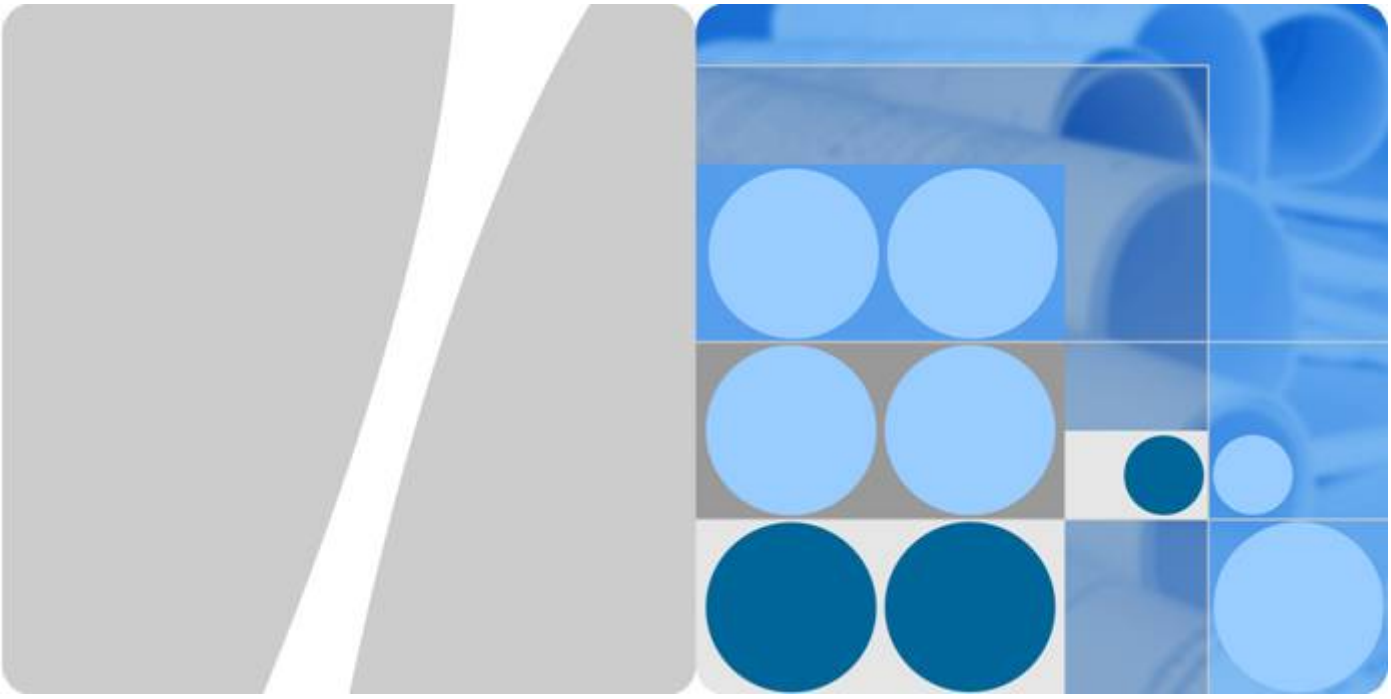

Document Database Service

API Reference

Issue 01

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Contents

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 *Document Database Service User Guide*.

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. For the endpoints of all services, see **Regions and Endpoints**.

1.4 Constraints

- For more constraints, see API description.

1.5 Concepts

- Account

  An account is generated after your registration. An account has full access permissions for all the resources and cloud services under the account. It can reset user passwords and grant users permissions. The account is a payment entity, which should not be used directly to perform routine management. To

ensure account security, create IAM 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.

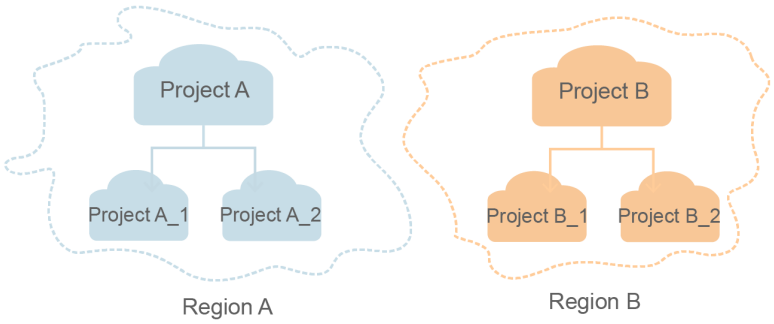
- AZ

  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 create 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
API Version Queries	• Query all API versions. • Query a specified API version.
Database Version Information Queries	Obtain database version information about a specified instance type.
All DB Instance Specifications Queries	Query all DB instance specifications in a specified region.
DB Instance Management	Manage DB instances, including creating a DB instance, deleting a DB instance, querying DB instances, adjusting instance storage space, adding nodes of cluster instances, and changing DB instance specifications.
Backup and Restoration	Back up and restore data, including creating a manual backup, deleting a manual backup, setting an automated backup policy, and querying an automated backup policy.
Tag Management	Manage tags, including querying resources by tag, adding and deleting a tag or tags, and querying resource tags and project tags.

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.

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://{{endpoint}}/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
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

Name	Description	Mandatory	Example
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	e9993fc787d94b6c886cbaa340f9c0f4
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.	Yes	The following is part of an example token: MIIPAgYJKoZIhvcNAQc-Co...ggg1BBIINPXsidG9rZ

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://{{endpoint}}/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 Chinese characters, convert the Chinese characters into the UTF-8 encoding format.

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 obtain a user token, 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***, ***domianname***, ********* (login password), and ***xxxxxxxxxxxxxxxxx*** (project name) with actual values. You can obtain the values from **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://{{endpoint}}/v3/auth/tokens
Content-Type: application/json

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

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

DDS supports token authentication.

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**.

NOTE

Obtain the token. For details, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*.

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

After a token is obtained, add the **X-Auth-Token** header field must be added to requests to specify the token when calling other APIs. For example, if the token is **ABCDEFJ....**, add **X-Auth-Token: ABCDEFJ....** in a request as follows:

```
POST https://{{Endpoint}}/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

3.3 Returned Values

Status Code

After sending a request, you will receive a response, including 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

(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 status code 201 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": "Test@123", //Administrator password
 "mode": "Sharding", //Sharded-cluster instance type
"flavor": [
 {
    "type":"mongos", //mongos node
   "num": 2, //Quantity
   "spec_code": "dds.c3.medium.4.mongos" //Node resource code
 },
 {
    "type":"shard", //shard node
   "num": 2, //Quantity
   "storage": "ULTRAHIGH", //Disk type
   "size": 20, //Disk size
   "spec_code": "dds.c3.medium.4.shard" //Node resource code
 },
 {
    "type":"config", //config node
   "num": 1, //Quantity
   "storage": "ULTRAHIGH", //Disk type
   "size": 20, //Disk size
   "spec_code": "dds.c3.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",
 "mode": "Sharding",
 "flavor": [
  {
   "type": "mongos",
   "num": 2,
   "spec_code": "dds.c3.medium.4.mongos"
  },
  {
   "type": "shard",
   "num": 2,
   "size": 20,
   "spec_code": "dds.c3.medium.4.shard"
  },
  {
   "type": "config",
   "num": 1,
```



```
      "size": 20,
      "spec_code": "dds.c3.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 API Description

5.1 Querying the API Version

5.1.1 Querying the API Version List

Function

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

URI

- URI format
  GET /
- Parameter description
  N/A

Requests

- Request header
  GET *https://DDS endpoint/*
- Request body
  N/A

Responses

- Parameter description

Table 5-1 Parameter description

Name	Type	Description
versions	Array of objects	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	Description
id	String	Indicates the API version.
links	Array of objects	Indicates the API link information. For more information, see **Table 5-3**. **NOTE** If the version is **v3**, the value is **[]**.
status	String	Indicates the version status.
version	String	Indicates the subversion of the API version.
min_version	String	Indicates the minimum API version.
updated	String	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	Description
href	String	Indicates the API URL and the value is "".

Name	Type	Description
rel	String	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

Function

This API is used to query the specified API version.

URI

URI format

GET /{version}

Requests

- Request header

