DBS.200001	Parameter Error	Parameter error.	Check whether the transferred parameters or URLs are correct.
404	DBS.200002	The DB instance does not exist.	Instance not found.	Check whether the DB instance and its ID are correct and whether the DB instance exists.
400	DBS.200004	Operation is illegal.	Invalid operation.	Check whether the operation meets the API requirements.
400	DBS.200010	Authentication failed.	Authentication failed.	Check whether the tenant and instance match.

Statu s Code	Error Code	Error Information	Description	Handling Measure
403	DBS.200 011	This instance {0} status makes it not be allowed to do this {1} operation now.	Operation cannot be executed in current state of the DB instance.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
404	DBS.200 013	This node does not exist.	No nodes found.	Check whether the node ID or group ID is correct.
403	DBS.200 018	Operation cannot be executed in current state of the DB instance.	Operation cannot be executed in current state of the DB instance.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
403	DBS.200 019	Another operation is being performed on the DB instance or the DB instance is faulty.	Another operation is being performed on the DB instance or the DB instance is faulty.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.200 024	The region is unavailable.	The region is unavailable.	Check whether the region name is correct and whether the region is available.
400	DBS.200 025	Invalid AZ.	Invalid AZ.	Check whether the AZ name is correct and whether the AZ is available.
403	DBS.200 028	Volume size reach limit.	The maximum storage space has been reached.	Check whether the storage space exceeds the upper limit.
400	DBS.200 029	Invalid username and password.	Invalid username and password.	Check whether the username and password match and whether the password meets the password strength requirements.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.200 041	Invalid datastore version.	Invalid database version.	Check whether the database version is supported.
404	DBS.200 042	Invalid database engine.	Invalid DB engine.	Check whether the DB engine is supported by DDS.
400	DBS.200 047	Operation cannot be executed in current state of the DB instance or node.	Operation cannot be executed in current state of the DB instance or node.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.200 048	Invalid VPC.	Invalid VPC.	Check whether the VPC ID and name are correct and meet the requirements.
400	DBS.200 049	Invalid subnet.	Invalid subnet.	Check whether the subnet ID and name are correct and meet the requirements.
400	DBS.200 050	Invalid security group.	Invalid security group.	Check whether the security group ID and name are correct and meet the requirements.
400	DBS.200 052	Invalid password.	Invalid password.	Check whether the username and password match and whether the password meets the password strength requirements.
400	DBS.200 053	The DB instance specification s do not exist.	Instance specifications not found.	Check whether the specifications are correct and supported in the current AZ.
400	DBS.200 054	Invalid DB instance specification s.	Invalid DB instance specifications.	Check whether the specifications are correct and supported in the current AZ.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.200 057	Invalid parameter group ID.	Invalid parameter template ID.	Check whether the parameter template is correct, whether the parameter template exists, and whether the parameter template matches the instance type.
400	DBS.200 058	Parameter template does not exist.	Parameter template not found.	Check whether the parameter template exists.
400	DBS.200 059	Invalid database port.	Invalid database port.	Check whether the database port is missing or valid.
400	DBS.200 060	The database port is out of range.	The database port number is out of the specified range.	Check whether the database port is valid.
400	DBS.200 068	Weak password.	Weak password.	Check whether the password meets the requirements. Enter a strong password.
400	DBS.200 072	Invalid storage space.	Invalid storage space.	Check whether the storage space exceeds the upper limit.
400	DBS.200 075	Invalid node role.	Invalid node role.	Check whether the role of the node meets the requirements and whether the instance is normal.
403	DBS.200 076	Operation cannot be executed in current state of the DB instance.	Operation cannot be executed in current state of the DB instance.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.200 077	Failed to change the password.	Failed to reset the password.	Check whether the user name is correct.
400	DBS.200 091	Invalid IP address.	Invalid IP address.	Check whether the required IP address is missing or whether the input IP address is valid.

Status Code	Error Code	Error Information	Description	Handling Measure
400	DBS.200092	The IP address already exists.	The IP address already exists.	Check whether the IP address exists.
400	DBS.200095	Invalid parameter.	Parameter error.	Check whether the parameters in the request and URLs are correct.
400	DBS.200302	The storage space must be a multiple of 10.	The storage space must be a multiple of 10.	Check whether the storage space is a multiple of 10.
400	DBS.200303	The maximum number of times that the storage space can be scaled up has been reached.	The maximum number of times that the storage space can be scaled up has been reached.	The maximum number of times that the storage space can be scaled up has been reached. To continue to scale up the storage space, contact technical support.
400	DBS.200304	The storage space can be scaled up for a maximum of four times.	The storage space can be scaled up a maximum of four times.	Check whether the instance has been scaled up for multiple times.
400	DBS.200306	Invalid storage space.	Invalid storage space.	Check whether the storage space is correct and meets the requirements.
400	DBS.200311	Scaling up storage space is not allowed in current state of the node.	Scaling up the storage space is not allowed in current state of the node.	Check whether the node type, instance type, and node ID are correct.
400	DBS.200434	Failed to restart the DB instance.	Failed to restart the DB instance.	Check whether the DB instance status is normal and whether other operations are being performed on the DB instance.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.200 451	The node does not exist.	Node not found.	Check whether node ID is correct.
400	DBS.200 462	The database port is the same as the current port.	The database port is the same as the current port.	Check whether the new port number is the same as the original port number.
400	DBS.200 470	Invalid AZ.	Invalid AZ.	Check whether the AZ is correct.
400	DBS.200 501	The subnet does not exist.	Subnet deleted.	Check whether the subnet ID and name exist and match the VPC.
400	DBS.200 502	The security group does not exist.	The security group is not found or does not belong to the VPC.	Check whether the security group ID and name exist and match the VPC.
400	DBS.200 503	The VPC does not exist.	VPC deleted.	Check whether the tenant has the VPC.
400	DBS.200 506	The encryption key does not exist.	The encryption key not found.	Check whether the disk encryption key ID exists.
400	DBS.200 507	The encryption key is not available.	The encryption key is not available.	Check whether the disk encryption key is available.
403	DBS.200 604	InstanceId and userId may be null, or an unauthorize d operation has been issued.	The instance is not owned by the current user.	Check whether the project ID is subordinate to the instance ID.
400	DBS.200 700	The EIP status does not allow EIP binding.	The EIP is being bound. Not allowed to bind the EIP again.	Check whether the instance is being bound to an EIP.

