

Document Database Service

API Reference

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1 Before You Start

1.1 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](#).

1.2 API Calling

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

1.3 Endpoints

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

1.4 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.

1.5 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.

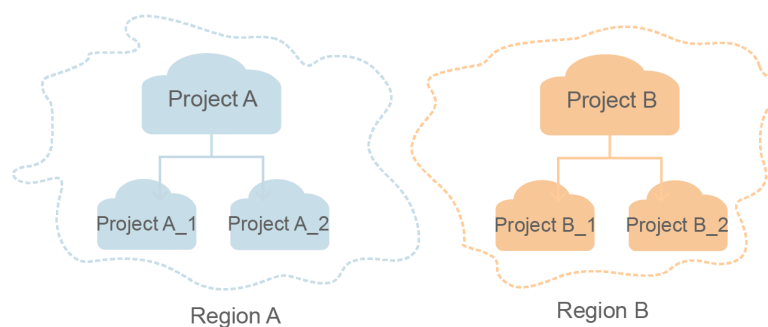
- AZ

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, and 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 **xxxxxxxxxxxxxxxxxxxx** (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": "xxxxxxxxxxxxxxxxxxxxxxx"  
    }  
  }  
}
```

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 **ABCDEFJ....**, add **X-Auth-Token: ABCDEFJ....** in a request as follows:

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

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
→ MIIVXQVJKoZIhvcNAQcCoIIYtJCCEoCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOansiZXhwaXJlc19hdCI6IjpwMTktMDItMTNUMC
fj3KJs6YgKnpVNRbW2eZ5eb78SZ0kqjACgkIQ01wi4JlGzrpd18LGXK5tdfdq4lqHCYb8P4NaY0NYejcAgzJVeFYtLWT1.GSO0zxKZmlQHqJ82HBqHdglZO9fuEbL5dMhdavj+33wEI
xHRC9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXI1jipPEGA270g1FruooL6jqgIFkNPQuFSOUB+uSsttVwRtNfsC+qTp22Rkd5MCqFGQ8LcuUx3a+9CMBnOintWW7oeRUVhVpxk8pxiX1wTEboX-
RzT6MUbvpvGw-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/

Requests

None

Responses

- 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 | Mandatory | 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 []. |
| 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 | 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

```
{
  "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

Requests

None

Responses

- 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`

Requests

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 | Specifies the 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 . |

Responses

- Parameter description

Table 5-8 Parameter description

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

- Response example

```
{
  "versions": [
    "3.2",
    "3.4",
    "4.0"
  ]
}
```

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`

Requests

Request parameters

Table 5-9 Parameter description

| Name | Type | IN | Man dator y | Description |
|----------------|-------------|------------|-------------------|--|
| x-auth-token | string | head er | Yes | User token |
| project_id | string | path | Yes | Specifies the 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 | Integ er | query | No | Index offset. <ul style="list-style-type: none"> 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 | Integ er | query | No | Maximum pieces of specifications information that can be queried <ul style="list-style-type: none"> 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. |

Responses

- 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: <ul style="list-style-type: none"> • 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 | <p>Indicates the resource specification code.</p> <p>Example: dds.mongodb.c6.xlarge.2.shard</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 | <p>key indicates the AZ ID, and value indicates the specification status in the AZ. Its value can be any of the following:</p> <ul style="list-style-type: none"> • normal: The specification is on sale. • unsupported: This specification is not supported. • sellout: The specification is sold out. |
| engine_versions | Array of strings | Yes | <p>Database versions</p> <p>For example, DDS mongos node, {"3.4", "4.0"}</p> |

 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

Requests

Request parameters

Table 5-12 Parameter description

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|--|
| x-auth-token | string | header | Yes | User token |
| 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 . |

Responses

- 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> • 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 | User token |

| 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 . |

Requests

- 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. |
| 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 | The 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. |

| Name | Type | Mandatory | Description |
|-------------------|--------|-----------|--|
| vpc_id | String | Yes | <p>The VPC ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • 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 | <p>The network ID of the subnet. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • 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. |
| security_group_id | String | Yes | <p>The security group ID. To obtain the security group ID, perform either of the following methods:</p> <ul style="list-style-type: none"> • 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. |

| Name | Type | Mandatory | Description |
|--------------------|--------|-----------|--|
| port | String | No | <p>Database access port</p> <p>Value range: 2100-9500, 27017, 27018, and 27019.</p> <p>If this parameter is not transferred, the port of the created DB instance is 8635 by default.</p> |
| password | String | No | <p>The database password.</p> <p>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 ~!@#%^*_-=+?</p> <p>Enter a strong password to improve security, preventing security risks such as brute force cracking.</p> <p>If this parameter is not transferred, set a password for the instance before connecting to the instance. For details, see Resetting the Administrator Password.</p> |
| disk_encryption_id | String | No | <p>The key ID used for disk encryption. The string must comply with UUID regular expression rules.</p> <p>If this parameter is not transferred, disk encryption is not performed.</p> |
| mode | String | Yes | <p>The instance type. Cluster and replica set instances are supported.</p> <p>Valid value:</p> <ul style="list-style-type: none"> ● Sharding ● ReplicaSet ● Single |

| Name | Type | Mandatory | Description |
|-----------------------|------------------|-----------|--|
| 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. |
| 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. <ul style="list-style-type: none"> 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> . |

| Name | Type | Mandatory | Description |
|-----------------------|------------------|-----------|---|
| ssl_option | String | No | Specifies whether to enable or disable SSL. Valid value: <ul style="list-style-type: none"> 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. |
| 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: <ul style="list-style-type: none"> 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 4.2, 4.0, and 3.4 are supported. The value can be 4.2 , 4.0 , or 3.4 . NOTE <ul style="list-style-type: none"> • DDS 4.2 is restricted for commercial use. For details, see the DDS notices. • To ensure you have a good experience using DDS, create a DDS 4.0 instance. |
| storage_engine | String | Yes | The storage engine. DDS supports the WiredTiger and RocksDB storage engines. <ul style="list-style-type: none"> • If the database version is 4.2 and the storage engine is RocksDB, the value is rocksDB. |

Table 5-19 Data structure of the Configurations field

| Parameter | Type | Mandatory | Description |
|-----------|--------|-----------|---|
| type | String | Yes | Node type. Valid value: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • mongos • shard • config • replica • single |

| Parameter | Type | Mandatory | Description |
|------------------|--------|-----------|--|
| configuration_id | String | Yes | Parameter group ID. For details, see Table 5-157 . |

Table 5-20 Data structure of the flavor field

| Name | Type | Mandatory | Description |
|------|--------|-----------|---|
| type | String | Yes | The node type. Valid value: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. |

| Name | Type | Mandatory | Description |
|---------|--------|-----------|--|
| storage | String | No | <p>The disk type.</p> <p>Valid value: ULTRAHIGH, which indicates the type SSD.</p> <p>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.</p> |
| size | String | No | <p>The disk size.</p> <p>This parameter is mandatory for all nodes except mongos. This parameter is invalid for the mongos nodes.</p> <p>The value must be a multiple of 10. The unit is GB.</p> <ul style="list-style-type: none"> • 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 | <p>The resource specification code. For details about how to obtain the value, see the response values of spec_code in Querying Database Specifications.</p> <p>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).</p> <p>Example:</p> <ul style="list-style-type: none"> • 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 | <p>The backup time window. Automated backups will be triggered during the backup time window.</p> <p>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.</p> <ul style="list-style-type: none"> • 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. <p>Example value: 23:00-00:00</p> |
| keep_days | String | No | <p>The number of days to retain the generated backup files.</p> <p>The value range is from 0 to 732.</p> <ul style="list-style-type: none"> • 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 | <p>Tag key. The value can contain a maximum of 36 unicode characters.</p> <p>The key cannot be left blank or an empty string.</p> <p>The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).</p> |
| value | String | Yes | <p>Tag value. It contains a maximum of 43 Unicode characters. The value can be an empty string.</p> <p>The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).</p> |

Table 5-23 Data structure of the ChargeInfo field

| Parameter | Type | Mandatory | Description |
|-------------|--------|-----------|--|
| charge_mode | String | Yes | <p>Billing mode. Value range:</p> <ul style="list-style-type: none"> • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode. |
| period_type | String | No | <p>Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid. Value range:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.

- Request example

Create a 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"
  }
]
}

```

Create a cross-AZ cluster instance.

```

{
  "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"
  }]
}

```

Create a replica set instance.

```

{
  "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-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.c6.medium.4.repset"
  }
],
"backup_strategy": {
  "start_time": "08:15-09:15",
  "keep_days": 8
},
"ssl_option": 1,
"tags": [
  {
    "key": "dds001",
    "value": "dds001"
  }
]
}

```

Create a 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"
  }
]
}

```

Responses

- 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. |
| 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. |

| Name | Type | Mandatory | Description |
|-----------------------|------------------|-----------|--|
| 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, 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 . |
| 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. |

| Name | Type | Mandatory | Description |
|-------------|------------------|-----------|--|
| 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 4.2, 4.0, and 3.4 are supported. The value can be 4.2 , 4.0 , or 3.4 . NOTE <ul style="list-style-type: none"> DDS 4.2 is restricted for commercial use. For details, see the DDS notices. To ensure you have a good experience using DDS, create a DDS 4.0 instance. |

| Name | Type | Mandatory | Description |
|----------------|--------|-----------|--|
| storage_engine | String | Yes | <p>The storage engine. DDS supports the WiredTiger and RocksDB storage engines.</p> <ul style="list-style-type: none"> If the database version is 4.2 and the storage engine is RocksDB, the value is rocksDB. |

Table 5-26 Data structure of the Configurations field

| Parameter | Type | Mandatory | Description |
|------------------|--------|-----------|---|
| type | String | Yes | <p>Node type. Valid value:</p> <ul style="list-style-type: none"> 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. <p>Enumerated values:</p> <ul style="list-style-type: none"> mongos shard config replica single |
| configuration_id | String | Yes | Parameter group ID. For details, see Table 5-157 . |

Table 5-27 Data structure of the flavor field

| Name | Type | Mandatory | Description |
|------|--------|-----------|---|
| type | String | Yes | The node type. Valid value: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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. |

| Name | Type | Mandatory | Description |
|---------|--------|-----------|--|
| storage | String | No | <p>The disk type.</p> <p>Valid value: ULTRAHIGH, which indicates the type SSD.</p> <p>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.</p> |
| size | String | No | <p>The disk size.</p> <p>This parameter is mandatory for all nodes except mongos. This parameter is invalid for the mongos nodes.</p> <p>The value must be a multiple of 10. The unit is GB.</p> <ul style="list-style-type: none"> • 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 | <p>The resource specification code. For details about how to obtain the value, see the response values of spec_code in Querying Database Specifications.</p> <p>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).</p> <p>Example:</p> <ul style="list-style-type: none"> • 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 5-28 Data structure of the backup_strategy field

| Name | Type | Mandatory | Description |
|------------|--------|-----------|--|
| start_time | String | Yes | <p>The backup time window. Automated backups will be triggered during the backup time window.</p> <p>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.</p> <ul style="list-style-type: none"> • 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. <p>Example value: 23:00-00:00</p> |
| keep_days | String | No | <p>The number of days to retain the generated backup files.</p> <p>The value range is from 0 to 732.</p> <ul style="list-style-type: none"> • 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 5-29 Data structure of the tags field

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

Table 5-30 Data structure of the ChargeInfo field

| Parameter | Type | Mandatory | Description |
|-------------|--------|-----------|--|
| charge_mode | String | Yes | <p>Billing mode. Value range:</p> <ul style="list-style-type: none"> • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode. |
| period_type | String | No | <p>Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid. Value range:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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,
      "spec_code": "dds.mongodb.c6.medium.4.shard",
      "size": 20
    },
    {
      "type": "config",
      "num": 1,
      "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 | User token |
| 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 |
|-------------|--------|------|-------------------|---|
| 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. |

Requests

- Parameter description

Table 5-32 Parameter description

| Name | Type | Ma nda tory | Description |
|-------------|--------|-------------------|--|
| target_type | String | No | <p>The type of the object to restart.</p> <ul style="list-style-type: none"> This parameter is mandatory when you restart one or more nodes of a cluster instance. <ul style="list-style-type: none"> 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 transferred when the DB instance is restarted. |
| target_id | String | Yes | <p>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.</p> <ul style="list-style-type: none"> In a cluster instance, the value is the ID of the node to restart. When you restart the entire DB instance, the value is the DB instance ID. |

- Request example

Restart the DB instance.

```
{
  "target_id":"9136fd2a9fcd405ea4674276ce36dae8in02"
}
```

Restart shards.

```
{
  "target_type": "shard",
  "target_id": "84e7c96b82aa4fedb3b00f98edd71ba4gr02"
}
```

Restart configs.

```
{
  "target_type": "config",
  "target_id": "06439baa35c146d3a8965af59d370908gr02"
}
```

Restart mongos.

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

Responses

- Parameter description

Table 5-33 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](#).