```
GET https://DDS endpoint/{version}
```

- Request body

  N/A

Responses

- Parameter description

Table 5-4 Parameter description

Name	Type	Description
version	Object	Indicates the list of detailed API version information. For more information, see **Table 5-5**.

Table 5-5 version field data structure description

Name	Type	Description
id	String	Indicates the API version.
links	Array of objects	Indicates the API version link information. For more information, see **Table 5-6**. **NOTE** If the version is **v3**, the value is **[]**.
status	String	Indicates the version status. The value **CURRENT** indicates that the version has been released.
version	String	Indicates the subversion of the API version.
min_version	String	Indicates the minimum API version.
updated	String	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	Description
href	String	Indicates the API URL and the value is **""**.
rel	String	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

Function

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

URI

- URI format

  GET /v3/{project_id}/datastores/{datastore_name}/versions

- Parameter description

Table 5-7 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
datastore_name	Yes	Specifies the database type. The value is **DDS-Community**.

Requests

- Request header
  GET *https://DDS endpoint*/v3/{project_id}/datastores/{datastore_name}/versions
- Request body

  N/A

Responses

- Parameter description

  Table 5-8 Parameter description

Name	Type	Description
versions	Array of strings	Indicates the database version. Currently, versions 3.2 and 3.4 are supported.

- Response example

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

Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.3 Querying All DB Instance Specifications

Function

This API is used to query all DB instance specifications in a specified region.

URI

- URI format

  GET /v3/{project_id}/flavors?region={region}&engine_name={engine_name}
- Parameter description

Table 5-9 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
region	Yes	Specifies the region where the DB instance is deployed. Valid value: The value cannot be empty. For details about how to obtain this parameter value, see **Regions and Endpoints**.
engine_name	No	Specifies the database type. The value is **DDS-Community**.

Requests

- Request header

  NOTE

  The value of **region** in the following is used as an example.

  GET *https://DDS endpoint*/v3/375d8d8fad1f43039e23d3b6c0f60a19/flavors?region=*aaa*&engine_name=DDS-Community

- Request body

  N/A

Responses

- Parameter description

Table 5-10 Parameter description

Name	Type	Description
flavors	Array of objects	Indicates the DB instance specifications information list. For more information, see **Table 5-11**.

Table 5-11 flavors field data structure description

Name	Type	Description
engine_name	String	Indicates the engine name.

Name	Type	Description
type	String	Indicates the node type. DDS contains the following types of nodes: • mongos • shard • config • replica
vcpus	String	Indicates the number of vCPUs.
ram	String	Indicates the memory size in gigabyte (GB).
spec_code	String	Indicates the resource specification code. Example: dds.c3.xlarge.2.shard **NOTE** • **dds**: indicates the DDS service. • **c3.xlarge.2**: indicates the performance specification, which is high memory. • **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).
az_status	Object	Indicates the status of specifications in an AZ. Its value can be any of the following: • **normal**: indicates that the specifications are on sale. • **unsupported**: indicates that the DB instance specifications are not supported. • **sellout**: indicates the specifications are 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.c3.medium.4.mongos",
            "az_status": {
                "az1": "normal",
                "az2": "normal",
                "az3": "normal"
            }
        },
{
            "engine_name": "DDS-Community",
            "type": "shard",
            "vcpus": "4",
            "ram": "8",
            "spec_code": "dds.c3.xlarge.2.shard",
            "az_status": {
                "az1": "normal",
                "az2": "normal",
                "az3": "normal"
            }
        },
{
            "engine_name": "DDS-Community",
            "type": "config",
            "vcpus": "2",
            "ram": "4",
            "spec_code": "dds.c3.large.2.config",
            "az_status": {
                "az1": "normal",
                "az2": "normal",
                "az3": "normal"
            }
        },
{
            "engine_name": "DDS-Community",
            "type": "replica",
            "vcpus": "1",
            "ram": "4",
            "spec_code": "dds.c3.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**.

5.4 DB Instance Management

5.4.1 Creating a DB Instance

Function

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

URI

- URI format

  POST /v3/{project_id}/instances

- Parameter description

Table 5-12 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.

Requests

- Parameter description

Table 5-13 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	Specifies the DB instance name. The DB instance name of the same DB engine is unique for the same tenant. 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 (_).
datastore	Yes	Object	Specifies the database information. For more information, see **Table 5-14**.
region	Yes	String	Specifies the region ID. The value cannot be empty. For details about how to obtain this parameter value, see **Regions and Endpoints**.

Name	Mandatory	Type	Description
availability_zone	Yes	String	Specifies the AZ ID. For details, see **az_status** returned in **Querying All DB Instance Specifications**. A user can select multiple AZs to create a cross-AZ cluster. The value cannot be empty. For details about how to obtain this parameter value, see **Regions and Endpoints**.
vpc_id	Yes	String	Specifies the VPC ID. To obtain this parameter value, use either of the following methods: • Method 1: Log in to VPC console and view the VPC ID on the VPC details page. • Method 2: See the "Querying VPCs" section in the *Virtual Private Cloud API Reference*.
subnet_id	Yes	String	Specifies the network ID of the subnet. To obtain this parameter value, use either of the following methods: • Method 1: Log in to VPC console and click the target subnet on the **Subnets** page. You can view the network ID on the displayed page. • Method 2: See the "Querying Subnets" section in the *Virtual Private Cloud API Reference*.

Name	Mandatory	Type	Description
security_group_id	Yes	String	Specifies the security group ID. To obtain the security group ID, perform either of the following methods: • 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: See the "Querying Security Groups" section in the *Virtual Private Cloud API Reference*.
password	No	String	Specifies 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 ~!@#%^*-_=+? You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.
mode	Yes	String	Specifies the instance type. Cluster and replica set instances are supported. Valid value: • Sharding • ReplicaSet
flavor	Yes	Array of objects	Specifies the instance specifications. For more information, see **Table 5-15**. For details about how to obtain the value, see the response values of **flavor** in **Querying All DB Instance Specifications**.

Name	Mandatory	Type	Description
backup_strategy	No	Object	Specifies the advanced backup policy. For more information, see **Table 5-16**.
enterprise_project_id	No	String	Specifies the enterprise project ID. • This parameter is not transferred for users who have not enabled the enterprise multi-project service. • If this parameter is not transferred for a user who has enabled the enterprise multi-project service, the value is the default enterprise project. To obtain the enterprise project ID, see the **id** value in the **enterprise_project field data structure** table in section "Querying the Enterprise Project List" of the *Enterprise Management API Reference*.
ssl_option	No	String	Specifies whether to enable or disable SSL. Valid value: • The value **0** indicates that SSL is disabled by default. • The value **1** indicates that SSL is enabled by default. • If this parameter is not transferred, SSL is enabled by default.

Table 5-14 datastore field data structure description

Name	Mandatory	Type	Description
type	Yes	String	Specifies the database type. The value is **DDS-Community**.
version	Yes	String	Specifies the database version. The value is **3.2** or **3.4**.

Name	Mandatory	Type	Description
storage_engine	Yes	String	Specifies the storage engine. Currently, DDS supports the WiredTiger storage engine. The value is **wiredTiger**.

Table 5-15 flavor field data structure description

Name	Mandatory	Type	Description
type	Yes	String	Specifies the node type. Valid value: • For a cluster instance, the value can be **mongos**, **shard**, or **config**. • For a replica set instance, the value is **replica**.
num	Yes	Integer	Specifies node quantity. Valid value: • mongos: The value ranges from 2 to 32. • mongos: The value ranges from 2 to 32. • config: The value is **1**. • replica: The value is **1**.
storage	This parameter is optional for all nodes except mongos. This parameter is invalid for the mongos nodes.	String	Specifies the disk type. Valid value: ULTRAHIGH, which indicates the type SSD. This parameter is valid for the shard and config nodes of a cluster instance and for replica set instances. This parameter is invalid for mongos nodes. Therefore, you do not need to specify the storage space for mongos nodes.

Name	Mandatory	Type	Description
size	This parameter is mandatory for all nodes except mongos. This parameter is invalid for the mongos nodes.	Integer	Specifies the disk size. The value must be a multiple of 10. The unit is GB. • For a cluster instance, the storage space of a shard node can be 10 to 2000 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 2000.
spec_code	Yes	String	Specifies the resource specification code. For details about how to obtain the value, see the response values of **spec_code** in **Querying All DB Instance Specifications**. In a cluster instance, multiple specifications need to be specified. All specifications must be of the same series, that is, general-purpose (s6), enhanced (c3), or enhanced II (c6).

Table 5-16 backup_strategy field data structure description

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

NOTE

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

- Request header
  POST https://*DDS endpoint*/v3/{*project_id*}/instances.
- Example request

  Create a cluster instance:

```
{
  "name": "test-cluster-01",
  "datastore": {
    "type": "DDS-Community",
    "version": "3.4",
    "storage_engine": "wiredTiger"
  },
  "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",
 "password": "Test#%0_",
 "mode": "Sharding",
 "flavor": [
  {
    "type": "mongos",
    "num": 2,
    "spec_code": "dds.c3.medium.4.mongos"
  },
  {
    "type": "shard",
    "num": 2,
    "storage": "ULTRAHIGH",
    "size": 20,
    "spec_code": "dds.c3.medium.4.shard"
  },
  {
    "type": "config",
    "num": 1,
    "storage": "ULTRAHIGH",
    "size": 20,
    "spec_code": "dds.c3.large.2.config"
  }
 ],
 "backup_strategy": {
   "start_time": "23:00-00:00",
   "keep_days": "8"
 },
 "ssl_option":"1"
}
```

Create a replica set instance.

```
{
 "name": "test-replicaset",
 "datastore": {
   "type": "DDS-Community",
   "version": "3.4",
   "storage_engine": "wiredTiger"
 },
 "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",
 "password": "Test#%0_",
 "mode": "ReplicaSet",
 "flavor": [
  {
    "type": "replica",
    "num": 1,
    "storage": "ULTRAHIGH",
    "size": 30,
    "spec_code": "dds.s2.medium.4.shard"
  }
 ],
 "backup_strategy": {
   "start_time": "23:00-00:00",
   "keep_days": "8"
 },
```



```
  "ssl_option":"1"
}
```

Responses

- Parameter description

Table 5-17 Parameter description

Name	Type	Description
id	String	Indicates the DB instance ID.
name	String	Same as the request parameter.
datastore	Object	Indicates the database information, which is the same as the request parameter. For more information, see **Table 5-14**.
created	String	Indicates the creation time in the following format: yyyy-mm-dd hh:mm:ss.
status	String	Indicates the DB instance status. The value is **creating**.
region	String	Indicates the region ID, which is the same as the request parameter.
availability_zone	String	Indicates the AZ ID, which is the same as the request parameter.
vpc_id	String	Indicates the VPC ID, which is the same as the request parameter.
subnet_id	String	Indicates the network ID of the subnet, which is the same as the request parameter.
security_group_id	String	Indicates the security group ID, which is the same as the request parameter.
mode	String	Indicates the instance type, which is the same as the request parameter.
flavor	Array of objects	Indicates the instance specification, which is the same as the request parameter. For more information, see **Table 5-15**.
backup_strategy	Object	Indicates the advanced backup policy, which is the same as the request parameter. For more information, see **Table 5-16**.
enterprise_project_id	String	Indicates the enterprise project ID. If the value is **0**, the resource belongs to the default enterprise project.

Name	Type	Description
ssl_option	String	Indicates whether to enable SSL, which functions the same as the request parameter.
job_id	String	Indicates the ID of the workflow for creating a DB instance.

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": "bbb",
   "vpc_id": "674e9b42-cd8d-4d25-a2e6-5abcc565b961",
   "subnet_id": "f1df08c5-71d1-406a-aff0-de435a51007b",
   "security_group_id": "7aa51dbf-5b63-40db-9724-dad3c4828b58",

   "mode": "Sharding",
   "flavor": [
      {
         "type": "mongos",
         "num": 2,
         "spec_code": "dds.c3.medium.4.mongos"
      },
      {
         "type": "shard",
         "num": 2,
         "spec_code": "dds.c3.medium.4.shard",
         "size": 20
      },
      {
         "type": "config",
         "num": 1,
         "spec_code": "dds.c3.large.2.config",
         "size": 20
      }
   ],
   "backup_strategy": {
      "start_time": "23:00-00:00",
      "keep_days": "8"
   },
   "enterprise_project_id": "",
   "ssl_option":"1",
   "job_id": "c010abd0-48cf-4fa8-8cbc-090f093eaa2f"
}
```


Replica set instance:


```
{
   "id": "46dfadfd2b674585a430217f23606cd7in02",
   "name": "test-replicaset",
   "datastore": {
      "type": "DDS-Community",
      "version": "3.4",
      "storage_engine": "wiredTiger"
   },
   "created": "2019-01-16 09:33:08",
   "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",
   "mode": "ReplicaSet",
   "flavor": [
      {
         "type": "replica",
         "num": 1,
         "spec_code": "dds.s2.medium.4.shard",
         "size": 30
      }
   ],
   "backup_strategy": {
      "start_time": "23:00-00:00",
      "keep_days": "7"
   },
   "enterprise_project_id": "",
   "ssl_option":"1",
   "job_id": "2408417d-fd4b-40ae-bec6-e09ce594eb5f"
}
```


Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.4.2 Restarting a DB Instance

Function

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.

Constraints

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

URI

- URI format

  POST /v3/{project_id}/instances/{instance_id}/restart

- Parameter description

  Table 5-18 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

  Table 5-19 Parameter description

Name	Mandatory	Type	Description
target_type	No	String	Specifies the type of the object to restart. ● This parameter is mandatory when you restart one or more nodes of a cluster instance. – Set the value to **mongos** if mongos nodes are restarted. – Set the value to **shard** if shard nodes are restarted. – Set the value to **config** if config nodes are restarted. ● This parameter is not transferred when the DB instance is restarted.
target_id	Yes	String	Specifies the ID of the object to restart. ● 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 header

  POST *https://DDS endpoint*/v3/{*project_id*}/instances/{*instance_id*}/restart

- Example request

  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 5-20 Parameter description

Name	Type	Description
job_id	String	Indicates 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**.

5.4.3 Deleting a DB Instance

Function

This API is used to delete a DB instance.

URI

- URI format

  DELETE /v3/{project_id}/instances/{instance_id}

- Parameter description

Table 5-21 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Request header
  DELETE *https://DDS endpoint*/v3/{*project_id*}/instances/{*instance_id*}
- Request body
  N/A

Responses

- Parameter description

  Table 5-22 Parameter description

Name	Type	Description
job_id	String	Indicates the workflow 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**.

5.4.4 Querying DB Instances

Function

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

URI

- URI format

  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}

- Parameter description

Table 5-23 Parameter description

Name	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID of a tenant in a region.
id	No	String	Specifies the DB instance ID.
name	No	String	Specifies the DB instance name. If you use asterisk (*) at the beginning of the name, fuzzy search results are returned. Otherwise, the exact results are returned. **NOTE** The asterisk (*) is a reserved character in the system and cannot be used alone.
mode	No	String	Specifies the instance type. ● **Sharding** indicates the cluster instance. ● **ReplicaSet** indicate the replica set instance.
datastore_type	No	String	Specifies the database type. The value is **DDS-Community**.
vpc_id	No	String	Specifies the VPC ID. To obtain this parameter value, use either of the following methods: ● Method 1: Log in to VPC console and view the VPC ID on the VPC details page. ● Method 2: See the "Querying VPCs" section in the *Virtual Private Cloud API Reference*.
subnet_id	No	String	Specifies the network ID of the subnet. To obtain this parameter value, use either of the following methods: ● Method 1: Log in to VPC console and click the target subnet on the **Subnets** page. You can view the network ID on the displayed page. ● Method 2: See the "Querying Subnets" section in the *Virtual Private Cloud API Reference*.

Name	Mandatory	Type	Description
offset	No	Integer	Specifies 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	No	Integer	Specifies 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.

Requests

- Request header

  Query all DB instances.

  GET *https://DDS endpoint*/v3/0483b6b16e954cb88930a360d2c4e663/instances

  Query DB instances based on specified conditions.

  GET *https://DDS endpoint*/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

- Request body

  N/A

Responses

- Parameter description

  Table 5-24 Parameter description

Name	Type	Description
instances	Array of objects	Indicates the DB instance information. For more information, see **Table 5-25**.
total_count	Integer	Indicates the total number of queried records.