Status Code	Error Code	Error Information	Description	Handling Measure
400	DBS.200701	The EIP status does not allow EIP unbinding.	Unbinding the EIP is not allowed due to the EIP status.	Check whether the operation is allowed by the EIP status.
400	DBS.200702	The node has been bound to a public IP address and cannot be bound again.	The node has been bound to a public IP address and cannot be bound again.	Check whether a public IP address has been bound to the node.
400	DBS.200816	Failed to create the database user.	Failed to create a database user.	Check whether the database user name is valid and check the database status and instance status.
400	DBS.200817	Failed to obtain the database user list.	Failed to obtain the database user list.	Check the database status and instance status.
400	DBS.200818	Failed to delete the database user.	Failed to delete a database user.	Check the database status and instance status.
400	DBS.200823	The database does not exist.	Database not found.	Check whether the database name is valid.
400	DBS.200824	The database account does not exist.	Database account not found.	Check whether the database username is valid.
400	DBS.200826	The database name already exists.	The database name already exists.	Check whether the database name is valid.
400	DBS.200827	The database user already exists.	The database account name already exists.	Check whether the database user is valid.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.200 828	Built-in database accounts cannot be edited.	This is an internal account of the database and cannot be operated by users.	Check whether the database user is valid.
400	DBS.200 998	The system is busy. Try again later.	The system is busy. Try again later.	The system is busy. Try again later.
403	DBS.201 000	The status of DB instance {0} does not allow the {1} operation.	Operation cannot be executed in current state of the DB instance.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.201 006	Parameter error.	Parameter error.	Check whether the transferred parameters or URLs are correct.
403	DBS.201 014	Operation cannot be executed in current state of the DB instance.	Operation cannot be executed in current state of the DB instance.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
403	DBS.201 015	This operation cannot be performed because another operation is being performed on the DB instance or the DB instance is faulty. Try again later.	This operation cannot be performed because another operation is being performed.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.201 020	Invalid DB engine.	Invalid DB engine.	Check whether the DB engine is supported by DDS.

Statu s Code	Error Code	Error Information	Description	Handling Measure
403	DBS.201 028	The DB instance does not exist.	Instance not found.	Check whether the DB instance belongs to the tenant and whether the DB instance exists.
400	DBS.201 035	The database name must be different.	The database name already exists.	Check whether the same database name exists.
400	DBS.201 038	The collection name must be different.	The collection name already exists.	Check whether the same collection name exists.
400	DBS.201 101	Invalid backup period.	Invalid backup period.	Check whether the backup cycle meets the requirements.
400	DBS.201 201	The backup already exists.	The backup already exists.	Check whether the backup name or ID exists.
400	DBS.201 202	Operation cannot be executed in current state of the DB instance.	Operation cannot be executed in current state of the DB instance.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.201 204	Operation cannot be executed in current state of the DB instance.	The backup file does not exist.	Check whether the backup file exists and matches the instance.
400	DBS.201 212	Backup ID is illegal.	Invalid backup ID.	Check whether the backup ID exists.
400	DBS.201 214	The backup file does not exist.	Backup file not found.	Check whether the backup exists and matches the instance.
400	DBS.201 215	Time is illegal.	Invalid time.	Check whether the time meets the requirements.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.201 319	Deleting backup file is not allowed because a restoration task is currently in progress. Please wait.	Original backup file cannot be deleted during restoration.	Check whether the backup is being used to restore instances.
400	DBS.201 501	The DB instance does not exist.	Instance not found.	Check whether the tenant has the DB instance, whether the DB instance name or ID is correct, and whether the DB instance exists.
400	DBS.201 502	The DB instance does not exist.	Instance not found.	Check whether the tenant has the DB instance, whether the DB instance name or ID is correct, and whether the DB instance exists.
500	DBS.201 509	Failed to access OBS.	The OBS service system is faulty.	An internal error occurs. Contact the O&M personnel to locate the fault.
404	DBS.212 001	The parameter group {0} does not exist.	Parameter template not found.	Check whether the parameter template exists.
400	DBS.212 002	The number of para groups exceeds quota.	The number of parameter templates exceeds the quota.	Delete unnecessary parameter groups and create the parameter group again.
400	DBS.212 003	This operation is not permitted.	Operation not allowed.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.212 006	The node associated with this parameter group is not available.	The node associated with this parameter template is not available.	Check whether the node that is associated with the parameter template is normal.
400	DBS.212 008	The database type does not exist.	Unsupported database version.	Check whether the database type is supported
400	DBS.212 013	The parameter group does not exist.	Parameter template not found.	Check whether the parameter exists.
400	DBS.212 017	The parameter is invalid.	Invalid parameter.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.212 019	Invalid parameter.	Invalid parameter.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.212 028	Invalid description.	Invalid parameter template description.	Check whether the parameter template description is valid.
400	DBS.212 030	The parameter group name already exists.	The parameter group name already exists.	Check whether the parameter template name is correct and whether the tenant has created the parameter template.
400	DBS.212 031	Invalid parameter group name.	Invalid parameter template name.	Check whether the parameter template name meets the requirements:

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.212 032	The operation cannot be performed because this parameter group is being applied to one or more DB instance nodes.	The operation cannot be performed because this parameter template is applied to one or more DB instance nodes.	Check whether the parameter template has been applied to the instance.
400	DBS.216 026	The node does not exist.	Node not found.	Check whether the input node exists and belongs to the current instance.
403	DBS.216 030	The queried node does not belong to the current instance.	The queried node does not belong to the current instance.	Check whether the input node belongs to the current instance.
400	DBS.216 031	Invalid entity id.	Invalid entityId.	Check whether the value of entityId is correct.
400	DBS.238 007	This operation cannot be performed in the current IP address status.	This operation cannot be performed in the current IP address status.	Check whether the delivered IP address is in use.
400	DBS.239 011	Invalid SSL option.	Invalid SSL option.	Check whether the SSL parameter is missing or whether the SSL option is valid.
400	DBS.239 012	The specifications are improper.	The specifications are improper.	Check whether the specifications are proper when the backup of an Enhanced Edition instance is restored to a new instance.
400	DBS.239 014	Failed to create the database role.	Failed to create a database role.	Check the database status and instance status.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.239 015	Failed to obtain the database role list.	Failed to obtain the database role list.	Check the database status and instance status.
400	DBS.239 016	Invalid database role.	Invalid database role.	Check whether the role meets the requirements and check the database status and instance status.
400	DBS.239 017	The database role name already exists.	The database role name already exists.	Check whether the database role exists.
400	DBS.239 018	The database role does not exist.	Database role not found.	Enter an existing database status.
400	DBS.239 019	Invalid database permission.	Invalid database permission.	Check whether the database permission is valid.
400	DBS.239 020	Invalid database name.	Invalid database name.	Check whether the database name is valid.
400	DBS.239 021	Roles in the non-admin databases cannot be inherited from other databases.	Roles in the non-admin databases cannot be inherited from other databases.	Check whether the data role is valid.
400	DBS.239 022	Cannot use database built-in roles.	This is an internal database role and cannot be operated by users.	Check whether the role is valid.
400	DBS.239 023	Invalid auditlog ID.	Invalid audit log ID.	Check whether the audit log ID is valid.
400	DBS.239 024	The auditlog does not exist.	The audit log does not exist.	Check whether the audit log exists.

Status Code	Error Code	Error Information	Description	Handling Measure
400	DBS.239025	Invalid auditlog scope.	Invalid audit scope.	Check whether the audit scope is valid.
400	DBS.239026	Invalid auditlog type.	Invalid audit type.	Check whether the audit type is valid.
400	DBS.239027	Invalid restore type.	Invalid restoration type.	Check whether the restoration type is valid.
400	DBS.239028	Invalid table name.	Invalid table name.	Check whether the table name is valid.
400	DBS.239029	Failed to delete database role.	Failed to delete the database role.	Check whether the database role exists and whether the instance status is normal.
400	DBS.239031	Invalid balancer action.	The balancer switching is invalid	Check whether the action parameter is correct.
400	DBS.239032	Invalid balancer window.	Invalid balancer window	Check whether the startTime and stopTime parameters are correct.
400	DBS.239033	Balancer window not supported.	Versions earlier than DDS 4.0 do not support the setting of the balancer window	Frozen instances and instances of versions earlier than DDS 4.0 do not support the setting of the balancer window.
400	DBS.280001	Parameter error.	Parameter error.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.280004	Operate type illegal.	Invalid operation.	Check whether the operation meets the API requirements.
500	DBS.280005	Server error. Try again later.	Server error. Try again later.	Contact technical support engineers.
400	DBS.280015	Permission denied.	Insufficient permissions.	Check whether the token expires and whether the instance matches the tenant.