5.5.3 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

Requests

Parameter description

Table 5-34 Request parameters

| Name | Type | IN | Mandator y | Description |
|--------------|--------|------------|---------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Responses

- Parameter description

Table 5-35 Parameter description

| Name | Type | Mandator y | Description |
|--------|--------|---------------|-------------|
| job_id | String | Yes | Task ID |

- 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/v3/0483b6b16e954cb88930a360d2c4e663/instances
 - Querying instances and details based on search criteria
https://dds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/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 |
| project_id | String | Yes | The 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 | Type | Mandatory | Description |
|----------------|--------|-----------|--|
| name | String | No | <p>The DB instance name.</p> <p>If you use asterisk (*) at the beginning of the name, fuzzy search results are returned. Otherwise, the exact results are returned.</p> <p>NOTE The asterisk (*) is a reserved character in the system and cannot be used alone.</p> |
| mode | String | No | <p>The instance type.</p> <ul style="list-style-type: none"> • Sharding indicates the cluster instance. • ReplicaSet indicate the replica set instance. • Single indicates the single node instance. |
| datastore_type | String | No | <p>The database type. The value is DDS-Community.</p> |
| vpc_id | String | No | <p>The VPC ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • 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 | No | <p>The network ID of the subnet. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • 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 |
|--------|---------|-----------|--|
| 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. <i>{key}</i> indicates the tag key, and <i>{value}</i> 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 (,). |

Requests

None

Responses

- 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 |
| status | String | Yes | <p>The DB instance status. Valid value:</p> <ul style="list-style-type: none"> ● 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. <p>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.</p> |
| 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. |

| Name | Type | Mandatory | Description |
|-------------------|---------|-----------|--|
| region | String | Yes | The region where the DB instance is deployed. |
| datastore | Object | Yes | The database information. For more information, see Table 5-39 . |
| engine | String | Yes | The storage engine. DDS supports the WiredTiger and RocksDB storage engines. <ul style="list-style-type: none"> If the database version is 4.2 and the storage engine is RocksDB, the value is rocksDB. If the database version is 4.0 or 3.4 and the storage engine is WiredTiger, 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. <ul style="list-style-type: none"> 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 | Indicates the security group ID. |

| Name | Type | Mandatory | Description |
|-----------------------|------------------|-----------|---|
| backup_strategy | Object | Yes | The backup policy. For more information, see Table 5-40 . |
| pay_mode | String | No | The billing mode. <ul style="list-style-type: none"> • 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 | <p>Action that is being executed on an instance.</p> <p>Valid value:</p> <ul style="list-style-type: none"> • 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 |
|------|------|-----------|---|
| | | | <ul style="list-style-type: none"> ● 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_CONFIGURATI ON: 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 |
|------|------|-----------|---|
| | | | <ul style="list-style-type: none"> ● 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 |
|----------|------------------|-----------|---|
| | | | <p>database user is being created.</p> <ul style="list-style-type: none"> • 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 | <p>The database version. Versions 4.2, 4.0, and 3.4 are supported. The value can be 4.2, 4.0, or 3.4.</p> <p>NOTE</p> <ul style="list-style-type: none"> • DDS 4.2 is restricted for commercial use. For details, see the DDS notices. • To ensure you have a good experience using DDS, create a DDS 4.0 instance. |

| Name | Type | Mandatory | Description |
|-----------------|---------|-----------|---|
| 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: <ul style="list-style-type: none"> • shard • config • mongos • replica • single |
| id | String | Yes | The group ID. This parameter is valid only when the node type is shard or config. |
| name | String | Yes | The group name. This parameter is valid only when the node type is shard or config. |

| Name | Type | Mandatory | Description |
|--------|------------------|-----------|--|
| status | String | Yes | The group status. This parameter is valid only when the node type is shard or config. |
| volume | Object | Yes | The volume information. For more information, see Table 5-42 . This parameter is valid only when the node type is shard, config, or replica. |
| 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. |

| Name | Type | Mandatory | Description |
|------------|--------|-----------|---|
| role | String | Yes | <p>The node role.</p> <p>Valid value:</p> <ul style="list-style-type: none"> • 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. |
| private_ip | String | Yes | <p>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 "".</p> <p>CAUTION</p> <p>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.</p> |
| public_ip | String | Yes | <p>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.</p> |

| Name | Type | Mandatory | Description |
|-------------------|--------|-----------|---|
| 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.

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}/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 | User token |
| 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. |

Requests

- Parameter description

Table 5-46 Parameter description

| Name | Type | Mandator y | Description |
|-------------|---------|---------------|--|
| volume | Object | Yes | The detailed information about the volume request. For more information, see Table 5-47 . |
| is_auto_pay | Boolean | No | 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. <ul style="list-style-type: none"> • 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. |

Table 5-47 Data structure description of the volume field

| Name | Type | Mandator y | Description |
|----------|--------|---------------|--|
| group_id | String | No | The role ID. <ul style="list-style-type: none"> • For a cluster instance, this parameter is set to the ID of the shard group. • This parameter is not transferred for replica set instances. |

| Name | Type | Mandatory | Description |
|----------|------------------|-----------|---|
| size | String | Yes | <p>The requested disk capacity. The value must be an integer multiple of 10 and greater than the current storage space.</p> <ul style="list-style-type: none"> In a cluster instance, this parameter indicates the storage space of shard nodes. The value range is from 10 GB to 2000 GB. 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 3000 GB. 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 1000 GB. |
| node_ids | Array of strings | No | <p>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.</p> |

- Request example

Clusters:

POST <https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume>

```
{
  "volume" : {
    "group_id" : "1b0c008adbcb495c81a3d5762a02a2abgr02",
    "size" : 20
  }
}
```

Replica sets:

POST <https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume>

```
{
  "volume" : {
    "size" : 20
  }
}
```

Single nodes:

POST <https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume>

enlarge-volume

```
{
  "volume" : {
    "size" : 20
  }
}
```

- Read replica of a replica set instance.
POST https://dds.cn-north-1.myhuaweicloud.com/v3/054e292c9880d4992f02c0196d3ea468/instances/054e292c9880d4992f02c0196d3ein02/enlarge-volume
{
 "volume" : {
 "size" : 20,
 "node_ids" : ["8f643d252d834a4c916b2db4322f9955in02"]
 }
}

Responses

- Parameter description

Table 5-48 Parameter description

| Name | Type | Mandatory | Description |
|----------|--------|-----------|--|
| job_id | String | Yes | The task ID. |
| order_id | String | No | The order ID. This parameter is returned only when the storage capacity of a yearly/monthly DB instance is expanded. |

- 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.
- The specifications of the new node must be the same as those of the existing nodes in the instance.

The specification series includes general-purpose (s6), enhanced (c3), and enhanced II (c6).

Example:

- dds.mongodb.s6.large.4.mongos and dds.mongodb.s6.medium.4.mongos have the same specifications.
- dds.mongodb.s6.large.4.mongos and dds.mongodb.c3.large.4.mongos are not of the same specifications.

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 | User token |
| 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. |

Requests

- Parameter description

Table 5-50 Parameter description

| Name | Type | Mandatory | Description |
|-------------|---------|-----------|---|
| type | String | Yes | Type of the object to be scaled. <ul style="list-style-type: none"> Set the value to mongos if mongos nodes are to be added. Set the value to shard if shard nodes are to be added. |
| spec_code | String | Yes | The resource specification code. For details about how to obtain the resource specification code, see the flavors.spec_code parameter in Querying Database Specifications . |
| num | String | Yes | The number of mongos or shard nodes to be added. A cluster instance supports up to 32 mongos nodes and 32 shard nodes. |
| volume | Object | No | The volume information. For more information, see Table 5-51 . <ul style="list-style-type: none"> 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. <p>NOTE If multiple shards are added at a time, the shards must have the same specifications and disk capacity.</p> |
| is_auto_pay | Boolean | No | 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. <ul style="list-style-type: none"> 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. |

Table 5-51 volume field data structure description

| Name | Type | Mandatory | Description |
|------|--------|-----------|--|
| size | String | Yes | The disk capacity of all new shards. The value range is from 10 GB to 2000 GB. |

- Request example

Number of mongos nodes to be added:

```
{
  "type": "mongos",
  "spec_code": "dds.mongodb.c6.medium.4.mongos",
  "num": 1
}
```

Number of shard nodes to be added:

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

Responses

- Parameter description

Table 5-52 Parameter description

| Name | Type | Mandatory | Description |
|----------|--------|-----------|---|
| job_id | String | Yes | Indicates the task ID. |
| order_id | String | No | The order ID. This parameter is returned only when the nodes of a yearly/monthly DB instance are added. |

- 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

Table 5-53 lists the specifications to which each instance specification can be changed. Exercise caution when performing this operation. Once the instance specification is changed, it cannot be changed back again.

Table 5-53 Change rules

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

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 | Mandator y | Description |
|--------------|--------|---------|------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-55 Parameter description

| Name | Type | Mandator y | Description |
|--------|--------|------------|---|
| resize | Object | Yes | The specification information. For more information, see Table 5-56 . |

| Name | Type | Mandatory | Description |
|-------------|---------|-----------|---|
| is_auto_pay | Boolean | No | <p>Whether the order is automatically paid from your account when you change the class of a yearly/monthly DB instance. This parameter does not affect the payment mode of automatic renewal.</p> <ul style="list-style-type: none"> • This parameter is invalid when the instance class is scaled down. • When the instance class is scaled up, this parameter can be set to: <ul style="list-style-type: none"> - 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. |

Table 5-56 Data structure description of the resize field

| Name | Type | Mandatory | Description |
|-------------|--------|-----------|--|
| target_type | String | No | <p>The object type:</p> <ul style="list-style-type: none"> • This parameter is mandatory for a cluster instance. If you modify the specifications of a mongos node, the value is mongos. If you modify the specifications of a shard node, the value is shard. If you modify the specifications of a config node, the value is config. • This parameter is not transferred for replica set and single node instances. |

| Name | Type | Mandatory | Description |
|------------------|--------|-----------|--|
| target_id | String | Yes | <p>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 an instance.</p> <ul style="list-style-type: none"> • If you modify the specifications of a mongos node, the value is the mongos node ID. If you modify the specifications of a shard node, the value is the shard node ID. If you modify the specifications of a config node, the value is the config node ID. • For a replica set instance, the value is the DB instance ID. • For a single node instance, the value is the DB instance ID. |
| target_spec_code | String | Yes | <p>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.</p> |

- Request example

Modify the mongos node specifications.

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

Modify the shard node specifications.

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

Modify the config node specifications.

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

```
}  
}  
Modify specifications of a replica set or a single node instance.  
{  
  "resize": {  
    "target_id": "aeeb40a704904977ad78993d138ec942in02",  
    "target_spec_code": "dds.mongodb.c6.medium.4.repset"  
  }  
}
```

Responses

- Parameter description

Table 5-57 Parameter description

| Name | Type | Mandatory | Description |
|----------|--------|-----------|--|
| job_id | String | Yes | The task ID. |
| order_id | String | No | The order ID. This parameter is returned only when the specifications of a yearly/monthly DB instance are changed. |

- 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

Requests

Parameter description

Table 5-58 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Responses

- Parameter description

Table 5-59 Parameter description

| Name | Type | Mandat ory | Description |
|--------|--------|---------------|--------------|
| job_id | String | Yes | The task 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](#).

5.5.9 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 | User token |
| 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. |

Requests

- Parameter description

Table 5-61 Parameter description

| Name | Type | Mandatory | Description |
|------------|--------|-----------|---|
| ssl_option | String | Yes | Whether to enable or disable SSL. Valid value: <ul style="list-style-type: none"> The value 0 indicates that SSL is disabled by default. The value 1 indicates that SSL is enabled by default. |

- Request example

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

Responses

- Parameter description

Table 5-62 Parameter description

| Name | Type | Mandatory | Description |
|------------|--------|-----------|---|
| job_id | String | Yes | The workflow ID. |
| ssl_option | String | Yes | Whether to enable or disable SSL. Valid value: <ul style="list-style-type: none"> 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 | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-64 Parameter description

| Name | Type | Mandatory | Description |
|-------------------|--------|-----------|---|
| new_instance_name | String | Yes | New 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. |

- Request example

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

Responses

- 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 | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-66 Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|--|
| remark | Yes | String | Instance remarks The length cannot exceed 64 characters. The carriage return character and the following special characters are not supported >!<"&'= |

- Request example

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

Responses

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 | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-68 Parameter description

| Name | Type | Mandatory | Description |
|------|---------|-----------|---|
| port | Integer | Yes | The port number. Valid port range and ports: 2100 to 9500, 27017, 27018, and 27019. |

- Request example

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

Responses

- Parameter description

Table 5-69 Parameter description

| Name | Type | Mandatory | Description |
|--------|---------|-----------|------------------|
| job_id | String | Yes | The workflow ID. |
| port | Integer | Yes | The port number. |

- 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 | User token |
| 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. |

Requests

- Parameter description

Table 5-71 Parameter description

| Name | Type | Mandat ory | Description |
|-----------------------|--------|---------------|-----------------------------------|
| security_gro up_id | String | Yes | The ID of the new security group. |

- Request example

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

Responses

- Parameter description

Table 5-72 Parameter description

| Name | Type | Mandatory | Description |
|-------------------|--------|-----------|-----------------------------------|
| job_id | String | Yes | The workflow ID. |
| security_group_id | String | Yes | The ID of the new security group. |

- 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 | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| project_id | string | path | Yes | The project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| node_id | string | path | Yes | The node ID. <ul style="list-style-type: none"> Select the mongos node in a cluster instance. Select the primary or secondary node in a replica set instance. |

Requests

- Parameter description

Table 5-74 Parameter description

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--------------------|
| public_ip_id | String | Yes | The ID of the EIP. |
| public_ip | String | Yes | EIP. |

- Request example

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

Responses

- Parameter description

Table 5-75 Parameter description

| Name | Type | Mandatory | Description |
|-----------|--------|-----------|------------------|
| job_id | String | Yes | The workflow ID. |
| node_name | String | Yes | The node name. |
| node_id | String | Yes | The node ID. |

| Name | Type | Mandato ry | Description |
|--------------|--------|---------------|--------------------|
| public_ip_id | String | Yes | The ID of the EIP. |
| public_ip | String | Yes | EIP. |

- 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>

Requests

Parameter description

Table 5-76 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|--|
| x-auth-token | string | header | Yes | User token |
| project_id | string | path | Yes | The project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| node_id | string | path | Yes | The node ID. |

Responses

- Parameter description

Table 5-77 Parameter description

| Name | Type | Mandatory | Description |
|-----------|--------|-----------|----------------------------|
| job_id | String | Yes | Indicates the workflow ID. |
| node_name | String | Yes | The node name. |
| node_id | String | Yes | The node ID. |

- 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 | User token |
| 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. |

Requests

- Parameter description

Table 5-79 Parameter description

| Name | Type | Mandatory | Description |
|---------|--------|-----------|---|
| new_ip | String | Yes | The new IP address, which must be in an available VPC CIDR block. Only IPv4 is supported. |
| node_id | String | Yes | The node ID. |

- Request example

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

Responses

- Parameter description

Table 5-80 Parameter description

| Name | Type | Mandatory | Description |
|---------|--------|-----------|-----------------------------|
| job_id | String | Yes | The workflow ID. |
| node_id | String | Yes | The node ID. |
| new_ip | String | Yes | The new private IP address. |