Table 5-25 instances field data structure description

Name	Type	Description
id	String	Indicates the DB instance ID.
name	String	Indicates the DB instance name.
status	String	Indicates the DB instance status. Valid value: • **normal**: indicates that the instance is running properly. • **abnormal**: indicates that the instance is abnormal. • **creating**: indicates that the instance is being created. • **data_disk_full**: indicates that the instance disk is full. • **createfail**: indicates that the instance failed to be created. • **enlargefail**: indicates that nodes failed to be added to the instance.
port	Integer	Indicates the database port number. The port range is 2100 to 9500.
mode	String	Indicates the instance type, which is the same as the request parameter.
region	String	Indicates the region where the DB instance is deployed.
datastore	Object	Indicates the database information. For more information, see **Table 5-26**.
engine	String	Indicates the storage engine. The value is **wiredTiger**.
created	String	Indicates the DB instance creation time.
updated	String	Indicates the time when a DB instance is updated.
db_user_name	String	Indicates the default username. The value is **rwuser**.
ssl	Integer	Indicates that SSL is enabled or not. • **1**: indicate that SSL is enabled. • **0**: indicate that SSL is disabled.

Name	Type	Description
vpc_id	String	Indicates the VPC ID.
subnet_id	String	Indicates the network ID of the subnet.
security_group_id	String	Indicates the security group ID.
backup_strategy	Object	Indicates the backup policy. For more information, see **Table 5-27**.
pay_mode	String	The value is set to **"0"**.
maintenance_window	String	Indicates the maintenance time window.
groups	Array of objects	Indicates group information. For more information, see **Table 5-28**.
enterprise_project_id	String	Indicates the enterprise project ID. If the value is **0**, the resource belongs to the default enterprise project.
time_zone	String	Indicates the time zone.
actions	Array of strings	Indicates the operation that is executed on the DB instance.

Table 5-26 datastore field data structure description

Name	Type	Description
type	String	Indicates the DB engine.
version	String	Indicates the database version.

Table 5-27 backup_strategy field data structure description

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

Table 5-28 groups field data structure description

Name	Type	Description
type	String	Indicates the node type. Valid value: • shard • config • mongos • replica
id	String	Indicates the group ID. This parameter is valid only when the node type is shard or config.
name	String	Indicates the group name. This parameter is valid only when the node type is shard or config.
status	String	Indicates the group status. This parameter is valid only when the node type is shard or config.
volume	Object	Indicates the volume information. For more information, see **Table 5-29**. This parameter is valid only when the node type is shard, config, or replica.
nodes	Array of objects	Indicates node information. For more information, see **Table 5-30**.

Table 5-29 volume field data structure description

Name	Type	Description
size	String	Indicates the disk size. Unit: GB
used	String	Indicates the disk usage. Unit: GB

Table 5-30 nodes field data structure description

Name	Type	Description
id	String	Indicates the node ID.
name	String	Indicates the node name.
status	String	Indicates the node status.

Name	Type	Description
role	String	Indicates the node role. Valid value: • **master**: This value is returned for the mongos node. • **Primary**: This value is returned for the primary shard and config nodes, and the primary node of a replica set. • **Secondary**: This value is returned for the secondary shard and config nodes, and the secondary node of a replica set. • **Hidden**: This value is returned for the hidden shard and config nodes, and the hidden node of a replica set. • **unknown**. This value is returned when the node is abnormal.
private_ip	String	Indicates the private IP address of a node. 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 "".
public_ip	String	Indicates the EIP that has been bound. This parameter is valid only for mongos nodes of cluster instances and the primary and secondary nodes of replica set instances.
spec_code	String	Indicates the resource specification code. For details about the instance specifications, see the value of the **flavors.spec_code** parameter in **Querying All DB Instance Specifications**.
availability_zone	String	Indicates the AZ.

NOTE

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

- Response example

  Query all DB instances.

```
{
  "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.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": "",
    "actions": [
      "CREATE"
    ]
},
{
    "id": "9136fd2a9fcd405ea4674276ce36dae8in02",
    "name": "dds-32f4",
    "status": "normal",
    "port": "8635",
    "mode": "Sharding",
    "region": "aaa",
    "datastore": {
        "type": "DDS-Community",
        "version": "3.4"
    },
    "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": "master",
                    "private_ip": "192.168.0.56",
                    "public_ip": "",
                    "spec_code": "dds.c3.medium.4.mongos",
                    "availability_zone": "bbb"
                },
                {
                    "id": "d4f66666b1d64ab28719da0526341c7eno02",
                    "name": "dds-32f4_mongos_node_2",
                    "status": "normal",
                    "role": "master",
                    "private_ip": "192.168.0.185",
                    "public_ip": "",
                    "spec_code": "dds.c3.medium.4.mongos",
                    "availability_zone": "bbb"
                }
            ]
        },
        {
```



```
            "type": "shard",
            "id": "d1b92d2cbd544e85ac7ce6a7f33ba205gr02",
            "name": "shard_2",
            "status": "normal",
            "volume": {
                "size": "10",
                "used": "0.33"
            },
            "nodes": [
                {
                    "id": "0e9abaebe5974b63a5b221de6ee34cfeno02",
                    "name": "dds-32f4_shard_2_node_3",
                    "status": "normal",
                    "role": "Primary",
                    "spec_code": "dds.c3.medium.4.shard",
                    "availability_zone": "bbb"
                },
                {
                    "id": "1d7f4c5476c04cc187f920925c2b601fno02",
                    "name": "dds-32f4_shard_2_node_2",
                    "status": "normal",
                    "role": "Hidden",
                    "spec_code": "dds.c3.medium.4.shard",
                    "availability_zone": "bbb"
                },
                {
                    "id": "3dd2cce03da54fc08f10651cbfea778dno02",
                    "name": "dds-32f4_shard_2_node_1",
                    "status": "normal",
                    "role": "Secondary",
                    "spec_code": "dds.c3.medium.4.shard",
                    "availability_zone": "bbb"
                }
            ]
        },
        {
            "type": "shard",
            "id": "06439baa35c146d3a8965af59d370908gr02",
            "name": "shard_1",
            "status": "normal",
            "volume": {
                "size": "10",
                "used": "0.33"
            },
            "nodes": [
                {
                    "id": "0f6744d7e29f42ff80fc1a36cc145042no02",
                    "name": "dds-32f4_shard_1_node_1",
                    "status": "normal",
                    "role": "Primary",
                    "spec_code": "dds.c3.medium.4.shard",
                    "availability_zone": "bbb"
                },
                {
                    "id": "3abcb399113b4512bd5a906da54e8753no02",
                    "name": "dds-32f4_shard_1_node_3",
                    "status": "normal",
                    "role": "Hidden",
                    "spec_code": "dds.c3.medium.4.shard",
                    "availability_zone": "bbb"
                },
                {
```



```
                    "id": "c149f70563494501b5706cad225a8ebdno02",
                    "name": "dds-32f4_shard_1_node_2",
                    "status": "normal",
                    "role": "Secondary",
                    "spec_code": "dds.c3.medium.4.shard",
                    "availability_zone": "bbb"
                }
            ]
        },
        {
            "type": "config",
            "id": "84e7c96b82aa4fedb3b00f98edd71ba4gr02",
            "name": "config",
            "status": "normal",
            "volume": {
                "size": "20",
                "used": "0.33"
            },
            "nodes": [
                {
                    "id": "7422f7331b714ac39aa647a1ec968d33no02",
                    "name": "dds-32f4_config_node_2",
                    "status": "normal",
                    "role": "Primary",
                    "spec_code": "dds.c3.large.2.config",
                    "availability_zone": "bbb"
                },
                {
                    "id": "9e3b343151044eda91ddb8a42ae5cbefno02",
                    "name": "dds-32f4_config_node_3",
                    "status": "normal",
                    "role": "Hidden",
                    "spec_code": "dds.c3.large.2.config",
                    "availability_zone": "bbb"
                },
                {
                    "id": "c0053ca460ac4889841ffb14a886ec54no02",
                    "name": "dds-32f4_config_node_1",
                    "status": "normal",
                    "role": "Secondary",
                    "spec_code": "dds.c3.large.2.config",
                    "availability_zone": "bbb"
                }
            ]
        }
    ],
    "enterprise_project_id": "0",
    "time_zone": "",
    "actions": [
      "CREATE"
    ]
  }
 ],
 "total_count":
}
```


Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.4.5 Scaling Up Storage Space

Function

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

URI

- URI format

  POST /v3/{project_id}/instances/{instance_id}/enlarge-volume

- Parameter description

Table 5-31 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

Table 5-32 Parameter description

Name	Mandatory	Type	Description
volume	Yes	Object	Specifies detailed information about the volume request. For more information, see **Table 5-33**.