Status Code	Error Code	Error Information	Description	Handling Measure
404	DBS.280016	Resource not found.	Resource not found.	Check whether the transferred parameters are correct and whether the instance exists.
403	DBS.280019	Account suspended.	Account suspended.	Check the account balance.
403	DBS.280032	You do not have permission to perform this operation. Contact the administrator to obtain permission.	Permission denied.	Check whether the user group to which the current user belongs has the corresponding operation permission.
403	DBS.280042	Invalid request.	Invalid request.	Check whether the request is allowed by the current instance status and the operations being performed on the instance and whether the request is valid.
403	DBS.280056	Invalid token.	Invalid token.	Check whether the instance belongs to the tenant and whether the token has been obtained again.
403	DBS.280063	You do not have following permission to perform this operation: {0}. Contact the administrator to obtain permission.	Permission denied. Contact the account administrator for authorization	Check whether the user group to which the current user belongs has the corresponding operation permission.
401	DBS.280064	Check PDP permissions failed.	Fine-grained authentication failed.	Contact the customer service.
400	DBS.280066	Invalid log type.	Invalid log type.	Check whether the log type meets the requirements.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.280 067	Invalid start time.	Invalid start time.	Check whether the start time meets the requirement.
400	DBS.280 068	Invalid end time.	Invalid end time.	Check whether the end time meets the requirement.
400	DBS.280 110	The DB instance does not exist.	Instance not found.	Check whether the tenant has the DB instance, whether the DB instance name or ID is correct, and whether the DB instance exists.
400	DBS.280 122	Invalid DB engine.	Invalid storage engine.	Check whether the storage engine matches the instance engine.
400	DBS.280 123	Invalid node number.	Invalid node quantity.	Check whether the number of nodes to be added to the instance meets the requirements.
400	DBS.280 124	Invalid backup.	Invalid backup ID.	Check whether the backup ID is correct and meets the requirements.
400	DBS.280 127	Invalid backup description.	Invalid backup description.	Check whether the backup description is correct and meets the requirements.
400	DBS.280 200	The password contains invalid characters.	The password contains invalid characters.	Check whether the password is correct and meets the requirements.
400	DBS.280 214	Invalid retention period.	Invalid retention period.	Check whether the backup retention period is correct.
400	DBS.280 215	Invalid backup cycle.	Invalid backup period.	Check whether the backup start time, end time, and backup cycle are correct and meet the requirements.
400	DBS.280 216	Invalid backup start time.	Invalid backup start time.	Check whether the backup start time meets the requirements and whether the relationship between the backup start time and end time is correct.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.280 234	Invalid DB instance name.	Invalid DB instance name.	Check whether the instance name is correct and whether the instance exists.
400	DBS.280 235	Invalid database type.	Invalid database type.	Check whether the database type is correct.
400	DBS.280 236	Invalid database version.	Invalid database version.	Check whether the database version is supported.
400	DBS.280 237	DataStore is invalid.	Invalid database information.	Check whether the database information is correct.
400	DBS.280 239	Invalid specification s.	Invalid specifications.	Check whether the specification code is correct, whether the specification exists in the current AZ, and whether the specification is supported.
400	DBS.280 241	Invalid storage type	Invalid storage type.	Check whether the storage type is correct and meets the requirements.
400	DBS.280 242	The storage space is out of range.	The storage space is out of range.	Check whether the disk size is correct.
400	DBS.280 244	Invalid AZ.	Invalid AZ.	Check whether the parameters of the AZ are correct, whether the AZ exists, and whether the AZ matches the specifications.
400	DBS.280 247	Invalid VPC.	Invalid VPC.	Check whether the VPC ID is correct and whether the VPC exists.
400	DBS.280 248	Invalid subnet.	Invalid subnet.	Check whether the subnet ID is correct and whether the subnet exists.
400	DBS.280 249	Invalid security group.	Invalid security group.	Check whether the security group ID is correct and whether the security group exists.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.280 266	Invalid storage space.	Invalid storage space.	Check whether the storage space is correct and meets the requirements.
400	DBS.280 267	Specification s not match.	Specifications do not match.	Check whether the specification information is correct and whether the specification matches the instance.
400	DBS.280 271	Parameter value out of range.	The parameter value is too long.	Check whether the length of the parameter value is correct.
400	DBS.280 277	Invalid backup name.	Invalid backup name.	Check whether the backup name is correct and meets the requirements.
400	DBS.280 280	Invalid DB instance number.	Invalid instance quantity.	Check whether the number of DB instances is correct and meets the requirements.
400	DBS.280 284	Invalid IP address.	Invalid IP address.	Check whether the IP address is correct and meets the requirements.
400	DBS.280 292	Invalid database username.	Invalid username.	Check whether the username is correct and meets the requirements.
400	DBS.280 311	Invalid storage space.	Invalid storage space.	Check whether the storage space is correct and meets the requirements.
400	DBS.280 314	Invalid storage space.	Invalid storage type.	Check whether the storage type is correct and whether the instance supports the disk type.
400	DBS.280 327	Invalid node type.	Invalid node type.	Check whether the node type is correct, whether the node type matches the instance, and whether the node type matches the group ID and node ID.
406	DBS.280 328	Invalid DB instance type.	Invalid DB instance type.	Check whether the instance type is correct.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.280 342	Invalid DB instance mode.	Invalid DB instance mode.	Check whether the instance mode is correct and whether the instance mode matches the instance ID.
400	DBS.280 343	Unsuppor ted operation.	The operation is not supported.	Check whether the instance and node meet the API requirements.
400	DBS.280 347	Unsuppor ted database type.	Unsupported database type.	Check whether the DB instance type is correct and meets the requirements.
400	DBS.280 361	Invalid file name.	Invalid file name.	Check whether the input file name is correct and meets the requirements.
400	DBS.280 365	Invalid payment mode.	Invalid payment mode.	Check whether the payment mode is correct and meets the requirements.
400	DBS.280 366	Invalid order ID.	Invalid order ID.	Check whether the yearly/ monthly order ID is transferred and meets the requirements.
400	DBS.280 404	Invalid DB instance ID.	Invalid DB instance ID.	Check whether the instance ID is correct and meets the requirements.
403	DBS.280 406	The DB instance cannot be deleted.	The DB instance cannot be deleted.	Check whether the instance deletion operation is supported by the DB engine and billing mode.
400	DBS.280 407	Invalid node ID.	Invalid node ID.	Check whether the node ID is correct and meets the requirements.
400	DBS.280 408	Invalid project id.	Unauthorized tenant ID	Check whether the tenant ID is correct and meets the requirements.
400	DBS.280 409	Invalid date.	Invalid time format.	Check whether the time format and content are correct and meet the requirements.

Statu s Code	Error Code	Error Information	Description	Handling Measure
400	DBS.280 414	Invalid group type.	Invalid group type.	Check whether the group type is correct, whether the group type matches the instance, and whether the node type matches the group ID.
400	DBS.280 416	Invalid backup end time.	Invalid end time	Check whether the end time is missing and whether the end time period and format meet the requirements.
400	DBS.280 421	Invalid EIP.	Invalid EIP.	Check whether the EIP exists and meets the requirements.
400	DBS.280 431	Invalid package type.	Invalid yearly/ monthly billing mode.	Check whether the value of period_type meets the requirements.
400	DBS.280 432	Invalid duration for yearly/ monthly DB instances.	Invalid yearly/ monthly duration.	Check whether the value of period_num meets the requirements.
403	DBS.280 433	Invalid enterprise project ID.	Invalid enterprise project ID.	Check whether the enterprise project ID is valid.
400	DBS.280 434	The specification s are unavailable.	Invalid resource specifications code.	Check whether the resource specifications code exists and meets the requirements.
400	DBS.280 437	Not support enterprise project.	Multi-project management not supported.	The current user has not enabled the enterprise multi-project service. Enable the enterprise multi-project service or do not transfer related parameters.
400	DBS.280 438	Invalid encryption key.	Invalid encryption key ID.	Check whether the disk encryption key ID in the request is created and available, and whether the current DB engine supports disk encryption.
400	DBS.280 439	Invalid limit.	Invalid query limit.	Check whether the value of the limit parameter is valid.