- 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 | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-82 Parameter description

| Name | Type | Mandatory | Description |
|-----------|--------|-----------|---|
| type | String | Yes | Cluster instance type. <ul style="list-style-type: none"> When adding a shard group, set the value to shard. When adding a config group, set the value to config. |
| target_id | String | No | Shard group ID. <p>CAUTION</p> <ul style="list-style-type: none"> 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. |
| password | String | Yes | The password for enabling this function for a cluster. <ul style="list-style-type: none"> 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. <p>CAUTION This password cannot be changed. Exercise caution when performing this operation.</p> |

- Request example

```
POST https://dds.cn-north-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/520c58ba00a3497e97ce0b9604874dd6in02/create-ip
```

```
{
  "type" : "config",
  "password" : "*****"
}
```

```
POST https://dds.cn-north-1.myhuaweicloud.com/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/520c58ba00a3497e97ce0b9604874dd6in02/create-ip
```

```
{
  "type" : "shard",
  "password" : "*****"
}
```



```
POST https://dds.cn-north-1.myhuaweicloud.com/
v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/
520c58ba00a3497e97ce0b9604874dd6in02/create-ip
{
  "type" : "shard",
  "target_id" : "91bac9f23ead42e19013333e05f44829gr02",
  "password" : "*****"
}
```

Responses

- Parameter description
None
- Response example
{ }

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 | Mandator y | Description |
|--------------|--------|---------|------------|-------------|
| x-auth-token | string | head er | Yes | User token |

| Name | Type | IN | Man dator y | Description |
|-------------|--------|------|-------------------|---|
| 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. |

Requests

- Parameter description

Table 5-84 Parameter description

| Name | Type | Mandato ry | Description |
|-----------------------|------------------|---------------|--|
| client_network_ranges | Array of strings | Yes | <p>CIDR block where the client is located</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. |

- Request example

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

Responses

- Response example
 {}

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

Requests

Parameter description

Table 5-85 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Responses

- Parameter description

Table 5-86 Parameter description

| Name | Type | Manda tory | Description |
|---------|------------------|---------------|--|
| az_list | Array of objects | Yes | AZ information. For more information, see Table 5-87 . |

Table 5-87 az_list field data structure description

| Name | Type | Manda tory | Description |
|-------------|--------|---------------|---|
| code | String | Yes | The AZ ID. |
| description | String | Yes | AZ description. |
| status | String | Yes | Status of the current AZ. <ul style="list-style-type: none"> ENABLED: indicates that the AZ (group) is available. DISABLED: indicates that the AZ (group) is unavailable. |

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.

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 | User token |
| 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. |

Requests

- Parameter description

Table 5-89 Parameter description

| Name | Type | Mandatory | Description |
|------------|--------|-----------|---|
| target_azs | String | Yes | Single-AZ or multi-AZ to which the VM is migrated. 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 . |

- Request example

Migration to a single AZ:

```
{
  "target_azs": "az1xahz"
}
```

Migration to multiple AZs:

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

Responses

- Parameter description

Table 5-90 Parameter description

| Name | Type | Mandatory | Description |
|--------|--------|-----------|--------------|
| job_id | String | Yes | The task 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](#).

5.5.21 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 | The project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| instance_id | Yes | String | 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 5-92 Request header parameters

| Name | Mandatory | Type | Description |
|--------------|-----------|--------|-------------|
| x-auth-token | Yes | String | User token. |

Requests

- Parameter description

Table 5-93 Request body parameters

| Name | Mandatory | Type | Description |
|-------------|-----------|---------|--|
| num | Yes | Integer | Number of nodes to be added to a replica set instance. If a replica set instance has three nodes, two or four nodes can be added. If a replica set instance has five nodes, only two nodes can be added. If a replica set instance has seven nodes, the standby node cannot be added. |
| is_auto_pay | No | Boolean | Whether the order is automatically paid from your account when you change the class of a yearly/monthly DB instance. This parameter does not affect the payment mode of automatic renewal. <ul style="list-style-type: none"> • This parameter is invalid when the instance class is scaled down. • When the instance class is scaled up, this parameter can be set to: <ul style="list-style-type: none"> - 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. |

- Request example

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

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


Responses

- Parameter description

Table 5-94 Response body parameters

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

- Response example

```
{  
  "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 replica set instances.

Restrictions

- This API can only be used to add read replicas to replica set instances.
- A maximum of five read replicas can be added to a replica set instance.
- This API supports both yearly/monthly and pay-per-use DB instances.

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 | The project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| instance_id | Yes | String | 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 5-96 Request header parameters

| Name | Mandatory | Type | Description |
|--------------|-----------|--------|-------------|
| x-auth-token | Yes | String | User token. |

Request Parameters

- Parameter description

Table 5-97 Request body parameters

| Name | Mandatory | Type | Description |
|-----------|-----------|---------|--|
| spec_code | Yes | String | 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 |
| num | Yes | Integer | Number of read replicas to be added. The value ranges from 1 to 5 . |
| delay | No | Integer | Synchronization delay. The value ranges from 0 to 1200, in milliseconds. The default value is 0 . |

| Name | Mandatory | Type | Description |
|-------------|-----------|---------|---|
| is_auto_pay | No | Boolean | <p>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.</p> <ul style="list-style-type: none"> • 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. |

Request Example

Example of adding read replicas to replica set instances

```
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 | Task ID. |
| order_id | String | Order ID. This parameter is available only when nodes of a yearly/monthly DB instance are added. |

Response Example

```
{
  "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

Community Edition 3.4 and 4.0 instances are supported.

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

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| project_id | string | path | Yes | The project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| node_id | string | path | Yes | The node ID. <ul style="list-style-type: none"> • Select the mongos node in a cluster instance. • Select the primary or secondary node in a replica set instance. |

Table 5-100 Query parameters

| Parameter | Type | Mandatory | Description |
|--------------|---------|-----------|---|
| 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 range is [1, 20]. The default value is 10 , indicating that 10 records are returned. |
| plan_summary | String | No | The description of an execution plan. 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 |
| type | String | No | The operation type. 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. |
| namespace | String | No | The namespace. 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. |
| cost_time | Integer | No | The duration. The unit is us. 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. |

Response Parameters

- Parameter description

Table 5-101 Response body parameters

| Parameter | Type | Mandatory | Description |
|-------------|------------------|-----------|--|
| total_count | Integer | Yes | The total number of records. |
| sessions | Array of objects | Yes | The detailed information. For details, see the QuerySessionResponse table. |

Table 5-102 Data structure description of the session field

| Parameter | Type | Description |
|--------------|---------|---|
| id | String | The session ID. |
| active | Boolean | Whether the current session is active. If the value is "true" , the session is active. If the value is "false" , the session is inactive. |
| operation | String | Operation. |
| type | String | Operation type. |
| cost_time | String | Duration. The unit is us. |
| plan_summary | String | The description of an execution plan. |
| host | String | Host. |
| client | String | Client address. |
| description | String | Indicates the connection description. |
| namespace | String | Namespace. |

Response example

```
{
  "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\":{\"$binary\":{\"base64\":\"00CMtIVItQN4IsEOsJdrPL8s7jv5xwh5a/
    A5Qfvs2A8\\|=\\|=\", \"subType\":\"00\"}}}, \"$clusterTime\":{\"clusterTime\":{\"timestamp\":{\"t\":
    1.614047961E9,\"i\":1.0}},\"signature\":{\"hash\":{\"$binary\":{\"base64\":
    \"HxUWu68VyfvQFivWjHQDdJj/3YQ\\|=\\|=\", \"subType\":\"00\"}},\"keyId\":
    6.9312672235666801E18}}, \"$client\":{\"driver\":{\"name\":\"PyMongo\"},\"version\":\"3.6.1\"},
    \"os\":{\"type\":\"Linux\"},\"name\":\"Linux\", \"architecture\":\"x86_64\", \"version\":
```

```

\4.18.0-147.5.1.0.h269.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"
} ]
}

```

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

- Community Edition 3.4 and 4.0 instances are supported.
- 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

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|--|
| x-auth-token | string | head er | Yes | User token |
| project_id | string | path | Yes | The project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |

| Name | Type | IN | Mandatory | Description |
|---------|--------|------|-----------|---|
| node_id | string | path | Yes | The node ID. <ul style="list-style-type: none"> Select the mongos node in a cluster instance. Select the primary or secondary node in a replica set instance. |

Requests

- Parameter description

Table 5-104 Request body parameters

| Parameter | Type | Mandatory | Description |
|-----------|------------------|-----------|--|
| sessions | Array of strings | Yes | The IDs of sessions to be terminated. For details, see the session ID returned in Table 5-102 . |

- Request example

```
{
  "sessions" : [ "34631", "34703" ]
}
```

Responses

```
{}
```

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

Requests

Parameter description

Table 5-105 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| project_id | string | path | Yes | The 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. |
| node_id | string | query | No | The node ID. If this parameter is left blank, the number of connections of all nodes that can be connected in the instance is queried by default. |

Responses

- Response parameters

Table 5-106 Response body parameters

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

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

| Parameter | Type | Mandatory | Description |
|-----------|---------|-----------|---|
| client_ip | String | Yes | The IP address of the client connected to the instance or node. |
| count | Integer | Yes | The number of connections corresponding to the IP address. |

- Response example

```
{
  "total_connections": 75,
  "total_inner_connections": 50,
  "total_outer_connections": 25,
  "inner_connections": [
    {"client_ip": "10.10.10.24", "count": 19},
    {"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 `https://{Endpoint}/v3/{project_id}/backups`
- URI example
`https://dds.ap-southeast-1.myhuaweicloud.com/v3/0549b4a43100d4f32f51c01c2fe4acdb/backups`

Requests

- Parameter description

Table 5-108 Parameter description

| Name | Type | Mandatory | Description |
|--------|--------|-----------|--|
| backup | Object | Yes | The backup parameter objects For more information, see Table 5-109 . |

Table 5-109 backup field data structure description

| 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. |
| name | String | Yes | The manual backup name. 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 (_). |
| description | String | No | The manual backup description. The description must consist of a maximum of 256 characters and cannot contain the following special characters: >!<"&'= |

- Request example

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

Responses

- Parameter description

Table 5-110 Parameter description

| Name | Type | Mandatory | Description |
|-----------|--------|-----------|--|
| job_id | String | Yes | The ID of the asynchronous manual backup task. |
| backup_id | String | Yes | Manual backup ID |

- Response example

```
{
  "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

Requests

Parameter description

Table 5-111 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| project_id | string | path | Yes | The 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. |

Responses

- 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 |
| project_id | string | Yes | The project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |

| Name | Type | Mandator y | 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 | Backup ID. If the backup ID belongs to an automated incremental backup, the instance ID must be specified. |
| backup_type | string | No | Backup type. <ul style="list-style-type: none"> ● Auto: indicates automated full backup. ● Manual indicates manual full backup. ● Incremental: indicates 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 | Specifies 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: <ul style="list-style-type: none"> • Sharding • ReplicaSet • Single |

Requests

None

Responses

- 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 | Indicates 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. <ul style="list-style-type: none"> ● Auto: indicates automated full backup. ● Manual: indicates manual full backup. ● Incremental: indicates 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: <ul style="list-style-type: none"> ● BUILDING: Backup in progress ● COMPLETED: Backup completed ● FAILED: Backup failed ● DISABLED: Backup being deleted |
| size | Long | Yes | The backup size in KB. |

| Name | Type | Mandatory | Description |
|-------------|--------|-----------|-------------------------|
| 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 4.2, 4.0, and 3.4 are supported. The value can be 4.2, 4.0, or 3.4 . NOTE <ul style="list-style-type: none"> • DDS 4.2 is restricted for commercial use. For details, see the DDS notices. • To ensure you have a good experience using DDS, create a DDS 4.0 instance. |

- 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`

Table 5-117 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

None

Responses

- Parameter description

Table 5-118 Parameter description

| Name | Type | Mandator y | 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 | Mandato ry | 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. |

- Response example

Enable the automated backup policy.

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

Disabled the automated backup policy.

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

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 | User token |
| 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. |

Requests

- 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 | Yes | The number of days to retain the generated backup files. The value range is from 0 to 732. The value 0 indicates that the automated backup policy is disabled. |
| 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. <ul style="list-style-type: none"> 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 | Mandatory | Description |
|--------|--------|-----------|---|
| period | String | No | <p>The backup cycle configuration. Data will be automatically backed up on the selected days every week.</p> <p>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:</p> <ul style="list-style-type: none"> • This parameter is not transferred if its value 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 |

- Request example

Enable or modify an automated backup policy.