Table 5-33 volume field data structure description

Name	Mandatory	Type	Description
group_id	No	String	Specifies the role ID. • 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	Mandatory	Type	Description
size	Yes	Integer	Specifies the requested disk capacity. The value must be an integer multiple of 10 and greater than the current storage space. • 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 2000 GB.

- Request header
  POST *https://DDS endpoint*/v3/{*project_id*}/instances/{*instance_id*}/enlarge-volume
- Example request

  Clusters:

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

  Replica sets:

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

Responses

- Parameter description

  Table 5-34 Parameter description

Name	Type	Description
job_id	String	Indicates 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**.

5.4.6 Adding Nodes for a Cluster Instance

Function

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

Constraints

- 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 /v3/{project_id}/instances/{instance_id}/enlarge

- Parameter description

  Table 5-35 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

Table 5-36 Parameter description

Name	Mandatory	Type	Description
type	Yes	String	Specifies the object to be scaled. • 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	Yes	String	Specifies the resource specification code. For details about how to obtain the resource specification code, see the **flavors.spec_code** parameter in **Querying All DB Instance Specifications**.
num	Yes	Integer	Specifies the number of mongos or shard nodes to be added. A cluster instance supports a maximum of 32 mongos nodes and 32 shard nodes.
volume	No	Object	Specifies the volume information. For more information, see **Table 5-37**. • 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. The disk information of all shards to be added needs to be specified. **NOTE** If multiple shards are added at a time, the shards must have the same specifications and disk capacity.

Table 5-37 volume field data structure description

Name	Mandatory	Type	Description
size	Yes	Integer	Specifies the disk capacity of all new shards. The value range is from 10 GB to 2000 GB.

- Request header
  POST *https://DDS endpoint*/v3/{*project_id*}/instances/{*instance_id*}/enlarge
- Example request

  Number of mongos nodes to be added:

```
{
   "type": "mongos",
```



```
    "spec_code":"dds.c3.medium.4.mongos",
    "num": 1
}
```

Number of shard nodes to be added:

```
{
    "type": "shard",
    "spec_code":"dds.c3.medium.4.shard",
    "num": 1,
        "volume": {
            "size": 330
    }
}
```

Responses

- Parameter description

  Table 5-38 Parameter description

Name	Type	Description
job_id	String	Indicates the task ID.

- Response example

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

Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.4.7 Modifying DB Instance Specifications

Function

This API is used to modify DB instance specifications.

NOTICE

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

Constraints

- The new specifications cannot be the same as the original specifications.
- Specifications can be modified only when the DB instance status is normal.

- This API can only be used to modify specifications within the same series.

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

  Example:

  – dds.mongodb.s6.large.4.mongos and dds.mongodb.s6.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 /v3/{project_id}/instances/{instance_id}/resize

- Parameter description

Table 5-39 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

Table 5-40 Parameter description

Name	Mandatory	Type	Description
resize	Yes	Object	Specifies the specification information. For more information, see **Table 5-41**.

Table 5-41 resize field data structure description

Name	Mandatory	Type	Description
target_type	No	String	Specifies the object type: • This parameter is mandatory for a cluster instance. When the mongos node specifications are to be modified, the value is **mongos**. When the shard nodes specifications are to be modified, the value is **shard**. • This parameter is not transferred for replica set instances.
target_id	Yes	String	Specifies the ID of the DB instance or node whose specifications are to be modified. • If the mongos node specifications are to be modified, the value is mongos node ID. If the shard nodes specifications are to be modified, the value is shard node ID. • For a replica set instance, the value is the DB instance ID.
target_spec_code	Yes	String	Specifies 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 All DB Instance Specifications**.

- Request header
  POST *https://DDS endpoint*/v3/{*project_id*}/instances/{*instance_id*}/resize
- Example request

  Modify the mongos specifications in a cluster instance.

```
{
  "resize": {
    "target_type": "mongos",
    "target_id": "a742c13a284949adad177672e8a0f01cno02",
```



```
    "target_spec_code": "dds.c3.large.4.mongos"
  }
}
```

Modify the shard specifications in a cluster instance.

```
{
  "resize": {
    "target_type": "shard",
    "target_id": "aeeb40a704904977ad78993d138ec942gr02",
    "target_spec_code": "dds.c3.large.4.shard"
  }
}
```

Modify specifications of a replica set instance.

```
{
  "resize": {
    "target_id": "aeeb40a704904977ad78993d138ec942in02",
    "target_spec_code": "dds.c3.medium.4.repset"
  }
}
```

Responses

- Parameter description

  Table 5-42 Parameter description

Name	Type	Description
job_id	String	Indicates 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**.

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

Function

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

Constraints

- This API supports only DDS replica sets.

- This API can freeze instances except abnormal instances.

URI

- URI format

  POST /v3/{project_id}/instances/{instance_id}/switchover
- Parameter description

  Table 5-43 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Request header

  POST *https://DDS endpoint*/v3/{*project_id*}/instances/{*instance_id*}/switchover
- Example request

  N/A

Responses

- Parameter description

  Table 5-44 Parameter description

Name	Type	Description
job_id	String	Indicates 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**.

5.4.9 Enabling or Disabling SSL

Function

This API is used to enable or disable SSL.

Constraints

- This API can freeze instances except abnormal instances.
- The DB instance must be restarted to make port number modifications take effect. Exercise caution when enabling or disabling SSL.

URI

- URI format

  POST/v3/{project_id}/instances/{instance_id}/switch-ssl

- Parameter description

  Table 5-45 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

  Table 5-46 Parameter description

Name	Mandatory	Type	Description
ssl_option	Yes	String	Specifies whether to enable or disable SSL. Valid value: • The value **0** indicates that SSL is disabled by default. • The value **1** indicates that SSL is enabled by default.

- Request header

  POST *https://DDS endpoint*/v3/{*project_id*}/instances/{*instance_id*}/switch-ssl

- Example request

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

Responses

- Parameter description

Table 5-47 Parameter description

Name	Type	Description
job_id	String	Indicates the workflow ID.
ssl_option	String	Indicates whether to enable or disable SSL. Valid value: • The value **0** indicates that SSL is disabled by default. • The value **1** indicates that SSL is enabled by default.

- 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**.

5.4.10 Modifying a DB Instance Name

Function

This API is used to modify a DB instance name.

Constraints

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

URI

- URI format

  PUT /v3/{project_id}/instances/{instance_id}/modify-name
- Parameter description

Table 5-48 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.

Name	Mandatory	Description
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

  Table 5-49 Parameter description

Name	Mandatory	Type	Description
new_instance_name	Yes	String	Specifies the DB instance name. The DB instance name of the same DB engine is unique for the same tenant. 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 (_).

- Request header
  PUT *https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/modify-name
- Example request

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

Responses

- Response example

```
{}
```

Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.4.11 Changing a Database Port

Function

This API is used to change a database port.

Constraints

- This API can freeze instances except abnormal instances.
- The DB instance must be restarted to make port number modifications take effect. Exercise caution when modifying the database port.

URI

- URI format

  POST /v3/{project_id}/instances/{instance_id}/modify-port
- Parameter description

  Table 5-50 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

  Table 5-51 Parameter description

Name	Mandatory	Type	Description
port	Yes	Integer	Specifies the port number. The port number ranges from 2100 to 9500.

- Request header

  POST*https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/modify-port
- Example request

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

Responses

- Parameter description

  Table 5-52 Parameter description

Name	Type	Description
job_id	String	Indicates the workflow ID.
port	Integer	Indicates 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**.

5.4.12 Changing a Security Group

Function

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

Constraints

- 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 /v3/{project_id}/instances/{instance_id}/modify-security-group

- Parameter description

Table 5-53 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

Table 5-54 Parameter description

Name	Mandatory	Type	Description
security_group_id	Yes	String	Specifies the ID of the new security group.