Status Code	Error Code	Error Information	Description	Handling Measure
400	DBS.280440	Invalid offset.	Invalid offset.	Check whether the value of the offset parameter is valid.
400	DBS.280441	Invalid key.	Invalid key.	Check whether the tag key is valid.
429	DBS.280443	The maximum number of connections has been reached.	The maximum number of connections has been reached.	APIs are frequently called by the same tenant. Reduce the frequency of API calls.
400	DBS.280445	The DB instance class is not available.	The DB instance class is not available.	The current DB instance class is unavailable. Select another one.
400	DBS.280446	The database information does not exist.	Database information not found.	Check whether the datastore field exists.
400	DBS.280453	Invalid DSS storage pool ID.	Invalid DSS storage pool ID.	Check whether the storage pool ID is correct.
400	DBS.280456	This operation is not supported by the current billing mode.	This operation is not supported by the current billing mode.	Check whether the billing mode of the current instance meets the API requirements.
400	DBS.280469	Invalid ECS group policy.	Invalid ECS group policy.	Check whether the policy associated with the ECS group is correct.
400	DBS.280482	Invalid user tag key.	Invalid user tag key.	Check whether the tag key is valid.
400	DBS.280483	Invalid tag value.	Invalid tag value.	Check whether the tag key is valid.
400	DBS.280484	Tag number reach limit.	There are too many tags.	Check whether the number of tags is correct.

Status Code	Error Code	Error Information	Description	Handling Measure
400	DBS.290000	Parameter error.	Parameter error.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.301024	Invalid backup restore information.	Invalid backup and restoration information.	Check whether the backup and restoration information is valid.
400	DBS.301071	Invalid session id.	Invalid session ID.	Check whether the session ID is correct and meets the requirements.
400	DBS.301072	Invalid plan summary.	Invalid execution plan.	Check whether the execution plan is correct and meets the requirements.
400	DBS.301073	Invalid operation type.	Invalid operation type.	Check whether the operation type is correct and meets the requirements.
400	DBS.301074	Invalid namespace.	Invalid namespace.	Check whether the namespace is correct and meets the requirements.
400	DBS.301075	Invalid cost time.	Invalid execution time.	Check whether the execution time is correct and meets the requirements.
400	DBS.301076	Query session failed.	Failed to query the session.	Contact customer service to check the instance status.
400	DBS.301077	Kill session failed.	Failed to kill the session.	Contact customer service to check the instance status.
400	DBS.301079	Query OS version failed.	Failed to query the OS version.	Contact the customer service.

9.4 Obtaining a Project ID

Scenarios

A project ID is required for some URLs when an API is called. To obtain the project ID:

- [Obtaining the Project ID by Calling an API](#)

- [Obtain a Project ID from the Console](#)

Obtaining the Project ID by Calling an API

You can 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**. **{Endpoint}** is the IAM endpoint and can be obtained from the Regions and Endpoints. For details about API authentication, see [Authentication](#).

The following is an example response. The value of **id** is the project ID.

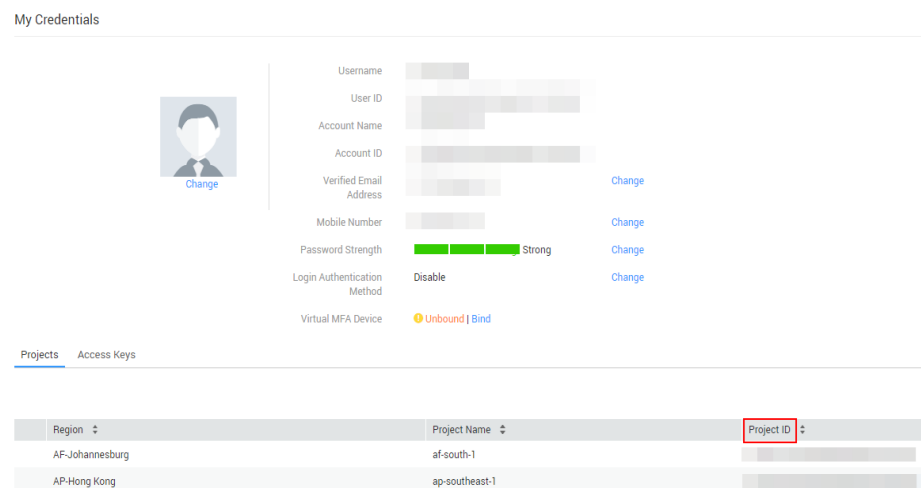
```
{
  "projects": [
    {
      "domain_id": "65382450e8f64ac0870cd180d14e684b",
      "is_domain": false,
      "parent_id": "65382450e8f64ac0870cd180d14e684b",
      "name": "project_name",
      "description": "",
      "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
      },
      "id": "a4a5d4098fb4474fa22cd05f897d6b99",
      "enabled": true
    }
  ],
  "links": {
    "next": null,
    "previous": null,
    "self": "https://www.example.com/v3/projects"
  }
}
```

Obtain a Project ID from the Console

1. Register yourself on the management console and log in to it.
2. Move your pointer over the username and select **My Credential** in the displayed drop-down list.