```
{
  "backup_policy": {
    "keep_days": 9,
    "start_time": "23:00-00:00",
    "period": "1,4,5,6,7"
  }
}
```

Disable an automated backup policy.

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

Responses

```
{
```

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 4.0 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 | User token |
| project_id | string | path | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |

Requests

- Parameter description

Table 5-124 Parameter description

| Name | Type | Mandator y | 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. |
| 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> . |
| security_group_id | String | Yes | Specifies the ID of the security group where a specified DB instance belongs to. For details about how to obtain this parameter value, see "Security Group" in the <i>Virtual Private Cloud API Reference</i> . |

| Name | Type | Mandatory | Description |
|--------------------|------------------|-----------|--|
| password | String | No | <p>Database password.</p> <p>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 ~!@#%^*_-=+?</p> <p>Enter a strong password to improve security, preventing security risks such as brute force cracking.</p> <p>If this parameter is not transferred, set a password for the instance before connecting to the instance. For details, see Resetting the Administrator Password.</p> |
| disk_encryption_id | String | No | <p>The key ID used for disk encryption. The string must comply with UUID regular expression rules.</p> <p>If this parameter is not transferred, disk encryption is not performed.</p> |
| configurations | Array of objects | No | <p>Parameter group configuration information. For more information, see Table 5-126.</p> <p>If this parameter is not transferred, the default parameter group is used.</p> |
| flavor | Array of objects | Yes | <p>Instance specifications. For more information, see Table 5-127.</p> <p>For details about how to obtain the value, see the parameter value in Querying Database Specifications.</p> |
| restore_point | Object | Yes | <p>The details about the backup to be restored to a new DB instance. For more information, see Table 5-125.</p> |

| Name | Type | Mandatory | Description |
|-----------------------|--------|-----------|---|
| backup_strategy | Object | No | Advanced backup policy. For more information, see Table 5-128 . |
| enterprise_project_id | String | No | Enterprise project ID. <ul style="list-style-type: none"> 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. |
| ssl_option | String | No | Whether to enable or disable SSL. Valid value: <ul style="list-style-type: none"> 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. |

| Name | Type | Mandatory | Description |
|-----------------------|------------------|-----------|--|
| server_group_policies | Array of strings | No | <p>The names of the policies associated with the ECS group of the DeC user. Available values include:</p> <ul style="list-style-type: none"> • 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. <p>If this parameter is not transferred for DeC users, anti-affinity deployment is disabled by default. Only DeC users can set this parameter.</p> |
| charge_info | Object | No | <p>Billing mode, which includes yearly/monthly and pay-per-use. The default billing mode is pay-per-use.</p> <p>For details, see Table 5-129.</p> |

Table 5-125 Data structure description of the restore_point field

| Name | Type | Mandatory | Description |
|-------------|--------|-----------|---|
| instance_id | String | No | <p>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.</p> <ul style="list-style-type: none"> • This parameter is optional when type is set to backup. • This parameter is mandatory when type is set to timestamp. |

| Name | Type | Mandatory | Description |
|--------------|---------|-----------|---|
| type | String | No | <p>The recovery mode. The enumerated values are as follows:</p> <ul style="list-style-type: none"> • backup: indicates restoration from backup files. In this mode, backup_id is mandatory when type is optional. • timestamp: indicates point-in-time restoration. In this mode, restore_time is mandatory when type is mandatory. |
| backup_id | String | No | <p>The ID of the backup to be restored. This parameter must be specified when the backup file is used for restoration.</p> <p>NOTE When type is not mandatory, backup_id is mandatory.</p> |
| restore_time | Integer | No | <p>The point in time that data is restored in the UNIX timestamp. The unit is millisecond and the time zone is UTC.</p> <p>NOTE When type is mandatory, restore_time is mandatory.</p> |

Table 5-126 Data structure description of the configurations field

| Parameter | Type | Mandatory | Description |
|------------------|--------|-----------|---|
| type | String | Yes | <p>The node type. Valid value:</p> <ul style="list-style-type: none"> 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. <p>Enumerated values:</p> <ul style="list-style-type: none"> mongos shard config replica single |
| configuration_id | String | Yes | Parameter group ID |

Table 5-127 Data structure of the flavor field

| Name | Type | Mandatory | Description |
|------|--------|-----------|--|
| type | String | Yes | <p>The node type.</p> <p>Valid value:</p> <ul style="list-style-type: none"> 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 | <p>The node quantity.</p> <p>Valid value:</p> <ul style="list-style-type: none"> 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. |

| Name | Type | Mandatory | Description |
|-----------|--------|-----------|---|
| size | String | No | <p>The disk size.</p> <p>The value must be a multiple of 10. The unit is GB.</p> <ul style="list-style-type: none"> • 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 | <p>The resource specification code. For details about how to obtain the value, see the parameter value in Querying Database Specifications.</p> |

Table 5-128 backup_strategy field data structure description

| Name | Type | Mandatory | Description |
|------------|--------|-----------|--|
| start_time | String | Yes | <p>The backup time window. Automated backups will be triggered during the backup time window.</p> <p>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.</p> <ul style="list-style-type: none"> 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. <p>Example value: 23:00-00:00</p> |
| keep_days | String | No | <p>The number of days to retain the generated backup files.</p> <p>The value range is from 0 to 732.</p> <ul style="list-style-type: none"> 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 of the ChargeInfo field

| Parameter | Type | Mandatory | Description |
|-------------|--------|-----------|--|
| charge_mode | String | Yes | <p>Billing mode. Value range:</p> <ul style="list-style-type: none"> prePaid: indicates the yearly/monthly billing mode. postPaid: indicates the pay-per-use billing mode. |

| Parameter | Type | Mandatory | Description |
|---------------|---------|-----------|--|
| period_type | String | No | Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid . Value range: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 | <p>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:</p> <ul style="list-style-type: none"> • 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.

- Request example

Restoring a backup to a new cluster instance:

```
{
  "name": "test-cluster-01",
  "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": "*****",
  "configurations": [
    {
      "type": "mongos",
      "configuration_id": "acb288dbd1174f26a8960b45591bd98apr02"
    },
    {
      "type": "shard",
      "configuration_id": "5bca546f0be64b038124ef9cedd1bfa1pr02"
    },
    {
      "type": "config",
      "configuration_id": "4d123b3ba8294921802b11bf4d8c5735pr02"
    }
  ],
  "restore_point": {
    "backup_id": "8f643d252d834a4c916b2db4322f99552734"
  },
  "flavor": [
    {
      "type": "mongos",
      "num": "2",
      "spec_code": "dds.mongodb.c6.medium.4.mongos"
    }
  ]
}
```

```
{
  "type": "shard",
  "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": "08:15-09:15",
  "keep_days": "8"
},
"ssl_option": "1",
"dss_pool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",
"server_group_policies": [
  "anti-affinity"
]
}
```

Restoring a backup to a new replica set instance:

```
"name": "test-replicaset",
"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": "*****",
"configurations": [
  {
    "type": "replica",
    "configuration_id": "f17e3aad778440fbb68603c8c9032003pr02"
  }
],
"restore_point": {
  "backup_id": "8f643d252d834a4c916b2db4322f99552734"
},
"flavor": [
  {
    "type": "replica",
    "num": "1",
    "storage": "ULTRAHIGH",
    "size": "30",
    "spec_code": "dds.mongodb.s2.medium.4.repset"
  }
],
"backup_strategy": {
  "start_time": "08:15-09:15",
  "keep_days": "8"
},
"ssl_option": "1"
}
```

Restoring a backup to a new single node instance:

```
{
  "name": "test-singlenode",
  "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": "*****",
"configurations": [
  {
    "type": "single",
    "configuration_id": "b8e962e66ede47609a94cba591735b49pr02"
  }
],
"restore_point": {
  "backup_id": "8f643d252d834a4c916b2db4322f99552734"
},
"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"
}
```

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

```
{
  "name": "replica-liuyunj1",
  "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",
  "flavor": [
    {
      "type": "replica",
      "num": 1,
      "size": 100,
      "spec_code": "dds.mongodb.c6.large.2.repset"
    }
  ],
  "backup_strategy": {
    "start_time": "08:00-09:00",
    "keep_days": "8"
  },
  "restore_point": {
    "instance_id": "d5833c2854a4486cb7960f829269e211in02",
    "type": "timestamp",
    "restore_time": 1607689584000
  },
  "ssl_option": "1"
}
```

Responses

- Parameter description

Table 5-130 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. |
| datastore | Object | No | Database information, which is the same as the request parameter. For more information, see Table 5-18 . |
| 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 | The ID of the security group to which the instance belongs. It is the same as the request parameter. |
| 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. |

| Name | Type | Mandatory | Description |
|-----------------------|------------------|-----------|---|
| configurations | Array of objects | No | Parameter group configuration information. For details, see Table 5-131 . |
| 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. |
| 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 5-132 . |

Table 5-131 Data structure description of the configurations field

| Parameter | Type | Mandatory | Description |
|------------------|--------|-----------|---|
| type | String | Yes | <p>The node type. Valid value:</p> <ul style="list-style-type: none"> 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. <p>Enumerated values:</p> <ul style="list-style-type: none"> mongos shard config replica single |
| configuration_id | String | Yes | Parameter group ID |

Table 5-132 Data structure of the ChargeInfo field

| Parameter | Type | Mandatory | Description |
|-------------|--------|-----------|--|
| charge_mode | String | Yes | <p>Billing mode. Value range:</p> <ul style="list-style-type: none"> prePaid: indicates the yearly/monthly billing mode. postPaid: indicates the pay-per-use billing mode. |
| period_type | String | No | <p>Subscription period. This parameter is valid and mandatory only when charge_mode is set to prePaid. Value range:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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",
      "spec_code": "dds.mongodb.c6.medium.4.shard",
      "size": "20"
    },
    {
      "type": "config",
      "num": "1",
      "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"
}
```

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=bd062e1af2d248b3bb4cd3dbb4183888br02`

Requests

Parameter description

Table 5-133 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|--|
| x-auth-token | String | head er | Yes | User token |
| X-Language | String | head er | No | Language |
| project_id | String | path | Yes | Project ID. 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. |
| backup_id | String | query | Yes | Backup ID. |

Responses

- Parameter description

Table 5-134 Parameter description

| Name | Type | Mandatory | Description |
|--------|------------------|-----------|--|
| files | Array of objects | Yes | The list of backup files. For more information, see Table 5-135 . |
| bucket | String | Yes | The name of the bucket where the file is located. |

Table 5-135 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. |
| 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

Requests

Parameter description

Table 5-136 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|-------------|
| x-auth-token | string | head er | Yes | User token |

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| 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. |
| 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. |
| date | string | query | Yes | The date to be queried. The value is in the yyyy-mm-dd format, and the time zone is UTC. |

Responses

- Parameter description

Table 5-137 Parameter description

| Name | Type | Mandato ry | Description |
|--------------|---------------------|---------------|---|
| restore_time | Array of objects | Yes | The restoration time ranges. For details, see Table 5-138 . |

Table 5-138 restore_time description

| Name | Type | Mandat ory | 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. |

| Name | Type | Mandatory | Description |
|----------|------|-----------|--|
| 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 5-139 Request parameters

| Name | Type | Mandatory | Description |
|--------------|---------|-----------|--|
| x-auth-token | String | Yes | User token |
| 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. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> The value ranges from 1 to 100. If this parameter is not transferred, the first 100 records are queried by default. |

Requests

None

Responses

- Parameter description

Table 5-140 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 5-141 Parameter description

| Name | Type | Mandatory | Description |
|--------------|---------|-----------|--|
| x-auth-token | String | Yes | User token |
| X-Language | String | No | Language |
| project_id | String | Yes | Specifies the 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. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> The value ranges from 1 to 100. If this parameter is not transferred, the first 100 records are queried by default. |

Requests

None

Responses

- Parameter description

Table 5-142 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 5-143 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.

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 5-144 Request parameters

| Name | Type | IN | Mandator y | Description |
|--------------|--------|---------|------------|--|
| x-auth-token | string | head er | Yes | User token |
| X-Language | string | head er | No | Language |
| project_id | string | path | Yes | Project ID. To obtain the project ID, see Obtaining a Project ID . |

Requests

- Parameter description

Table 5-145 Parameter description

| Name | Type | Mandator y | Description |
|--------|--------|------------|--|
| source | Object | Yes | The instance from which the backup was created For details, see Table 5-146 . |
| target | Object | Yes | The instance to which the backup is restored. For details, see Table 5-147 . |

Table 5-146 source field data structure description

| Name | Type | Mandator y | 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. |

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| type | String | No | The restoration mode. Enumerated values: <ul style="list-style-type: none"> • 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 5-147 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. |

- Request example
 - Restoring a backup:

```
{
  "source": {
```

```

    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin02",
    "type": "backup",
    "backup_id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe"
  },
  "target": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin02"
  }
}

```

- Restoring to a point in time (applicable to replica set instances and cluster instances 4.0)

```

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

```

Responses

- Parameter description

Table 5-148 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](#).

5.7.12 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 5-149 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-150 Parameter description

| Name | Type | Mandatory | Description |
|---------------------|------------------|-----------|--|
| restore_collections | Array of objects | Yes | The database information. For details, see Table 5-151 . |

Table 5-151 restore_collections data structure description

| Name | Type | Mandatory | Description |
|----------|--------|-----------|----------------|
| database | String | Yes | Database name. |

| Name | Type | Mandatory | Description |
|-----------------------|------------------|-----------|---|
| collections | Array of objects | No | The collection information. For details, see Table 5-152 . |
| 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 5-152 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. |

- Request example

- Database-level restoration

```
{
  "restore_collections": [
    {
      "database": "test",
      "restore_database_time": 1607762955000
    }
  ]
}
```

- Collection-level restoration

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

```
]
}
]
}
```

Responses

- 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](#).