- Request header
  POST *https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/modify-security-group
- Example request
  ```
  {
     "security_group_id": "73bed21a-708b-4985-b697-a96d0e0d2b39"
  }
  ```

Responses

- Parameter description

  Table 5-55 Parameter description

Name	Type	Description
job_id	String	Indicates the workflow ID.
security_group_id	String	Indicates 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**.

5.4.13 Binding an EIP

Function

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

Constraints

- This API can freeze instances except abnormal instances.
- Hidden nodes do not support this operation.
- Multiple EIPs cannot be bound to the same node.

URI

- URI format

  POST /v3/{project_id}/nodes/{node_id}/bind-eip
- Parameter description

Table 5-56 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
node_id	Yes	Specifies the ID of the node to which the EIP is to be bound. • Select the mongos node in a cluster instance • Select the primary or secondary node in a replica set instance.

Requests

- Parameter description

  Table 5-57 Parameter description

Name	Mandatory	Type	Description
public_ip_id	Yes	String	Specifies the ID of the EIP.
public_ip	Yes	String	Specifies the EIP.

- Request header

  POST *https://DDS endpoint*/v3/{project_id}/nodes/{node_id}//bind-eip

- Example request

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

Responses

- Parameter description

  Table 5-58 Parameter description

Name	Type	Description
job_id	String	Indicates the workflow ID.
node_name	String	Indicates the node name.
node_id	String	Indicates the node ID.
public_ip_id	String	Specifies the ID of the EIP.
public_ip	String	Specifies the 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**.

5.4.14 Unbinding an EIP

Function

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

Constraints

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

URI

- URI format

  POST /v3/{project_id}/nodes/{node_id}/unbind-eip
- Parameter description

  Table 5-59 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
node_id	Yes	Specifies the ID of the node from which the EIP is to be unbound.

Requests

- Request header

  POST *https://DDS endpoint*/v3/{project_id}/nodes/{node_id}/unbind-eip
- Example request

  N/A

Responses

- Parameter description

  Table 5-60 Parameter description

Name	Type	Description
job_id	String	Indicates the workflow ID.
node_name	String	Indicates the node name.
node_id	String	Indicates 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**.

5.4.15 Changing a Private IP Address

Function

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

Constraints

- This API can freeze instances except 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 /v3/{project_id}/instances/{instance_id}/modify-internal-ip

- Parameter description

Table 5-61 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

  Table 5-62 Parameter description

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

- Request header

  POST *https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/modify-internal-ip

- Example request

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

Responses

- Parameter description

  Table 5-63 Parameter description

Name	Type	Description
job_id	String	Indicates the workflow ID.
node_id	String	Indicates the node ID.
new_ip	String	Indicates 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 Backup and Restoration

5.5.1 Creating a Manual Backup

Function

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

URI

- URI format

  POST /v3/{project_id}/backups
- Parameter description

  Table 5-64 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.

Requests

- Parameter description

  Table 5-65 Parameter description

Name	Mandatory	Type	Description
backup	Yes	Object	Specifies the backup parameter objects For more information, see **Table 5-66**.

Table 5-66 backup field data structure description

Name	Mandatory	Type	Description
instance_id	Yes	String	Specifies the DB instance ID.
name	Yes	String	Specifies 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	No	String	Specifies the manual backup description. The description must consist of a maximum of 256 characters and cannot contain the following special characters: >! <"&'=

- Request header
  POST *https://DDS endpoint*/v3/{project_id}/backups
- Example request

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

Responses

- Parameter description

Table 5-67 Parameter description

Name	Type	Description
backup_id	String	Indicates the manual backup ID.

- Response example

```
{
    "backup_id": "bf9ee62a7f7044c583c6765c916c36edbr02"
}
```

Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.5.2 Deleting a Manual Backup

Function

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

URI

- URI format

  DELETE /v3/{project_id}/backups/{backup_id}

- Parameter description

Table 5-68 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
backup_id	Yes	Specifies the backup file ID.

Requests

- Request header

  DELETE *https://DDS endpoint*/v3/{project_id}/backups/{backup_id}

- Request body

  N/A

Responses

- Parameter description

Table 5-69 Parameter description

Name	Type	Description
job_id	String	Indicates 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**.

5.5.3 Querying the Backup List

Function

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

URI

- URI format

  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}

- Parameter description

Table 5-70 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	No	Specifies the DB instance ID.
backup_id	No	Specifies the backup ID.
backup_type	No	Specifies the backup type. • **Auto**: indicates automated full backup. • **Manual** indicates manual full backup.

Name	Mandatory	Description
offset	No	Specifies 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	No	Specifies 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.
begin_time	No	Specifies 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	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	No	Specifies the DB instance mode. Valid value: • Sharding • ReplicaSet

Requests

- Request header
  GET *https://DDS endpoint*/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
- Request body

  N/A

Responses

- Parameter description

Table 5-71 Parameter description

Name	Type	Description
backups	Array of objects	Indicates the backup list. For more information, see **Table 5-72**.
total_count	Integer	Indicates the total number of queried records.

Table 5-72 backups field data structure description

Name	Type	Description
id	String	Indicates the backup ID.
name	String	Indicates the backup name.
instance_id	String	Indicates the ID of the DB instance for which the backup is created.
instance_name	String	Indicates the name of the DB instance for which the backup is created.
datastore	Object	Indicates the database version. For more information, see **Table 5-73**.
type	String	Indicates the backup type. • **Auto**: indicates automated full backup. • **Manual** indicates manual full backup.
begin_time	String	Indicates 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	Indicates 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	Indicates the backup status. Valid value: • BUILDING: Backup in progress • COMPLETED: Backup completed • FAILED: Backup failed • DISABLED: Backup being deleted
size	Long	Indicates the backup size in KB.
description	String	Indicates the backup description.

Table 5-73 datastore field data structure description

Name	Type	Description
type	String	Indicates the DB engine. Valid value: **DDS-Community**.
version	String	Indicates the database of version 3.2 or 3.4. Its value is **3.2** or **3.4**.

- Response example

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

Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.5.4 Querying an Automated Backup Policy

Function

This API is used to query an automated backup policy.

URI

- URI format

  GET /v3/{project_id}/instances/{instance_id}/backups/policy

- Parameter description

Table 5-74 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Request header
  GET *https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/backups/policy
- Request body
  N/A

Responses

- Parameter description

Table 5-75 Parameter description

Name	Type	Description
backup_policy	Object	Indicates the backup policy object, including the backup retention period (days) and start time. For more information, see **Table 5-76**.

Table 5-76 backup_policy field data structure description

Name	Type	Description
keep_days	Integer	Indicates the number of days to retain the backup files.
start_time	String	Indicates the backup time window. Automated backups will be triggered during the backup time window.
period	String	Indicates 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**.

5.5.5 Setting an Automated Backup Policy

Function

This API is used to set an automated backup policy.

URI

- URI format

  PUT /v3/{project_id}/instances/{instance_id}/backups/policy

- Parameter description

  Table 5-77 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

Table 5-78 Parameter description

Name	Mandatory	Type	Description
backup_policy	Yes	Object	Specifies the backup policy object, including the backup retention period (days) and start time. For more information, see **Table 5-79**.

Table 5-79 backup_policy field data structure description

Name	Mandatory	Type	Description
keep_days	Yes	Integer	Specifies 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.

Name	Mandatory	Type	Description
start_time	No	String	Specifies the backup time window. Automated backups will be triggered during the backup time window. This parameter is mandatory if the automated backup policy is enabled. This parameter is not transferred if the automated backup policy is disabled. The value must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. • The **HH** value must be 1 greater than the **hh** value. • The values of **mm** and **MM** must be the same and must be set to **00**. Example value: 23:00-00:00

Name	Mandatory	Type	Description
period	No	String	Specifies the backup cycle configuration. Data will be automatically backed up on the selected days every week. Value range: The value is a number separated by DBS case commas (,). The number indicates the week. The restrictions on the backup retention period are as follows: ● 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 header
  PUT *https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/backups/policy
- Example request

  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**.

5.5.6 Restoring Data to a New DB Instance

Function

This API is used to restore a DB instance using the backup.