On the **My Credential** page, view the project ID in the project list.

Figure 9-1 Viewing project IDs



9.5 DDS Metrics

This section describes metrics reported by Document Database Service (DDS) to Cloud Eye as well as their namespaces and dimensions. You can use APIs provided by Cloud Eye to query the metrics of the monitored object and alarms generated for DDS.

Namespace

SYS.DDS

Monitoring Metrics

Table 9-3 Recommended DDS metrics

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo007_connections_usage	Percentage of Active Node Connections	Percentage of the number of connections that attempt to connect to the instance node to the total number of available connections	0~100	%	N/A	- dds mongos node - Primary node - Secondary node	1 minute 5 seconds

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo032_mem_usage	Memory Usage	Memory usage of the monitored object	0~100	%	N/A	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo031_cpu_usage	CPU Usage	CPU usage of the monitored object	0~100	%	N/A	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo035_disk_usage	Storage Space Usage	Storage usage of the monitored object	0~100	%	N/A	• Primary node • Secondary node	1 minute

Table 9-4 DDS metrics

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo001_command_ps	COMMAND Statements per Second	Number of COMMAND statements executed per second on the current node	≥ 0	Count/s	N/A	• DDS DB instance • dds mongos node • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute 5 seconds
mongo002_delete_ps	DELETE Statements per Second	Number of DELETE statements executed per second on the current node	≥ 0	Count/s	N/A	• DDS DB instance • dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo003_insert_ps	INSERT Statements per Second	Number of INSERT statements executed per second on the current node	≥ 0	Count/s	N/A	• DDS DB instance • dds mongos node • Primary node • Secondary node	1 minute 5 seconds