5.8 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 5-154 Request parameters

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| config_id | String | Yes | Parameter template ID. |

Table 5-155 Query parameters

| Parameter | Type | Mandatory | Description |
|-----------|---------|-----------|---|
| 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 | Number of records displayed on each page. The default value is 100. |

Requests

None

Responses

- Parameter description

Table 5-156 Response body parameters

| Name | Type | Description |
|----------------|------------------|---|
| total_count | Integer | The total number of queried records. |
| configurations | Array of objects | The parameter template list. For details, see Table 5-157 . |

Table 5-157 Data structure description of the configurations field

| Parameter | Type | Description |
|-------------------|---------|--|
| id | String | Parameter template ID. |
| name | String | Parameter template name. |
| description | String | Parameter template description. |
| datastore_version | String | Database version. |
| datastore_name | String | Database type. |
| node_type | String | Node type of the parameter template. <ul style="list-style-type: none"> ● mongos: the mongos node type. ● shard: the shard node type. ● config: the config node type. ● replica: the replica set type. ● single: the single node type. |
| 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. |
| user_defined | Boolean | Indicates whether the parameter template is created by users. <ul style="list-style-type: none"> ● 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 5-158 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|--|
| x-auth-token | string | head er | Yes | User token |
| project_id | string | path | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |

Requests

- Parameter description

Table 5-159 Request body parameters

| Parameter | Type | Mandatory | Description |
|------------------|---------------------|-----------|--|
| name | String | Yes | Parameter template name. Value range: a string of 1 to 64 characters, which can contain only letters, digits, hyphens (-), underscores (_), and periods (.). |
| description | String | Yes | Parameter template description. This parameter is left blank by default. The description must consist of a maximum of 256 characters and cannot contain the carriage return character or the following special characters: >!<"&'= |
| parameter_values | Map<String, String> | Yes | Mapping between parameter names and parameter values. You can customize parameter values based on the parameters in the default parameter template. |
| datastore | Object | Yes | Database object. For details, see Table 5-160 . |

Table 5-160 Data structure description of the datastore field

| Name | Type | Mandatory | Description |
|-----------|--------|-----------|---|
| node_type | String | Yes | Node type of parameter template node_type. Valid value: <ul style="list-style-type: none"> ● mongos: the mongos node type. ● shard: the shard node type. ● config: the config node type. ● replica: the replica set type. ● single the single node type. |
| version | String | Yes | Database version. Versions 4.2, 4.0, and 3.4 are supported. The value can be 4.2 , 4.0 , or 3.4 . NOTE <ul style="list-style-type: none"> ● DDS 4.2 is restricted for commercial use. For details, see the DDS notices. ● To ensure you have a good experience using DDS, create a DDS 4.0 instance. |

- Request example

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

Responses

- Parameter description

Table 5-161 configuration field data structure description

| Name | Type | Description |
|------|--------|-----------------------|
| id | String | Parameter template ID |

| Name | Type | Description |
|-------------------|--------|---|
| name | String | Parameter template name |
| description | String | Parameter template description. |
| datastore_version | String | Database version. |
| datastore_name | String | Database type. |
| 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. |

- 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 5-162 Request parameters

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| config_id | String | Yes | Parameter template ID. |

Requests

None

Responses

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 5-163 Request parameters

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| config_id | String | Yes | Parameter template ID. |

Requests

None

Responses

- Parameter description

Table 5-164 Response body parameters

| Name | Type | Description |
|-------------------|--------|----------------------------|
| id | String | The parameter template ID. |
| name | String | Parameter template name. |
| datastore_version | String | Database version. |

| Name | Type | Description |
|----------------|------------------|---|
| datastore_name | String | Database type. |
| description | String | The parameter template 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 | The parameters defined by users based on the default parameter templates. For details, see Table 5-165 . |

Table 5-165 Data structure description of the parameters field

| Name | Type | Description |
|-------------|--------|---|
| name | String | The parameter name. |
| value | String | The parameter value. |
| description | String | The parameter description. |
| type | String | Parameter type. The value can be integer , string , boolean , float , or list . |

| Name | Type | Description |
|------------------|---------|--|
| value_range | String | Value range. For example, the value of integer is 0 or 1, and the value of boolean is true or false. |
| restart_required | Boolean | Whether the instance needs to be restarted. <ul style="list-style-type: none"> If the value is true, restart is required. If the value is false, restart is not required. |
| readonly | Boolean | Whether the parameter is read-only. <ul style="list-style-type: none"> 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 5-166 Request parameters

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| config_id | String | Yes | Parameter template ID. |

Requests

- Parameter description

Table 5-167 Parameter description

| Name | Mandatory | Type | Description |
|------------------|-----------|--------------------|---|
| name | No | String | <p>The parameter template name.</p> <p>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.</p> <p>The parameter template name, parameter template description, parameter name, and parameter value mapping cannot be all empty.</p> |
| description | No | String | <p>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.</p> |
| parameter_values | No | Map<String,String> | <p>Mapping between parameter names and parameter values. You can customize parameter values based on the parameters in the default parameter template.</p> |

- Request example

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

Responses

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 5-168 Request parameters

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |
| config_id | String | Yes | Parameter template ID. |

Requests

- Parameter description

Table 5-169 Request body parameters

| Name | Mandatory | Type | Description |
|------------|-----------|------------------|---|
| entity_ids | Yes | Array of strings | <p>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.</p> <ul style="list-style-type: none"> 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. |

- Request example

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

Responses

- Parameter description

Table 5-170 Response body parameters

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

- Response example

```
{
  "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`

Requests

Parameter description

Table 5-171 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token. |
| 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 | The 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. |

Table 5-172 Query parameters

| Parameter | Type | Mandatory | Description |
|-----------|--------|-----------|---|
| entity_id | String | Yes | <ul style="list-style-type: none"> 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. |

Responses

- Parameter description

Table 5-173 Response body parameters

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

| Name | Type | Description |
|------------|------------------|---|
| parameters | Array of objects | Indicates the parameters defined by users based on the default parameter templates. For details, see Table 5-174 . |

Table 5-174 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. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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 5-175 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-176 Request body parameters

| Name | Mandatory | Type | Description |
|------------------|-----------|--------------------|--|
| entity_id | Yes | String | <p>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.</p> <ul style="list-style-type: none"> 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. |
| parameter_values | Yes | Map<String,String> | <p>Mapping between parameter names and parameter values. You can customize parameter values based on the parameters in the default parameter template.</p> |

- Request example

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

Responses

- Parameter description

Table 5-177 Response body parameters

| Parameter | Type | Description |
|-----------|--------|--|
| job_id | String | The ID of the asynchronous task for modifying instance parameters. |

| Parameter | Type | Description |
|------------------|---------|---|
| restart_required | Boolean | Check whether the instance, group, or node needs to be restarted after parameter modification. <ul style="list-style-type: none">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",  
  "result_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

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 5-178 Parameter description

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | The 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 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. |

| Name | Type | Mandatory | Description |
|--------|---------|-----------|--|
| type | String | No | The statement type. If it is left blank, all statement types are queried. Valid value: <ul style="list-style-type: none"> • 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. |
| 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. |

Requests

None

Responses

- Parameter description

Table 5-179 Parameter description

| Name | Type | Description |
|---------------|------------------|---|
| slow_log_list | Array of objects | The detailed information. For details, see Table 5-180 . |
| total_record | Integer | The total number of records. |

Table 5-180 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": "{\n\"responseLength\": 230, \n\"ts\": {\n\"date\": 1605480486800},
\n\"inserted\": 1, \n\"locks\": {\n\"oplog\": {\n\"acquireCount\": {\n\"w\": 1}}, \n\"Global\":
{\n\"acquireCount\": {\n\"r\": 3, \n\"w\": 2}}, \n\"Collection\": {\n\"acquireCount\": {\n\"w\": 2}},
\n\"Database\": {\n\"acquireCount\": {\n\"w\": 3}}}, \n\"numYield\": 0, \n\"ns\":
\n\"geographySpace.tiles\n\"}",
      "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](#).

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 5-181 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-182 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: <ul style="list-style-type: none"> • Shard nodes in a cluster. • All nodes in a replica set or single node instance. |

- Request example

```
{
  "file_name_list":
  ["0541c9f81e80d2201fcc00b92ad6ec0_052f8a12dfed43fbb27c2020e3c3c507no02_slowlog_20201117104809"],
  "node_id_list":["052f8a12dfed43fbb27c2020e3c3c507no02"]
}
```

Responses

- Parameter description

Table 5-183 Parameter description

| Name | Type | Description |
|------|------|--|
| list | List | The links for downloading slow query logs. For details, see Table 5-184 . |

| Name | Type | Description |
|--------|---------|---|
| status | String | The status of links for downloading slow query logs. <ul style="list-style-type: none"> ● 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 5-184 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. <ul style="list-style-type: none"> ● 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":
"054bc9f81e80d2201fcc00b92ad6ec0_ca327a60b3084fa79ce072d7299b905ano02_slowlog
```

```
{
  "update_at": "20201117060412",
  "status": "SUCCESS",
  "file_size": "0",
  "file_link": "https://rdsbucket.xxr.obs.ap-southeast-1.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

Requests

Parameter description

Table 5-185 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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 . |

Responses

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

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 5-186 Parameter description

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| x-auth-token | String | Yes | User token |
| 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 | The 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 | <p>The end time in the "yyyy-mm-ddThh:mm:ssZ" format.</p> <ul style="list-style-type: none"> • 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. <p>NOTE The end time cannot be later than the current time.</p> |
| node_id | String | No | <p>The node ID. For details, see Table 5-43.</p> <p>If this parameter is left blank, all nodes in the instance can be queried.</p> <p>Nodes that can be queried:</p> <ul style="list-style-type: none"> • mongos, shard, and config nodes in a cluster instance. • All nodes in a replica set or single node instance. |
| type | String | No | <p>The statement type. If it is left blank, all statement types are queried. Valid value:</p> <ul style="list-style-type: none"> • WARNING • ERROR |
| offset | Integer | No | <p>The index position. Its value range is [0, 1999].</p> <p>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.</p> |
| limit | Integer | No | <p>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.</p> <p>NOTE The sum of limit and offset values must be less than or equal to 2000.</p> |

Requests

None

Responses

- Parameter description

Table 5-187 Parameter description

| Name | Type | Description |
|----------------|------------------|---|
| error_log_list | Array of objects | The detailed information. For details, see Table 5-188 . |
| total_record | Integer | The total number of records. |

Table 5-188 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](#).

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 5-189 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-190 Parameter description

| Name | Type | Mandatory | Description |
|----------------|------------------|-----------|--|
| file_name_list | Array of strings | No | The list of the names of the files to be downloaded. |

| Name | Type | Mandatory | Description |
|--------------|------------------|-----------|--|
| node_id_list | Array of strings | No | <p>The node ID list. If this parameter is left blank, all nodes in the instance can be queried.</p> <p>For details, see the id value in the nodes data structure table in section "Querying Instances" in the <i>DDS API Reference</i>.</p> <p>Nodes that can be queried:</p> <ul style="list-style-type: none"> mongos, shard, and config nodes in a cluster. All nodes in a replica set or single node instance. |

- Response to the request body

```
{
  "file_name_list": [
    "0541c9f81e80d2201fcc00b92ad6ec0_052f8a12dfed43fbb27c2020e3c3c507no02_errorlog_20201117104809"
  ],
  "node_id_list": [
    "052f8a12dfed43fbb27c2020e3c3c507no02"
  ]
}
```

Responses

- Parameter description

Table 5-191 Parameter description

| Name | Type | Description |
|------|------|---|
| list | List | <p>The list of error log download links.</p> <p>For details, see Table 5-192.</p> |

| Name | Type | Description |
|--------|---------|---|
| status | String | The status of the error log download link. <ul style="list-style-type: none"> ● 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 5-192 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. <ul style="list-style-type: none"> ● 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.xxxxx.southeast.ur.obs.ap-
southeast-1.myhuaweicloud.com:
443/054bc9c1f680d55c1f36c006e5a9f67b_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 5-193 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|--|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-194 Parameter description

| Name | Type | Mandatory | Description |
|-------------------|---------|-----------|--|
| keep_days | Integer | Yes | The number of days for storing audit logs. The value can be 0 or ranges from 7 to 732. <ul style="list-style-type: none"> 0: indicates that SQL audit is disabled. 7 to 732: indicates the retention days for audit logs after SQL audit is enabled. |
| reserve_auditlogs | String | No | This parameter is valid only when SQL audit is disabled. <ul style="list-style-type: none"> 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. |

| Name | Type | Mandator y | Description |
|-------------|------------------|---------------|---|
| audit_scope | String | No | <p>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.</p> <p>Audit scope:</p> <p>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.</p> <p>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.</p> |
| audit_types | Array of strings | No | <p>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.</p> <p>Specifies the audit type. The value is auth, insert, delete, update, query, or command.</p> |

- Request example
 - Enabling or updating the audit log policy

```
{
  "keep_days": 7,
  "audit_scope": "all",
  "audit_types": [
    "insert"
  ]
}
```

- Disabling the policy for SQL audit logs:

```
{
  "keep_days": 0,
  "reserve_auditlogs": false
}
```

Responses

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`

Requests

Parameter description

Table 5-195 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Responses

- Parameter description

Table 5-196 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 5-197 Parameter description

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|-------------|
| x-auth-token | String | Yes | User token |
| X-Language | String | No | Language |

| Name | Type | Mandatory | Description |
|-------------|---------|-----------|---|
| project_id | String | Yes | The 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. |
| 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. <ul style="list-style-type: none"> The value ranges from 1 to 100. If this parameter is not transferred, the first 100 DB instances are queried by default. |

Requests

None

Responses

- Parameter description

Table 5-198 Parameter description

| Name | Type | Description |
|--------------|------------------|--|
| audit_logs | Array of objects | The audit log details. For details about audit logs, see Table 5-199 . |
| total_record | Integer | The total number of records. |

Table 5-199 audit_logs description

| Name | Type | Description |
|------------|--------|--|
| node_id | String | The node ID. |
| 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 5-200 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-201 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. |

- Request example

```
{
  "ids": ["10190012aae94b38a10269b8ad025fc1no02_1607681849871",
    "12390012aae94b38a10269b8ad025fc1no02_1607681849871"]
}
```

Responses

- Parameter description

Table 5-202 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 5-203 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|--|
| x-auth-token | string | header | Yes | User token |
| project_id | string | path | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |

Requests

- Parameter description

Table 5-204 Parameter description

| Name | Type | Mandatory | Description |
|--------|--------|-----------|---|
| offset | String | No | <p>The index position. The query starts from the next piece of data indexed by this parameter.</p> <ul style="list-style-type: none"> • If action is set to count, this parameter is not transferred. • If action is set to filter, this parameter must be a positive integer. The default value is 0, indicating that the query starts from the first piece of data. |

| Name | Type | Mandatory | Description |
|---------|------------------|-----------|---|
| limit | String | No | <p>The number of resources to be queried.</p> <ul style="list-style-type: none"> • 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. If this parameter is not transferred, the first 100 DB instances are queried by default. |
| action | String | Yes | <p>The operation identifier.</p> <ul style="list-style-type: none"> • 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. |
| matches | Array of objects | No | <p>The search field.</p> <ul style="list-style-type: none"> • 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 5-206. |
| tags | Array of objects | No | <p>The included tags. Each tag contains a maximum of 20 keys. For more information, see Table 5-205.</p> |

Table 5-205 tags field data structure description

| Name | Type | Mandatory | Description |
|--------|------------------|-----------|--|
| key | String | Yes | The tag key. It contains a maximum of 36 Unicode characters. key cannot be empty, an empty string, or spaces. Before using key , delete spaces of single-byte character (SBC) before and after the value. NOTE The character set of this parameter is not verified in the search process. |
| values | Array of strings | Yes | Lists the tag values. Each value contains a maximum of 43 Unicode characters and cannot contain spaces. Before using values , delete SBC spaces before and after the value. If the values are null, it indicates querying any value. The values are in OR relationship. |

Table 5-206 matches field description

| Name | Type | Mandatory | Description |
|-------|--------|-----------|---|
| key | String | Yes | The query criteria. The value can be instance_name or instance_id , indicating that the query is based on the instance name or instance ID. |
| value | String | Yes | 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 an instance. |

- Request example
Query specified DB instances by tag.