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo004_query_ps	QUERY Statements per Second	Number of QUERY statements executed per second on the current node	≥ 0	Count/s	N/A	• DDS DB instance • dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo005_update_ps	UPDATE Statements per Second	Number of UPDATE statements executed per second on the current node	≥ 0	Count/s	N/A	• DDS DB instance • dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo006_getmore_ps	GETMORE Statements per Second	Number of GETMORE statements executed per second on the current node	≥ 0	Count/s	N/A	• DDS DB instance • dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo007_chunk_num1	Chunks of Shard 1	Number of chunks in shard 1	0~64	Count	N/A	DDS cluster instance	1 minute
mongo007_chunk_num2	Chunks of Shard 2	Number of chunks in shard 2	0~64	Count	N/A	DDS cluster instance	1 minute
mongo007_chunk_num3	Chunks of Shard 3	Number of chunks in shard 3	0~64	Count	N/A	DDS cluster instance	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo07_chunk_num4	Chunks of Shard 4	Number of chunks in shard 4	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num5	Chunks of Shard 5	Number of chunks in shard 5	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num6	Chunks of Shard 6	Number of chunks in shard 6	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num7	Chunks of Shard 7	Number of chunks in shard 7	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num8	Chunks of Shard 8	Number of chunks in shard 8	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num9	Chunks of Shard 9	Number of chunks in shard 9	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num10	Chunks of Shard 10	Number of chunks in shard 10	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num11	Chunks of Shard 11	Number of chunks in shard 11	0~64	Count	N/A	DDS cluster instance	1 minute
mongo07_chunk_num12	Chunks of Shard 12	Number of chunks in shard 12	0~64	Count	N/A	DDS cluster instance	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo008_connections	Active Instance Connections	Total number of connections attempting to connect to a DDS DB instance	0~200	Count	N/A	DDS DB instance	1 minute
mongo009_migration_fail_num	Chunk Migration Failures in Last 24 hrs	Number of chunk migration failures in the last 24 hours	≥ 0	Count	N/A	DDS cluster instance	1 minute
mongo007_connections	Active Node Connections	Total number of connections attempting to connect to a DDS DB instance node	0~200	Count	N/A	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo007_connections_usage	Percentage of Active Node Connections	Percentage of the number of connections that attempt to connect to the instance node to the total number of available connections	0~100	%	N/A	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo008_memory_resident	Resident Memory	Size of resident memory	≥ 0	MB	N/A	• dds mongos node • Primary node • Secondary node	1 minute
mongo009_memory_virtual	Virtual Memory	Size of virtual memory	≥ 0	MB	N/A	• dds mongos node • Primary node • Secondary node	1 minute
mongo010_regular_asserts_per_second	Regular Asserts per Second	Number of regular asserts per second	≥ 0	Count/s	N/A	• dds mongos node • Primary node • Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo011_warning_asserts_ps	Warning Asserts per Second	Number of warning asserts per second	≥ 0	Count/s	N/A	• dds mongos node • Primary node • Secondary node	1 minute
mongo012_msg_asserts_ps	Message Asserts per Second	Number of message asserts per second	≥ 0	Count/s	N/A	• dds mongos node • Primary node • Secondary node	1 minute
mongo013_user_asserts_ps	User Asserts per Second	Number of user asserts per second	≥ 0	Count/s	N/A	• dds mongos node • Primary node • Secondary node	1 minute
mongo014_queues_total	Operations Queued Waiting for a Lock	Number of operations queued waiting for a lock	≥ 0	Count	N/A	• Primary node • Secondary node	1 minute
mongo015_queues_readers	Operations Queued Waiting for a Read Lock	Number of operations queued waiting for a read lock	≥ 0	Count	N/A	• Primary node • Secondary node	1 minute
mongo016_queues_writers	Operations Queued Waiting for a Write Lock	Number of operations queued waiting for a write lock	≥ 0	Count	N/A	• Primary node • Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo017_page_faults	Page Faults	Number of page faults on the current node	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo018_porfling_num	Slow Queries	Total number of slow queries from the last 5 minutes to the current time point on the monitored node.	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo019_cursors_open	Maintained Cursors	Number of maintained cursors on the current node	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo020_cursors_timeOut	Timeout Cursors	Number of timed out cursors on the current node	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo021_wt_cache_usage	Bytes in WiredTiger Cache	Size of data in the WiredTiger cache in MB	≥ 0	MB	N/A	- Primary node - Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo022_wt_cache_dirty	Tracked Dirty Bytes in WiredTiger Cache	Size of tracked dirty data in the WiredTiger cache in MB	≥ 0	MB	N/A	- Primary node - Secondary node	1 minute
mongo023_wlnto_wtCache	Bytes Written Into Cache per Second	Bytes written into WiredTiger cache per second	≥ 0	byte/s	1024(IEC)	- Primary node - Secondary node	1 minute
mongo024_wFrom_wtCache	Bytes Written From Cache per Second	Bytes written into disks from WiredTiger cache per second	≥ 0	byte/s	1024(IEC)	- Primary node - Secondary node	1 minute
mongo025_repl_oplog_win	Oplog Window	Available time in the monitored primary node's oplog	≥ 0	h	N/A	Primary node	1 minute
mongo025_repl_headroom	Replication Headroom	Time difference between the primary's oplog window and the replication lag of the secondary	≥ 0	s	N/A	Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo026_repl_lag	Replication Lag	A delay between an operation on the primary and the application of that operation from the oplog to the secondary	≥ 0	s	N/A	Secondary node	1 minute
mongo027_repl_command_ps	Replicated COMMAND Statements per Second	Number of replicated COMMAND statements executed on the secondary node per second	≥ 0	Count/s	N/A	Secondary node	1 minute
mongo028_repl_update_ps	Replicated UPDATE Statements per Second	Number of replicated UPDATE statements executed on the secondary node per second	≥ 0	Count/s	N/A	Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo029_repl_delete_ops	Replicated DELETE Statements per Second	Number of replicated DELETE statements executed on the secondary node per second	≥ 0	Count/s	N/A	Secondary node	1 minute
mongo030_repl_insert_ops	Replicated INSERT Statements per Second	Number of replicated INSERT statements executed on the secondary node per second	≥ 0	Count/s	N/A	Secondary node	1 minute
mongo031_cpu_usage	CPU Usage	CPU usage of the monitored object	0~100	%	N/A	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo032_memory_usage	Memory Usage	Memory usage of the monitored object	0~100	%	N/A	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo033_bytes_out	Network Output Throughput	Outgoing traffic in bytes per second	≥ 0	byte/s	1024(IEC)	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo034_bytes_in	Network Input Throughput	Incoming traffic in bytes per second	≥ 0	byte/s	1024(IEC)	• dds mongos node • Primary node • Secondary node	1 minute 5 seconds
mongo035_disk_usage	Storage Space Usage	Storage usage of the monitored object	0~100	%	N/A	• Primary node • Secondary node	1 minute
mongo036_iops	IOPS	Average number of I/O requests processed by the system in a specified period	≥ 0	Count/s	N/A	• Primary node • Secondary node	1 minute
mongo037_read_throughput	Disk Read Throughput	Average number of read bytes per second for disks	≥ 0	byte/s	1024(IEC)	• Primary node • Secondary node	1 minute
mongo038_write_throughput	Disk Write Throughput	Average number of write bytes per second for disks	≥ 0	byte/s	1024(IEC)	• Primary node • Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo039_avg_disk_sec_per_read	Average Time per Disk Read	Average time required for each disk read in a specified period	≥ 0	s	N/A	- Primary node - Secondary node	1 minute
mongo040_avg_disk_sec_per_write	Average Time per Disk Write	Average time required for each disk write in a specified period	≥ 0	s	N/A	- Primary node - Secondary node	1 minute
mongo042_disk_total_size	Total Storage Space	Total disk size of the monitored object	0~1 000	GB	N/A	- Primary node - Secondary node	1 minute
mongo043_disk_used_size	Used Storage Space	Used storage space of the monitored object	0~1 000	GB	N/A	- Primary node - Secondary node	1 minute
mongo044_swap_usage	SWAP Usage	SWAP usage.	0~1 00	%	N/A	- dds mongos node - Secondary node	1 minute
mongo050_top_total_time	Total Time Spent on Collections	Mongotop-total time: total time spent on collection operations.	≥ 0	ms	N/A	- Primary node - Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo051_top_read_time	Total Time Spent on Collections	Mongo p-read time: total time spent reading collections.	≥ 0	ms	N/A	- Primary node - Secondary node	1 minute
mongo052_top_write_time	Total Time Spent on Collections	Mongo p-write time: total time spent writing collections.	≥ 0	ms	N/A	- Primary node - Secondary node	1 minute
mongo053_wt_flushes_status	Number of Times that Checkpoints Are Triggered	Number of times that the checkpoint is triggered during a polling interval of WiredTiger	≥ 0	times	N/A	- Primary node - Secondary node	1 minute
mongo054_wt_cache_used_percent	Percentage of the Cache Used by WiredTiger	Percentage of the cache used by WiredTiger	0~100	%	N/A	- Primary node - Secondary node	1 minute
mongo055_wt_cache_dirty_percent	Percentage of Dirty Data in the WiredTiger Cache	Percentage of dirty data in the WiredTiger cache	0~100	%	N/A	- Primary node - Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo070_rocks_active_memtable	Memtable Data Size	Size of data in the active memtable	0~100	Byte	1024(IEC)	- Primary node - Secondary node	1 minute
mongo071_rocks_oplogcf_active_memtable	Memtable Data Size on Oplogcf	Size of data in the active memtable on oplogcf	0~100	Byte	1024(IEC)	- Primary node - Secondary node	1 minute
mongo072_rocks_all_memtable	Total Data Size of Memtable and Immuta-ble-memtable	Total data size of memtable and immutable-memtable	0~100	Byte	1024(IEC)	- Primary node - Secondary node	1 minute
mongo073_rocks_oplogcf_all_memtable	Total Data Size of Memtable and Immuta-ble-memtable on Oplogcf	Total data size of memtable and immutable-memtable on oplogcf	0~100	Byte	1024(IEC)	- Primary node - Secondary node	1 minute
mongo074_rocks_snapshots	Unreleased Snapshots	Number of unreleased snapshots	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo075_rocks_oplogcf_snapshots	Unreleased Snapshots on Oplogcf	Number of unreleased snapshots on oplogcf	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo076_rocks_live_versions	Active Versions	Number of active versions	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo077_rocks_oplogcf_live_versions	Active Versions on Oplogcf	Number of active versions on oplogcf	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo078_rocks_blockcache	Data Size in Blockcache	Size of data in blockcache	0~100	Byte	1024(IEC)	- Primary node - Secondary node	1 minute
mongo079_rocks_background_errors	Accumulated Background Errors	Accumulated number of background errors	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo080_rocks_oplogcf_background_errors	Accumulated Background Errors on Oplogcf	Number of accumulated background errors on oplogcf	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo081_rocks_conflict_bytes_usage	Buffer Usage for Processing Transaction Write Conflicts	Usage of the buffer for processing transaction write conflicts	0~100	%	N/A	- Primary node - Secondary node	1 minute
mongo082_rocks_uncommitted_keys	Uncommitted Keys	Number of uncommitted keys	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo083_rock_s_committed_keys	Committed Keys	Number of committed keys	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo084_rock_s_alive_txn	Length of Active Transaction Linked Lists	Length of active transaction linked lists	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo085_rock_s_read_queue	Length of Read Queues	Length of read queues	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo086_rock_s_committed_queue	Length of Committed Queues	Length of committed queues	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo087_rock_s_ct_write_out	Used Concurrent Write Transactions	Number of used concurrent write transactions	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo088_rock_s_ct_write_available	Available Concurrent Write Transactions	Number of available concurrent write transactions	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo089_rock_s_ct_read_out	Used Concurrent Read Transactions	Number of used concurrent read transactions	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo090_rocks_ct_read_available	Available Concurrent Read Transactions	Number of available concurrent read transactions	≥ 0	Count	N/A	- Primary node - Secondary node	1 minute
mongo091_active_session_count	Active Sessions	Number of active sessions cached in the memory of the Mongo instance since the last refresh	≥ 0	Count	N/A	- DDS DB instance - Read replica of a DDS replica set instance - Primary node - Secondary node - Hidden nodes of a DDS instance	1 minute
mongo092_rx_errors	Error Rate of Received Packets	Ratio of the number of error packets to the total number of received packets during the monitoring period	0~100	%	N/A	DDS DB instance	1 minute 5 seconds

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo093_rx_dropped	Loss Rate of Received Packets	Ratio of the number of lost packets to the total number of received packets during the monitoring period	0~100	%	N/A	DDS DB instance	1 minute 5 seconds
mongo094_tx_errors	Error Rate of Sent Packets	Ratio of the number of error packets to the total number of sent packets during the monitoring period	0~100	%	N/A	DDS DB instance	1 minute 5 seconds
mongo095_tx_dropped	Loss Rate of Sent Packets	Ratio of the number of lost packets to the total number of sent packets during the monitoring period	0~100	%	N/A	DDS DB instance	1 minute 5 seconds

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo096_retrans_segs	Retransmitted Packets	The number of retransmitted packets during the monitoring period	≥ 0	Counts	N/A	DDS DB instance	1 minute 5 seconds
mongo097_retrans_rate	Retransmission Ratio	Ratio of retransmitted packets during the monitoring period	0~100	%	N/A	DDS DB instance	1 minute 5 seconds
mongo098_out_rsts_nums	Sent RST Packets	The number of sent RST packets during the monitoring period	≥ 0	Counts	N/A	DDS DB instance	1 minute 5 seconds
mongo099_read_time_average	Average Read Latency	Average read command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo100_read_time_p99	P99 Read Latency	P99 read command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute
mongo101_read_time_p999	P999 Read Latency	P999 read command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo102_write_time_average	Average Write Latency	Average write command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute
mongo103_write_time_p99	P99 Write Latency	P99 write command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo104_write_time_p999	P999 Write Latency	P999 write command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute
mongo105_command_time_average	Average Command Latency	Average command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo106_command_time_p99	P99 Command Latency	P99 command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute
mongo107_command_time_p999	P999 Command Latency	P999 command execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo108_txn_time_average	Average Transaction Latency	Average transaction execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute
mongo109_txn_time_p99	P99 Transaction Latency	P99 transaction execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute

Metric ID	Metrics Name	Description	Value Range	Unit	Conversion Rule	Monitored Object	Monitoring Interval (Raw Data)
mongo10_txn_time_p999	P999 Transaction Latency	P999 transaction execution latency of a single node	≥ 0	ms	N/A	• DDS DB instance • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden node	1 minute

 NOTE

Metrics whose IDs contain rocks are used to monitor instances or instance nodes of version 4.2.

Dimensions

Key	Value
mongodb_instance_id	DDS DB instance ID Supports cluster instances of Community Edition, replica set instances, and single node instances.
mongodb_node_id	DDS node ID

 NOTE

mongodb_instance_id is used to specify dimension fields when the Cloud Eye API is invoked. Replica sets and single node instance types do not have instance-level metrics.