```
{
  "offset": "100",
  "limit": "100",
  "action": "filter",
  "matches": [
```

```
{
  "key": "instance_name",
  "value": "test-single"
}
],
"tags": [
  {
    "key": "key1",
    "values": [
      "value1",
      "value2"
    ]
  }
]
}
```

Query the total number of resources.

```
{
  "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"
    }
  ]
}
```

Responses

- Parameter description

Table 5-207 Parameter description

| Name | Type | Description |
|-------------|------------------|---|
| instances | Array of objects | The instance list. For details, see Table 5-208 . |
| total_count | Integer | The total number of queried records. |

Table 5-208 instance field data structure description

| Name | Type | Description |
|---------------|------------------|---|
| instance_id | String | 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. |
| instance_name | String | The DB instance name. |
| tags | Array of objects | The tag list. If there is no tag in the list, tags is taken as an empty array. For more information, see Table 5-209 . |

Table 5-209 tags field data structure description

| Name | Type | Description |
|-------|--------|---|
| key | String | The tag key. The value contains 36 Unicode characters and cannot be blank. Character set: 0-9, A-Z, a-z, "_", and "-". |
| value | String | The tag value. The value contains a maximum of 43 Unicode characters and can also be an empty string. Character set: 0-9, A-Z, a-z, "_", ".", and "-". |

- 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 5-210 Request parameters

| Name | Type | IN | Mandator y | Description |
|--------------|--------|---------|------------|-------------|
| x-auth-token | string | head er | Yes | User token |

| 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 . |
| 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. |

Requests

- Parameter description

Table 5-211 Parameter description

| Name | Type | Mandatory | Description |
|--------|------------------|-----------|--|
| action | String | Yes | The operation identifier. Valid value: <ul style="list-style-type: none"> create: indicates to add tags. delete: indicates to delete tags. |
| tags | Array of objects | Yes | The tag list. For more information, see Table 5-212 . NOTE When you delete tags, do not check the character set of this parameter. |

Table 5-212 tags field data structure description

| Name | Type | Mandatory | Description |
|-------|--------|-----------|--|
| key | String | Yes | <p>The tag key. It contains a maximum of 36 Unicode characters. It cannot be null or an empty string or contain spaces. Before verifying and using key, spaces are automatically filtered out.</p> <p>Character set: 0-9, A-Z, a-z, "_", and "-".</p> |
| value | String | No | <p>The tag value. It contains a maximum of 43 Unicode characters, can be an empty string, and cannot contain spaces. Before verifying or using value, spaces are automatically filtered out.</p> <p>Character set: 0-9, A-Z, a-z, "_", ".", and "-".</p> <ul style="list-style-type: none"> • If action is set to create, this parameter is mandatory. • If action is set to delete, this parameter is optional. <p>NOTE If value is specified, tags are deleted by key and value. If value is not specified, tags are deleted by key.</p> |

- Request example

Add tags.

```
{
  "action": "create",
  "tags": [
    {
      "key": "key1",
      "value": "value1"
    },
    {
      "key": "key",
      "value": "value3"
    }
  ]
}
```

Delete tags.

```
{
  "action": "delete",
  "tags": [
```

```
{
  "key": "key1"
},
{
  "key": "key2",
  "value": "value3"
}
]
```

Responses

```
{}
```

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>

Requests

Parameter description

Table 5-213 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Responses

- Parameter description

Table 5-214 Parameter description

| Name | Mandatory | Type | Description |
|------|-----------|------------------|---|
| tags | Yes | Array of objects | The tag list. For more information, see Table 5-215 . |

Table 5-215 tags field data structure description

| Name | Mandatory | Type | Description |
|------|-----------|--------|---|
| key | Yes | String | The tag key. The value contains 36 Unicode characters and cannot be blank. Character set: 0-9, A-Z, a-z, "_", and "-". |

| Name | Mandatory | Type | Description |
|-------|-----------|--------|--|
| value | Yes | String | The tag value. The value contains a maximum of 43 Unicode characters and can also be an empty string. 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 5-216 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|--|
| x-auth-token | string | header | Yes | User token |
| project_id | string | path | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |

Requests

None

Responses

- Parameter description

Table 5-217 Parameter description

| Name | Mandatory | Type | Description |
|------|-----------|------------------|---|
| tags | Yes | Array of objects | The tag list. For more information, see Table 5-218 . |

Table 5-218 tags field data structure description

| Name | Mandatory | Type | Description |
|--------|-----------|------------------|---|
| key | Yes | String | The tag key. The value contains 36 Unicode characters and cannot be blank. Character set: 0-9, A-Z, a-z, "_", and "-". |
| values | Yes | Array of strings | Lists the tag values. The value contains a maximum of 43 Unicode characters and can also be an empty string. 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 5-219 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-220 Parameter description

| Name | Type | Mandatory | Description |
|-----------|--------|-----------|---|
| user_name | String | Yes | <p>The database username.</p> <ul style="list-style-type: none"> 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 drsFull or drsIncremental. |

| Name | Type | Mandatory | Description |
|----------|-----------------|-----------|--|
| user_pwd | String | Yes | <p>The password of the database user.</p> <ul style="list-style-type: none"> 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. |
| roles | Array of Object | Yes | <p>The role of the database user. For details, see Table 5-221.</p> |
| db_name | String | No | <p>The database where the new user is located. The default value is "admin".</p> <p>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 (_).</p> |

Table 5-221 roles field data structure description

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|--|
| role_db_name | String | Yes | <p>The name of the database to which the role granted to the new user belongs.</p> <p>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 (_).</p> |
| role_name | String | Yes | <p>The name of the role granted to the new user.</p> <p>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 (.).</p> |

- Request example

```
{
  "user_name": "test" ,
  "user_pwd": "*****",
  "roles": [{
    "role_db_name": "testDb" ,
    "role_name": "testRole"
  }],
  "db_name": "test_db"
}
```

Responses

- 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 5-222 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-223 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 5-224 . |
| 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 5-224 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 (.). |

- Request example

```
{
  "role_name": "testRole",
  "roles": [{
    "role_name": "readWrite",
    "role_db_name": "testDb"
  }],
  "db_name": "testDb"
}
```

Responses

- 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 the list of all 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 5-225 Parameter description

| Name | Type | Man dato ry | Description |
|--------------|--------|-------------------|---|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | The 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 (. |
| 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 (_). |

| Name | Type | Mandatory | Description |
|--------|---------|-----------|---|
| 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. |

Requests

None

Responses

- Parameter description

Table 5-226 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 list of all roles.
`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 5-227 Parameter description

| Name | Type | Mandatory | Description |
|--------------|--------|-----------|---|
| x-auth-token | String | Yes | User token |
| project_id | String | Yes | The 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. |

| Name | Type | Mandatory | Description |
|-----------|---------|-----------|--|
| 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. |

Requests

None

Responses

- Parameter description

Table 5-228 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. |
| 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 5-229 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-230 Parameter description

| Name | Type | Mandatory | 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. <ul style="list-style-type: none"> 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 ". |

- Request example

```
{
  "user_name": "rwuser",
  "user_pwd": "*****"
}
```

Responses

- 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 5-231 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-232 Parameter description

| Name | Type | Mandatory | 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 ". |

- Request example

```
{
  "user_name": "rwuser",
  "user_pwd": "*****"
}
```

Responses

- 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

Requests

Parameter description

Table 5-233 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Responses

- Parameter description

Table 5-234 Response to the request for querying the balancing settings of a cluster

| Name | Type | Manda tory | Description |
|---------------|---------|---------------|--|
| is_open | Boolean | Yes | Whether cluster balancing is enabled. |
| active_window | Object | No | The activity time window. For details, see Table 5-235 . |

Table 5-235 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`

Requests

Parameter description

Table 5-236 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| project_id | string | path | Yes | The 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 |

Responses

- Parameter description

Table 5-237 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.

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 5-238 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|---|
| x-auth-token | string | header | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-239 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
 - a. Setting the activity time window


```
{
  "start_time": "00:00",
  "stop_time": "02:00"
}
```
 - b. Canceling the activity time window setting


```
{}
```

Responses

- Parameter description

Table 5-240 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 5-241 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-242 Parameter description

| Name | Type | Mandatory | 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"  
}
```

Responses

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 5-243 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|---|
| x-auth-token | string | head er | Yes | User token |
| 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. |

Requests

- Parameter description

Table 5-244 Parameter description

| Name | Type | Mandat ory | 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 (.). |

| Name | Type | Mandatory | Description |
|---------|--------|-----------|---|
| 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"  
}
```

Responses

Response example

```
{}
```

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 5-245 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|--|
| x-auth-token | string | head er | Yes | User token |
| project_id | string | path | Yes | Project ID of a tenant in a region. To obtain the project ID, see Obtaining a Project ID . |

Requests

None

Responses

- Parameter description

Table 5-246 Response body parameters

| Parameter | Type | Man dator y | Description |
|-----------|--------|-------------------|---|
| quotas | Object | Yes | Quota information. For more information, see Table 5-247 . |

Table 5-247 ShowResourcesListResponseBody

| Parameter | Type | Manda tory | Description |
|-----------|---------|---------------|--|
| resources | Objects | Yes | The resource objects. For more information, see Table 5-248 . |

Table 5-248 ShowResourcesDetailResponseBody

| Parameter | Type | Mandat ory | Description |
|-----------|--------|---------------|---|
| type | String | Yes | The quota resource type. Only the instance type is supported. |

| Parameter | Type | Mandatory | Description |
|-----------|---------|-----------|---|
| mode | String | Yes | The instance type. <ul style="list-style-type: none"> 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 Task Management

5.13.1 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, scaling up a node, restarting a node, 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, and 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, and database/table-level restoration to a specified time point.

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`

Requests

Parameter description

Table 5-249 Request parameters

| Name | Type | IN | Mandatory | Description |
|--------------|--------|--------|-----------|--|
| x-auth-token | string | header | Yes | User token |
| project_id | string | path | Yes | The 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. |

Responses

- Normal response

Table 5-250 Parameter description

| Name | Type | Mandatory | Description |
|------|--------|-----------|--|
| job | Object | Yes | Task information. For details, see Table 5-251 . |

Table 5-251 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: <ul style="list-style-type: none"> • 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 5-252 . |
| fail_reason | String | Yes | Task failure information. |

Table 5-252 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

Requests

Parameter description

Table 6-1 Request parameters

| Name | Type | IN | Man dator y | Description |
|--------------|--------|------------|-------------------|--|
| x-auth-token | string | head er | Yes | User token |
| 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 . |

Responses

- 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: <ul style="list-style-type: none"> mongos shard config replica single |
| vcpus | String | Number of vCPUs |
| ram | String | Memory size in GB |

| Name | Type | Description |
|-----------|--------|--|
| spec_code | String | <p>Resource specification code</p> <p>Example: dds.mongodb.c6.xlarge.2.shard</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 | <p>The status of specifications in an AZ. Its value can be any of the following:</p> <ul style="list-style-type: none"> • 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](#).

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 |
|-------------|--------------------------|---|
| 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. |
| 415 | Unsupported Media Type | The server is unable to process the media format in the request. |

| Status Code | Message | Description |
|-------------|-----------------------|---|
| 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. | The DB instance does not exist. | 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. 200011 | 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. 200013 | This node does not exist. | The node does not exist | Check whether the node ID or group ID is correct. |
| 403 | DBS. 200018 | Operation cannot be executed in current state of the DB instance. | This DB instance is not available. | Check whether the instance status or the ongoing operation on the instance conflicts with the request. |
| 403 | DBS. 200019 | Another operation is being performed on the DB instance or the DB instance is faulty. | 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. 200024 | The region is unavailable. | The region is unavailable. | Check whether the region name is correct and whether the region is available. |
| 400 | DBS. 200025 | Invalid AZ. | Invalid AZ. | Check whether the AZ name is correct and whether the AZ is available. |
| 403 | DBS. 200028 | Volume size reach limit. | The maximum storage space has been reached. | Check whether the storage space exceeds the upper limit. |
| 400 | DBS. 200029 | Invalid username and password. | Invalid username and password. | Check whether the username and password match and whether the password meets the password strength requirements. |

| Status Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|-------------------|---|---|--|
| 400 | DBS.200041 | Invalid datastore version. | Invalid database version. | Check whether the database version is supported. |
| 404 | DBS.200042 | Invalid database engine. | Invalid DB engine. | Check whether the DB engine is supported by DDS. |
| 400 | DBS.200047 | 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.200048 | Invalid VPC. | Invalid VPC. | Check whether the VPC ID and name are correct and meet the requirements. |
| 400 | DBS.200049 | Invalid subnet. | Invalid subnet. | Check whether the subnet ID and name are correct and meet the requirements. |
| 400 | DBS.200050 | Invalid security group. | Invalid security group. | Check whether the security group ID and name are correct and meet the requirements. |
| 400 | DBS.200052 | Invalid password. | Invalid password. | Check whether the username and password match and whether the password meets the password strength requirements. |
| 400 | DBS.200053 | The DB instance specifications do not exist. | The DB instance specifications do not exist. | Check whether the specifications are correct and supported in the current AZ. |
| 400 | DBS.200054 | Invalid DB instance specifications. | 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. 200057 | Invalid parameter group ID. | Invalid parameter template. | Check whether the parameter template is correct, whether the parameter template exists, and whether the parameter template matches the instance type. |
| 400 | DBS. 200059 | Invalid database port. | Invalid database port | Check whether the database port is missing or valid. |
| 400 | DBS. 200060 | 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. 200068 | Weak password. | Weak password | Check whether the password meets the requirements. Enter a strong password. |
| 400 | DBS. 200072 | Invalid storage space. | Invalid storage space. | Check whether the storage space exceeds the upper limit. |
| 400 | DBS. 200075 | Invalid node role. | Invalid node role. | Check whether the role of the node meets the requirements and whether the instance is normal. |
| 403 | DBS. 200076 | 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. 200077 | Failed to change the password. | Failed to reset the password. | Check whether the user name is correct. |
| 400 | DBS. 200091 | Invalid IP address. | Invalid IP address. | Check whether the required IP address is missing or whether the input IP address is valid. |
| 400 | DBS. 200092 | The IP address already exists. | The IP address already exists. | Check whether the IP address exists. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|---|---|
| 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. |
| 400 | DBS. 200451 | The node does not exist. | The node does not exist. | Check whether node ID is correct. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|--|--|
| 400 | DBS. 200462 | 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. 200470 | Invalid AZ. | Invalid AZ. | Check whether the AZ is correct. |
| 400 | DBS. 200501 | The subnet does not exist. | The subnet does not exist. | Check whether the subnet ID and name exist and match the VPC. |
| 400 | DBS. 200502 | The security group does not exist. | The security group does not exist. | Check whether the security group ID and name exist and match the VPC. |
| 400 | DBS. 200503 | The VPC does not exist. | The VPC does not exist. | Check whether the tenant has the VPC. |
| 400 | DBS. 200506 | The encryption key does not exist. | The encryption key does not exist. | Check whether the disk encryption key ID exists. |
| 400 | DBS. 200507 | The encryption key is not available. | The encryption key is not available. | Check whether the disk encryption key is available. |
| 403 | DBS. 200604 | The instance is not owned by the current user. | The instance is not owned by the current user. | Check whether the project ID is subordinate to the instance ID. |
| 400 | DBS. 200700 | 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. |
| 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. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|---|--|
| 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. | The database does not exist. | Check whether the database name is valid. |
| 400 | DBS. 200824 | The database account does not exist. | The database account does not exist. | 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. |
| 400 | DBS. 200828 | Built-in database accounts cannot be edited. | Cannot use database built-in account. | Check whether the database user is valid. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|--|--|
| 400 | DBS. 200998 | The system is busy. Try again later. | The system is busy. Try again later. | The system is busy. Try again later. |
| 403 | DBS. 201000 | 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. 201006 | Parameter error. | Parameter error. | Check whether the transferred parameters or URLs are correct. |
| 403 | DBS. 201014 | 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. 201015 | 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. 201020 | Invalid DB engine. | Invalid DB engine. | Check whether the DB engine is supported by DDS. |
| 403 | DBS. 201028 | The DB instance does not exist. | The DB instance does not exist. | Check whether the DB instance belongs to the tenant and whether the DB instance exists. |
| 400 | DBS. 201035 | The database name must be different. | The database name already exists. | Check whether the same database name exists. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|---|--|
| 400 | DBS. 201038 | The collection name must be different. | The collection name already exists. | Check whether the same collection name exists. |
| 400 | DBS. 201201 | The backup already exists. | The backup already exists. | Check whether the backup name or ID exists. |
| 400 | DBS. 201202 | 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. 201204 | 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. 201212 | Backup ID is illegal. | Invalid backup ID. | Check whether the backup ID exists. |
| 400 | DBS. 201214 | The backup file does not exist. | The backup file does not exist. | Check whether the backup exists and matches the instance. |
| 400 | DBS. 201215 | Time is illegal. | Invalid time. | Check whether the time meets the requirements. |
| 400 | DBS. 201319 | Deleting backup file is not allowed because a restoration task is currently in progress. Please wait. | Deleting backup file is not allowed because a restoration task is currently in progress. Please wait. | Check whether the backup is being used to restore instances. |
| 400 | DBS. 201501 | The DB instance does not exist. | The DB instance does not exist. | Check whether the tenant has the DB instance, whether the DB instance name or ID is correct, and whether the DB instance exists. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|--|--|
| 400 | DBS. 201502 | The DB instance does not exist. | The DB instance does not exist. | Check whether the tenant has the DB instance, whether the DB instance name or ID is correct, and whether the DB instance exists. |
| 404 | DBS. 212001 | The parameter group {0} does not exist. | This parameter template does not exist. | Check whether the parameter template exists. |
| 400 | DBS. 212002 | The number of para groups exceeds quota. | The number of parameter groups exceeds the quota. | Delete unnecessary parameter groups and create the parameter group again. |
| 400 | DBS. 212003 | This operation is not permitted. | This operation is not permitted. | Check whether the instance status or the ongoing operation on the instance conflicts with the request. |
| 400 | DBS. 212006 | 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. 212008 | The database type does not exist. | The database type is not supported. | Check whether the database type is supported |
| 400 | DBS. 212013 | The parameter group does not exist. | This parameter template does not exist. | Check whether the parameter exists. |
| 400 | DBS. 212017 | The parameter is invalid. | Invalid parameter. | Check whether the transferred parameters or URLs are correct and meet the requirements. |
| 400 | DBS. 212019 | Invalid parameter. | Invalid parameter. | Check whether the transferred parameters or URLs are correct and meet the requirements. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|---|---|
| 400 | DBS. 212028 | Invalid description. | Invalid parameter template description. | Check whether the parameter template description is valid. |
| 400 | DBS. 212030 | 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. 212031 | Invalid parameter group name. | Invalid parameter template name. | Check whether the parameter template name meets the requirements: |
| 400 | DBS. 212032 | 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. 216026 | The node does not exist. | The node does not exist or has been deleted. | Check whether the input node exists and belongs to the current instance. |
| 403 | DBS. 216030 | 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. 216031 | Invalid entity id. | Invalid entityId. | Check whether the value of entityId is correct. |
| 500 | DBS. 201509 | Failed to access OBS. | The OBS service system is faulty. | An internal error occurs. Contact the O&M personnel to locate the fault. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|--|--|
| 400 | DBS. 238007 | 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. 239011 | Invalid SSL option. | Invalid SSL option. | Check whether the SSL parameter is missing or whether the SSL option is valid. |
| 400 | DBS. 239012 | 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. 239014 | Failed to create the database role. | Failed to create a database role. | Check the database status and instance status. |
| 400 | DBS. 239015 | Failed to obtain the database role list. | Failed to obtain the database role list. | Check the database status and instance status. |
| 400 | DBS. 239016 | Invalid database role. | Invalid database role. | Check whether the role meets the requirements and check the database status and instance status. |
| 400 | DBS. 239017 | The database role name already exists. | The database role name already exists. | Check whether the database role exists. |
| 400 | DBS. 239018 | The database role does not exist. | The database role does not exist. | Enter an existing database status. |
| 400 | DBS. 239019 | Invalid database permission. | Invalid database permission. | Check whether the database permission is valid. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|--|---|
| 400 | DBS. 239020 | Invalid database name. | Invalid database name. | Check whether the database name is valid. |
| 400 | DBS. 239021 | 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. 239022 | Cannot use database built-in roles. | Cannot use database built-in roles. | Check whether the role is valid. |
| 400 | DBS. 239023 | Invalid auditlog ID. | Invalid audit log ID. | Check whether the audit log ID is valid. |
| 400 | DBS. 239024 | The auditlog does not exist. | The audit log does not exist. | Check whether the audit log exists. |
| 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. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|---|--|
| 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. |
| 500 | DBS. 280005 | Server error. Try again later. | Server error. Try again later. | Contact technical support engineers. |
| 400 | DBS. 280015 | Permission denied. | Permission denied. | Check whether the token expires and whether the instance matches the tenant. |
| 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. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|--|--|
| 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 NOTE xxx indicates the fine-grained configuration item corresponding to an operation performed on the DDS DB instance. | 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. |
| 400 | DBS. 280067 | Invalid start time. | Invalid start time. | Check whether the start time meets the requirement. |
| 400 | DBS. 280068 | Invalid end time. | Invalid end time. | Check whether the end time meets the requirement. |
| 400 | DBS. 280110 | The DB instance does not exist. | The DB instance does not exist. | 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. 280122 | Invalid DB engine. | Invalid DB engine. | Check whether the storage engine matches the instance engine. |
| 400 | DBS. 280123 | Invalid node number. | Invalid node number. | Check whether the number of nodes to be added to the instance meets the requirements. |
| 400 | DBS. 280124 | Invalid backup. | Invalid backup. | Check whether the backup ID is correct and meets the requirements. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|---|--|
| 400 | DBS. 280127 | Invalid backup description. | Invalid backup description. | Check whether the backup description is correct and meets the requirements. |
| 400 | DBS. 280200 | The password contains invalid characters. | The password contains invalid characters. | Check whether the password is correct and meets the requirements. |
| 400 | DBS. 280214 | Invalid retention period. | Invalid retention period. | Check whether the backup retention period is correct. |
| 400 | DBS. 280215 | 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. 280216 | 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. |
| 400 | DBS. 280234 | Invalid DB instance name. | Invalid DB instance name. | Check whether the instance name is correct and whether the instance exists. |
| 400 | DBS. 280235 | Invalid database type. | Invalid DB engine. | Check whether the DB engine information is correct. |
| 400 | DBS. 280236 | Invalid database version. | Invalid database version. | Check whether the database version is supported. |
| 400 | DBS. 280237 | DataStore is invalid. | Invalid database information. | Check whether the database information is correct. |
| 400 | DBS. 280239 | Invalid specifications. | Invalid specifications. | Check whether the specification code is correct, whether the specification exists in the current AZ, and whether the specification is supported. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|--|---|
| 400 | DBS. 280241 | Invalid storage type | Invalid storage type. | Check whether the storage type is correct and meets the requirements. |
| 400 | DBS. 280242 | The storage space is out of range. | The storage space is out of range. | Check whether the disk size is correct. |
| 400 | DBS. 280244 | 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. 280247 | Invalid VPC. | Invalid VPC. | Check whether the VPC ID is correct and whether the VPC exists. |
| 400 | DBS. 280248 | Invalid subnet. | Invalid subnet. | Check whether the subnet ID is correct and whether the subnet exists. |
| 400 | DBS. 280249 | Invalid security group. | Invalid security group. | Check whether the security group ID is correct and whether the security group exists. |
| 400 | DBS. 280266 | Invalid storage space. | Invalid storage space. | Check whether the storage space is correct and meets the requirements. |
| 400 | DBS. 280267 | Specifiction s not match. | Specifications do not match. | Check whether the specification information is correct and whether the specification matches the instance. |
| 400 | DBS. 280271 | Parameter value out of range. | The parameter value is too long. | Check whether the length of the parameter value is correct. |
| 400 | DBS. 280277 | Invalid backup name. | Invalid backup name. | Check whether the backup name is correct and meets the requirements. |
| 400 | DBS. 280280 | Invalid DB instance number. | Invalid DB instance number. | Check whether the number of DB instances is correct and meets the requirements. |
| 400 | DBS. 280284 | Invalid IP address. | Invalid IP address. | Check whether the IP address is correct and meets the requirements. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|-----------------------------------|---------------------------------------|--|
| 400 | DBS. 280292 | Invalid database username. | Invalid username. | Check whether the username is correct and meets the requirements. |
| 400 | DBS. 280311 | Invalid storage space. | Invalid storage space. | Check whether the storage space is correct and meets the requirements. |
| 400 | DBS. 280314 | Invalid storage space. | Invalid storage type. | Check whether the storage type is correct and whether the instance supports the disk type. |
| 400 | DBS. 280327 | 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. 280328 | Invalid DB instance type. | Invalid DB instance type. | Check whether the instance type is correct. |
| 400 | DBS. 280342 | 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. 280343 | Unsuppor ted operation. | The operation is not supported. | Check whether the instance and node meet the API requirements. |
| 400 | DBS. 280347 | Unsuppor ted database type. | Unsupported database type. | Check whether the DB instance type is correct and meets the requirements. |
| 400 | DBS. 280361 | Invalid file name. | Invalid file name. | Check whether the input file name is correct and meets the requirements. |
| 400 | DBS. 280365 | Invalid payment mode. | Invalid payment mode. | Check whether the payment mode is correct and meets the requirements. |
| 400 | DBS. 280366 | Invalid order ID. | Invalid order ID. | Check whether the yearly/ monthly order ID is transferred and meets the requirements. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|---|--|
| 400 | DBS. 280404 | Invalid DB instance ID. | Invalid DB instance ID. | Check whether the instance ID is correct and meets the requirements. |
| 403 | DBS. 280406 | 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. 280407 | Invalid node ID. | Invalid node ID. | Check whether the node ID is correct and meets the requirements. |
| 400 | DBS. 280408 | Invalid project id. | Unauthorized tenant ID | Check whether the tenant ID is correct and meets the requirements. |
| 400 | DBS. 280409 | Invalid date. | Invalid time format. | Check whether the time format and content are correct and meet the requirements. |
| 400 | DBS. 280414 | 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. 280416 | 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. 280421 | Invalid EIP. | Invalid EIP. | Check whether the EIP exists and meets the requirements. |
| 400 | DBS. 280431 | Invalid package type. | Invalid yearly/ monthly billing mode. | Check whether the value of period_type meets the requirements. |
| 400 | DBS. 280432 | Invalid duration for yearly/ monthly DB instances. | Invalid yearly/ monthly duration. | Check whether the value of period_num meets the requirements. |
| 403 | DBS. 280433 | Invalid enterprise project ID. | Invalid enterprise project ID. | Check whether the enterprise project ID is valid. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|---|---|---|
| 400 | DBS. 280434 | The specifications are unavailable. | Invalid resource specifications code. | Check whether the resource specifications code exists and meets the requirements. |
| 400 | DBS. 280437 | Not support enterprise project. | Not support enterprise multi-project. | 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. 280438 | 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. 280439 | Invalid limit. | Invalid query limit. | Check whether the value of the limit parameter is valid. |
| 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. | The database information does not exist. | 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. |

| Statu s Code | Error Code | Error Information | Description | Handling Measure |
|--------------------|----------------|--|--|---|
| 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. |
| 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. |

| Status Code | Error Code | Error Information | Description | Handling Measure |
|-------------|------------|--------------------------|---------------------------------|--|
| 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"
  }
}
```

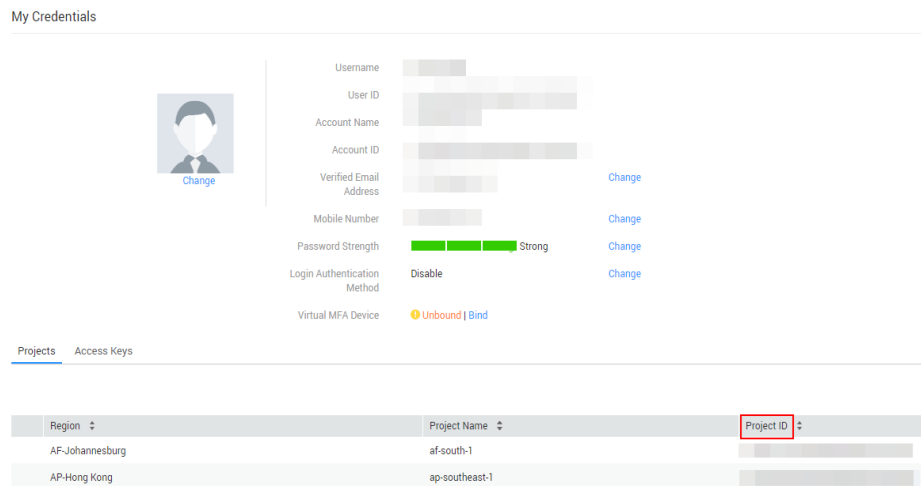
```
}  
}
```

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 DDS metrics

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|---------------------|-------------------------------|--|----------------|--|--------------------------------|
| mongo001_command_ps | COMMAND Statements per Second | Number of COMMAND statements executed per second | ≥ 0 Count/s | <ul style="list-style-type: none"> • DDS DB instance • mongos node • Read replica of a DDS replica set instance • Primary node • Secondary node • Hidden nodes of a DDS instance | 1 minute 5 seconds |
| mongo002_delete_ps | DELETE Statements per Second | Number of DELETE statements executed per second | ≥ 0 Count/s | <ul style="list-style-type: none"> • DDS DB instance • mongos node • Primary node • Secondary node | 1 minute 5 seconds |
| mongo003_insert_ps | INSERT Statements per Second | Number of INSERT statements executed per second | ≥ 0 Count/s | <ul style="list-style-type: none"> • DDS DB instance • mongos node • Primary node • Secondary node | 1 minute 5 seconds |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|---------------------|-------------------------------|--|-------------|--|--------------------------------|
| mongo004_query_ps | QUERY Statements per Second | Number of QUERY statements executed per second | ≥ 0 Count/s | <ul style="list-style-type: none"> • DDS DB instance • mongos node • Primary node • Secondary node | 1 minute 5 seconds |
| mongo005_update_ps | UPDATE Statements per Second | Number of UPDATE statements executed per second | ≥ 0 Count/s | <ul style="list-style-type: none"> • DDS DB instance • mongos node • Primary node • Secondary node | 1 minute 5 seconds |
| mongo006_getmore_ps | GETMORE Statements per Second | Number of GETMORE statements executed per second | ≥ 0 Count/s | <ul style="list-style-type: none"> • DDS DB instance • 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 Counts | DDS instance | 1 minute |
| mongo007_chunk_num2 | Chunks of Shard 2 | Number of chunks in shard 2 | 0-64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num3 | Chunks of Shard 3 | Number of chunks in shard 3 | 0-64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num4 | Chunks of Shard 4 | Number of chunks in shard 4 | 0-64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num5 | Chunks of Shard 5 | Number of chunks in shard 5 | 0-64 Counts | DDS instance | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|----------------------|---|--|--------------|------------------|--------------------------------|
| mongo007_chunk_num6 | Chunks of Shard 6 | Number of chunks in shard 6 | 0–64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num7 | Chunks of Shard 7 | Number of chunks in shard 7 | 0–64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num8 | Chunks of Shard 8 | Number of chunks in shard 8 | 0–64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num9 | Chunks of Shard 9 | Number of chunks in shard 9 | 0–64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num10 | Chunks of Shard 10 | Number of chunks in shard 10 | 0–64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num11 | Chunks of Shard 11 | Number of chunks in shard 11 | 0–64 Counts | DDS instance | 1 minute |
| mongo007_chunk_num12 | Chunks of Shard 12 | Number of chunks in shard 12 | 0–64 Counts | DDS instance | 1 minute |
| mongo008_connections | Active Instance Connections | Total number of connections attempting to connect to a DDS DB instance | 0–200 Counts | DDS DB instance | 1 minute |
| mongo009_migFail_num | Chunk Migration Failures in Last 24 hrs | Number of chunk migration failures in the last 24 hours | ≥ 0 Counts | DDS DB instance | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|-----------------------------|---------------------------------------|---|--------------|---|--------------------------------|
| mongo007_connections | Active Node Connections | Total number of connections attempting to connect to a DDS DB instance node | 0~200 Counts | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute 5 seconds |
| 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% | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute 5 seconds |
| mongo008_mem_resident | Resident Memory | Size of resident memory in MB | ≥ 0 MB | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute |
| mongo009_mem_virtual | Virtual Memory | Size of virtual memory in MB | ≥ 0 MB | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute |
| mongo010_regular_asserts_ps | Regular Asserts per Second | Number of regular asserts per second | ≥ 0 Count/s | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|--|--|--|-------------|---|--------------------------------|
| mongo011_warning_asserts_per_s | Warning Asserts per Second | Number of warning asserts per second | ≥ 0 Count/s | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute |
| mongo012_msg_asserts_per_s | Message Asserts per Second | Number of message asserts per second | ≥ 0 Count/s | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute |
| mongo013_user_asserts_per_s | User Asserts per Second | Number of user asserts per second | ≥ 0 Count/s | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute |
| mongo014_queues_waiting_for_a_lock_total | Operations Queued Waiting for a Lock | Number of operations queued waiting for a lock | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo015_queues_waiting_for_a_read_lock | Operations Queued Waiting for a Read Lock | Number of operations queued waiting for a read lock | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo016_queues_waiting_for_a_write_lock | Operations Queued Waiting for a Write Lock | Number of operations queued waiting for a write lock | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo017_page_faults | Page Faults | Number of page faults on the monitored nodes | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|--------------------------|---|--|-------------|--|--------------------------------|
| mongo018_porfling_num | Slow Queries | Number of slow queries on the monitored nodes | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 5 minutes |
| mongo019_cursors_open | Maintained Cursors | Number of maintained cursors on the monitored nodes | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo020_cursors_timeOut | Timeout Cursors | Number of timed out cursors on the monitored nodes | ≥ 0 Counts | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo022_wt_cache_dirty | Tracked Dirty Bytes in WiredTiger Cache | Size of tracked dirty data in the WiredTiger cache in MB | ≥ 0 MB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo023_wInto_wtCache | Bytes Written Into Cache per Second | Bytes written into WiredTiger cache per second | ≥ 0 bytes/s | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo024_wFrom_wtCache | Bytes Written From Cache per Second | Bytes written from the WiredTiger cache to the disk per second | ≥ 0 bytes/s | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|-------------------------|----------------------|--|-------------|------------------|--------------------------------|
| mongo025_repl_oplog_win | Oplog Window | Available time in hour in the monitored primary node's oplog | ≥ 0 Hours | Primary node | 1 minute |
| mongo026_oplog_size_ph | Oplog Growth Rate | Speed in MB/hour at which oplogs are generated on the monitored primary node | ≥ 0 MB/Hour | Primary node | 1 minute |
| mongo025_repl_headroom | Replication Headroom | Time difference in seconds between the primary's oplog window and the replication lag of the secondary | ≥ 0 Seconds | Secondary node | 1 minute |
| mongo026_repl_lag | Replication Lag | A delay in seconds between an operation on the primary and the application of that operation from the oplog to the secondary | ≥ 0 Seconds | Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|-------------------------|--|---|----------------|---|--------------------------------|
| mongo027_repl_commands | Replicated COMMAND Statements per Second | Number of replicated COMMAND statements executed on the secondary node per second | ≥ 0 Count/s | 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 | Secondary node | 1 minute |
| mongo029_repl_delete_ps | Replicated DELETE Statements per Second | Number of replicated DELETE statements executed on the secondary node per second | ≥ 0 Count/s | Secondary node | 1 minute |
| mongo030_repl_insert_ps | Replicated INSERT Statements per Second | Number of replicated INSERT statements executed on the secondary node per second | ≥ 0 Count/s | Secondary node | 1 minute |
| mongo031_cpu_usage | CPU Usage | CPU usage of the monitored object | 0-1 | <ul style="list-style-type: none"> • mongos node • Primary node • Secondary node | 1 minute 5 seconds |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|----------------------------|---------------------------|--|------------------|---|--------------------------------|
| mongo03_2_mem_usage | Memory Usage | Memory usage of the monitored object | 0-1 | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute 5 seconds |
| mongo03_3_bytes_output | Network Output Throughput | Outgoing traffic in bytes per second | ≥ 0 bytes/s | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute 5 seconds |
| mongo03_4_bytes_in | Network Input Throughput | Incoming traffic in bytes per second | ≥ 0 bytes/s | <ul style="list-style-type: none"> mongos node Primary node Secondary node | 1 minute 5 seconds |
| mongo03_5_disk_usage | Storage Space Usage | Storage space usage of the monitored object | 0-1 | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo03_6_iops | IOPS | Average number of I/O requests processed by the system in a specified period | ≥ 0 Count/s | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo03_7_read_throughput | Disk Read Throughput | Number of bytes read from the disk per second | ≥ 0 bytes/s | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo03_8_write_throughput | Disk Write Throughput | Number of bytes written into the disk per second | ≥ 0 bytes/s | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | 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 Seconds | <ul style="list-style-type: none"> 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 Seconds | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo042_disk_total_size | Total Storage Space | Total storage space of the monitored object | 0-1000 GB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo043_disk_used_size | Used Storage Space | Used storage space of the monitored object | 0-1000 GB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo044_swap_usage | SWAP Usage | Swap usage, in percentage. | 0-1 | <ul style="list-style-type: none"> mongos node Secondary node | 1 minute |
| mongo050_top_total_time | Total Time Spent on Collections | Mongotop-total time: total time spent on collection operations, in milliseconds | ≥ 0 Milliseconds | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|---------------------------------|--|--|------------------|--|--------------------------------|
| mongo051_top_read_time | Total Time Spent on Collections | Mongotop-read time: total time spent reading collections, in milliseconds | ≥ 0 Milliseconds | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo052_top_write_time | Total Time Spent on Collections | Mongotop-write time: total time spent writing collections, in milliseconds | ≥ 0 Milliseconds | <ul style="list-style-type: none"> 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 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo054_wt_cache_used_percent | Percentage of the Cache Used by WiredTiger | Cache size used by WiredTiger, in percentage | 0-1 | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo055_wt_cache_dirty_percent | Percentage of Dirty Data in the WiredTiger Cache | Dirty size in the WiredTiger cache, in percentage | 0-1 | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo070_rocks_active_memtable | Memtable Data Size | Size of data in the active memtable | 0~100 GB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|--|--|---|-------------|--|--------------------------------|
| mongo071_rocks_oplogcf_active_memtable | Memtable Data Size on Oplogcf | Size of data in the active memtable on oplogcf | 0~100 GB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo072_rocks_all_memtable | Total Data Size of Memtable and Immutabl e-memtable | Total data size of memtable and immutable-memtable | 0~100 GB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo073_rocks_oplogcf_all_memtable | Total Data Size of Memtable and Immutabl e-memtable on Oplogcf | Total data size of memtable and immutable-memtable on oplogcf | 0~100 GB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo074_rocks_snapshots | Unrelease d Snapshots | Number of unreleased snapshots | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo075_rocks_oplogcf_snapshots | Unrelease d Snapshots on Oplogcf | Number of unreleased snapshots on oplogcf | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo076_rocks_live_versions | Active Versions | Number of active versions | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo077_rocks_oplogcf_live_versions | Active Versions on Oplogcf | Number of active versions on oplogcf | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|--|---|--|-------------|--|--------------------------------|
| mongo078_rocks_block_cache | Data Size in Blockcache | Size of data in blockcache | 0~100 GB | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo079_rocks_background_errors | Accumulated Background Errors | Accumulated number of background errors | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo080_rocks_oplogcf_background_errors | Accumulated Background Errors on Oplogcf | Number of accumulated background errors on oplogcf | ≥ 0 Counts | <ul style="list-style-type: none"> 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 | 0-1 | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo082_rocks_uncommitted_keys | Uncommitted Keys | Number of uncommitted keys | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo083_rocks_committed_keys | Committed Keys | Number of committed keys | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo084_rocks_active_txn | Length of Active Transaction Linked Lists | Length of active transaction linked lists | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo085_rocks_read_queue | Length of Read Queues | Length of read queues | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |

| Metric ID | Metrics Name | Description | Value Range | Monitored Object | Monitoring Interval (Raw Data) |
|-----------------------------------|---|---|-------------|---|--------------------------------|
| mongo086_rocks_committed_queues | Length of Committed Queues | Length of committed queues | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo087_rocks_ct_write_out | Used Concurrent Write Transactions | Number of used concurrent write transactions | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo088_rocks_ct_write_available | Available Concurrent Write Transactions | Number of available concurrent write transactions | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo089_rocks_ct_read_out | Used Concurrent Read Transactions | Number of used concurrent read transactions | ≥ 0 Counts | <ul style="list-style-type: none"> Primary node Secondary node | 1 minute |
| mongo090_rocks_ct_read_available | Available Concurrent Read Transactions | Number of available concurrent read transactions | ≥ 0 Counts | <ul style="list-style-type: none"> 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 Counts | <ul style="list-style-type: none"> DDS DB instance Read replica of a DDS replica set instance Primary node Secondary node Hidden nodes of a DDS instance | 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 |
| mongos_instance_id | mongos node ID |
| mongodb_primary_instance_id | Primary node ID |
| mongodb_secondary_instance_id | Secondary 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.

A Change History (European Sites)

| Date | Description |
|------------|---|
| 2022-09-30 | This issue is the first official release. |