Constraints

- The database type of the destination DB instance must be the same as that of the source DB instance.

URI

- URI format

  POST /v3/{project_id}/instances
- Parameter description

  Table 5-80 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.

Requests

- Parameter description

Table 5-81 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	Specifies the DB instance name. The DB instance name of the same DB engine is unique for the same tenant. 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 (_).
availability_zone	Yes	String	Specifies the AZ ID. The value cannot be empty. For details about how to obtain this parameter value, see **Regions and Endpoints**.
vpc_id	Yes	String	Indicates the VPC ID. For details about how to obtain this parameter value, see section "Virtual Private Cloud" in the *Virtual Private Cloud API Reference*. The value cannot be empty. The string length and whether the string complying with UUID regular expression rules are verified.
subnet_id	Yes	String	Specifies the subnet ID. For details about how to obtain this parameter value, see section "Subnet" in the *Virtual Private Cloud API Reference*.

Name	Mandatory	Type	Description
security_group_id	Yes	String	Specifies the ID of the security group where a specified DB instance belongs to. For details about how to obtain this parameter value, see section "Security Group" in the *Virtual Private Cloud API Reference*.
password	No	String	Specifies 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 ~!@#%^*-_=+? You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.
disk_encryption_id	No	String	Specifies the key ID used for disk encryption. The string must comply with UUID regular expression rules. If this parameter is not transferred, disk encryption is not performed.
flavor	Yes	Array of objects	Specifies the instance specifications. For more information, see **Table 5-83**. For details about how to obtain the value, see the parameter value in **Querying All DB Instance Specifications**.

Name	Mandatory	Type	Description
restore_point	Yes	Object	Specifies the details about the backup to be restored to a new DB instance. For more information, see **Table 5-82**.
backup_strategy	No	Object	Specifies the advanced backup policy. For more information, see **Table 5-84**.
enterprise_project_id	No	String	Specifies the enterprise project ID. • This parameter is not transferred for users who have not enabled the enterprise multi-project service. • If this parameter is not transferred for a user who has enabled the enterprise multi-project service, the value is the default enterprise project.
ssl_option	No	String	Specifies whether to enable or disable SSL. Valid value: • The value **0** indicates that SSL is disabled by default. • The value **1** indicates that SSL is enabled by default. If this parameter is not transferred, SSL is enabled by default.

Table 5-82 restore_point field data structure description

Name	Mandatory	Type	Description
backup_id	Yes	String	Specifies the ID of the backup to be restored.

Table 5-83 flavor field data structure description

Name	Mandatory	Type	Description
type	Yes	String	Specifies the node type. Valid value: ● For a cluster instance, the value can be **mongos**, **shard**, or **config**. ● For a replica set instance, the value is **replica**.
num	Yes	Integer	Specifies node quantity. Valid value: ● This parameter is not transferred for shard nodes. ● mongos: The value ranges from 2 to 32. ● config: The value is **1**. ● replica: The value is **1**.
size	This parameter is optional for all nodes except mongos and invalid for mongos.	Integer	Specifies the disk size. The value must be a multiple of 10. The unit is GB. ● In a cluster instance, the shard size ranges from 10 GB to 2000 GB and must be greater than or equal to the disk size of the original instance. The config size can only be 20 GB. This parameter is invalid for mongos nodes. Therefore, you do not need to specify the storage space for mongos nodes. ● In a replica set instance, the disk size ranges from 10 GB to 2000 GB and must be greater than or equal to the disk size of the original instance.

Name	Mandatory	Type	Description
spec_code	Yes	String	Specifies the resource specification code. For details about how to obtain the value, see the parameter value in **Querying All DB Instance Specifications**.

Table 5-84 backup_strategy field data structure description

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

NOTE

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

- Request header
  POST *https://DDS endpoint*/v3/{project_id}/instances
- Example request

  Restore the backup of a cluster to a new DB instance.

```
{
  "name": "test-cluster-01",
  "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",
  "password": "Test#%0_",
  "restore_point": {
    "backup_id": "8f643d252d834a4c916b2db4322f99552734"
  },
  "flavor": [{
      "type": "mongos",
      "num": 2,
      "spec_code": "dds.c3.medium.4.mongos"
    },
    {
      "type": "shard",
      "size": 40,
      "spec_code": "dds.c3.medium.4.shard"
    },
    {
      "type": "config",
      "num": 1,
      "size": 20,
      "spec_code": "dds.c3.large.2.config"
    }
  ],
  "backup_strategy": {
    "start_time": "23:00-00:00",
    "keep_days": "8"
  }
}
```

  Restore the backup of a replica set instance:

```
{
  "name": "test-replicaset",
  "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",
  "password": "Test#%0_",
"restore_point": {
    "backup_id": "8f643d252d834a4c916b2db4322f99552734"
},
  "flavor": [
    {
      "type": "replica",
      "num": 1,
      "spec_code": "dds.s2.medium.4.shard"
    }
  ],
  "backup_strategy": {
    "start_time": "23:00-00:00",
```



```
    "keep_days": "8"
  }
}
```

Responses

- Parameter description

Table 5-85 Parameter description

Name	Type	Description
id	String	Indicates the DB instance ID.
name	String	Same as the request parameter.
datastore	Object	Indicates the database information, which is the same as the request parameter. For more information, see **Table 5-14**.
created	String	Indicates the creation time in the following format: yyyy-mm-dd hh:mm:ss.
status	String	Indicates the DB instance status. The value is **creating**.
region	String	Indicates the region ID, which is the same as the request parameter.
availability_zone	String	Indicates the AZ ID, which is the same as the request parameter.
vpc_id	String	Indicates the VPC ID, which is the same as the request parameter.
subnet_id	String	Indicates the subnet ID, which is the same as the request parameter.
security_group_id	String	Indicates the ID of the security group to which the instance belongs, which is the same as the request parameter.
disk_encryption_id	String	Indicates the ID of the disk encryption key, which is the same as the request parameter.

Name	Type	Description
mode	String	Indicates the instance type, which is the same as the request parameter.
flavor	Array of objects	Indicates the instance specification, which is the same as the request parameter. For more information, see **Table 5-83**.
backup_strategy	Object	Indicates the advanced backup policy, which is the same as the request parameter. For more information, see **Table 5-84**.
enterprise_project_id	String	Indicates the enterprise project ID. If the value is **0**, the resource belongs to the default enterprise project.
job_id	String	Indicates the ID of the workflow for creating a DB instance.

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": "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": "",
    "mode": "Sharding",
    "flavor": [
        {
            "type": "mongos",
            "num": 2,
            "spec_code": "dds.c3.medium.4.mongos"
        },
```



```
        {
            "type": "shard",
            "num": 2,
            "spec_code": "dds.c3.medium.4.shard",
            "size": 20
        },
        {
            "type": "config",
            "num": 1,
            "spec_code": "dds.c3.large.2.config",
            "size": 20
        }
    ],
    "backup_strategy": {
        "start_time": "23:00-00:00",
        "keep_days": "8"
    },
    "enterprise_project_id": "",
    "job_id": "c010abd0-48cf-4fa8-8cbc-090f093eaa2f"
}
```


Replica set instance:


```
{
    "id": "46dfadfd2b674585a430217f23606cd7in02",
    "name": "test-replicaset",
    "datastore": {
        "type": "DDS-Community",
        "version": "3.4",
        "storage_engine": "wiredTiger"
    },
    "created": "2019-01-16 09:33:08",
    "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": "",
    "mode": "ReplicaSet",
    "flavor": [
        {
            "type": "replica",
            "num": 1,
            "spec_code": "dds.s2.medium.4.shard",
            "size": 30
        }
    ],
    "backup_strategy": {
        "start_time": "23:00-00:00",
        "keep_days": "7"
    },
    "enterprise_project_id": "",
    "job_id": "2408417d-fd4b-40ae-bec6-e09ce594eb5f"
}
```


Status Code

For more information, see **Status Code**.

Error Code

For more information, see **Error Code**.

5.6 Tag Management

5.6.1 Querying Resources by Tag

Function

This API is used to query the specified DB instances by tag.

Constraints

A maximum of 10 tags can be added to a DB instance. The tag key must be unique.

URI

- URI format

  POST /v3/{project_id}/instances/action
- Parameter description

  Table 5-86 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.

Requests

- Parameter description

Table 5-87 Parameter description

Name	Mandatory	Type	Description
offset	No	String	Specifies the index position. The query starts from the next piece of data indexed by this parameter. • 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.
limit	No	String	Specifies the number of resources to be queried. • 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	Yes	String	Specifies the operation identifier. • 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	No	Array of objects	Specifies the search field. • 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 5-89**.
tags	No	Array of objects	Specifies the included tags. Each tag contains a maximum of 10 keys. For more information, see **Table 5-88**.

Table 5-88 tags field data structure description

Name	Mandatory	Type	Description
key	Yes	String	Specifies 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	Yes	Array of strings	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 5-89 matches field description

Name	Mandatory	Type	Description
key	Yes	String	Specifies 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	Yes	String	Specifies the name or ID of the DB instance to be matched.

- Request header
  POST *https://DDS endpoint*/v3/{project_id}/instances/action
- Example request

  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 5-90 Parameter description

Name	Type	Description
instances	Array of objects	Indicates the instance list.

Name	Type	Description
total_count	Integer	Indicates the total number of queried records.

Table 5-91 instance field data structure description

Name	Type	Description
instance_id	String	Indicates the DB instance ID.
instance_name	String	Indicates the DB instance name.
tags	Array of objects	Indicates the tag list. If there is no tag in the list, **tags** is taken as an empty array. For more information, see **Table 5-92**.

Table 5-92 tags field data structure description

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

5.6.2 Adding or Deleting Resource Tags in Batches

Function

This API is used to add or delete tags of the specified instance in batches.

Constraints

- A maximum of 10 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 /v3/{project_id}/instances/{instance_id}/tags/action
- Parameter description

Table 5-93 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Parameter description

Table 5-94 Parameter description

Name	Mandatory	Type	Description
action	Yes	String	Specifies the operation identifier. Valid value: • **create**: indicates to add tags. • **delete**: indicates to delete tags.
tags	Yes	Array of objects	Specifies the tag list. For more information, see **Table 5-95**. **NOTE** When you delete tags, do not check the character set of this parameter.

Table 5-95 tags field data structure description

Name	Mandatory	Type	Description
key	Yes	String	Specifies 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. Character set: 0-9, A-Z, a-z, "_", and "-".

Name	Mandatory	Type	Description
value	No	String	Specifies 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. Character set: 0-9, A-Z, a-z, "_", ".", and "-". • If **action** is set to **create**, this parameter is mandatory. • If **action** is set to **delete**, this parameter is optional. **NOTE** If **value** is specified, tags are deleted by key and value. If **value** is not specified, tags are deleted by key.

- Request header
  POST *https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/tags/action
- Example request

  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**.

5.6.3 Querying Resource Tags

Function

This API is used to query tags of a specified resource.

Constraints

A maximum of 10 tags can be added to a DB instance. The tag key must be unique.

URI

- URI format

  GET /v3/{project_id}/instances/{instance_id}/tags

- Parameter description

  Table 5-96 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.
instance_id	Yes	Specifies the DB instance ID.

Requests

- Request header

  GET *https://DDS endpoint*/v3/{project_id}/instances/{instance_id}/tags

- Request body

  N/A

Responses

- Parameter description

Table 5-97 Parameter description

Name	Mandatory	Type	Description
tags	Yes	Array of objects	Indicates the tag list. For more information, see **Table 5-98**.

Table 5-98 tags field data structure description

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

5.6.4 Querying Tags in a Specified Project

Function

This API is used to query all tags of instances in a specified project.

URI

- URI format

  GET /v3/{project_id}/tags

- Parameter description

Table 5-99 Parameter description

Name	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region.

Requests

- Request header

  GET *https://DDS endpoint*/v3/{project_id}/tags

- Request body

  N/A

Responses

- Parameter description

Table 5-100 Parameter description

Name	Mandatory	Type	Description
tags	Yes	Array of objects	Indicates the tag list. For more information, see **Table 5-101**.

Table 5-101 tags field data structure description

Name	Mandatory	Type	Description
key	Yes	String	Indicates 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
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**.

6 Permissions Policies and Supported Actions

6.1 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**.

6.2 DDS Actions

Table 6-1 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	√	x
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	√	x
Deleting a DB instance	DELETE /v3/{project_id}/instances/{instance_id}	dds:instance:deleteInstance	√	x

Permissions	APIs	Action	IAM Project	Enterprise Project
Restarting a DB instance	POST /v3/{project_id}/instances/{instance_id}/restart	dds:instance:reboot	√	x

Table 6-2 Backup and restoration

Permissions	APIs	Action	IAM Project	Enterprise Project
Creating a manual backup	POST /v3/{project_id}/backups	dds:instance:createManualBackup	√	x
Deleting a manual backup	DELETE /v3/{project_id}/backups/{backups_id}	dds:backup:delete	√	x
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	√	x
Querying an automated backup policy	GET /v3/{project_id}/instances/{instance_id}/backups/policy	dds:instance:list	√	x

Permissions	APIs	Action	IAM Project	Enterprise Project
Setting an automated backup policy	PUT /v3/{project_id}/instances/{instance_id}/backups/policy	dds:instance:modifyBackupPolicy	√	x

Table 6-3 Specifications and storage

Permissions	APIs	Action	IAM Project	Enterprise Project
Scaling up storage space	POST /v3/{project_id}/instances/{instance_id}/enlarge-volume	dds:instance:extendVolume	√	x
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	√	x
Modifying DB instance specifications	POST /v3/{project_id}/instances/{instance_id}/resize	dds:instance:modifySpec	√	x

NOTE

The check mark (√) indicates that an action takes effect. The cross mark (x) indicates that an action does not take effect.

7 Appendix

7.1 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.

Status Code	Message	Description
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.
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 exits, 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.
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.

7.2 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 7-1 Error code description

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.200001	Parameter error.	Check whether the transferred parameters or URLs are correct.
404	DBS.200002	The DB instance does not exist.	Check whether the DB instance and its ID are correct and whether the DB instance exists.
400	DBS.200010	Authentication failed	Check whether the tenant and instance match.
403	DBS.200011	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	The node does not exist	Check whether the node ID or group ID is correct.
403	DBS.200018	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	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.	Check whether the region name is correct and whether the region is available.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.200022	The DB instance name already exists.	Check whether the DB instance name exists.
400	DBS.200025	Invalid AZ.	Check whether the AZ name is correct and whether the AZ is available.
403	DBS.200028	The maximum storage space has been reached.	Check whether the storage space exceeds the upper limit.
400	DBS.200041	Invalid database version.	Check whether the database version is supported.
404	DBS.200042	Invalid DB engine.	Check whether the DB engine is supported by DDS.
400	DBS.200029	Invalid username and password.	Check whether the username and password match and whether the password meets the password strength requirements.
400	DBS.200047	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.	Check whether the VPC ID and name are correct and meet the requirements.
400	DBS.200049	Invalid subnet.	Check whether the subnet ID and name are correct and meet the requirements.
400	DBS.200050	Invalid security group.	Check whether the security group ID and name are correct and meet the requirements.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.200052	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.	Check whether the specifications are correct and supported in the current AZ.
400	DBS.200054	Invalid DB instance specifications.	Check whether the specifications are correct and supported in the current AZ.
400	DBS.200057	Invalid parameter group.	Check whether the parameter group is correct, whether the parameter group exists, and whether the parameter group matches the instance type.
400	DBS.200059	Invalid database port	Check whether the database port is missing or valid.
400	DBS.200060	The database port number is out of the specified range.	Check whether the database port is valid.
400	DBS.200072	Invalid storage space.	Check whether the storage space exceeds the upper limit.
400	DBS.200075	Invalid node role.	Check whether the role of the node meets the requirements and whether the instance is normal.

HTTP Status Code	Error Code	Error Information	Handling Measure
403	DBS.200076	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.200091	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.	Check whether the IP address exists.
400	DBS.200095	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.	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. To continue to scale up the storage space, contact technical support.
400	DBS.200304	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.	Check whether the storage space is correct and meets the requirements.
400	DBS.200311	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.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.200434	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.	Check whether node ID is correct.
400	DBS.200462	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.	Check whether the AZ is correct.
400	DBS.200501	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.	Check whether the security group ID and name exist and match the VPC.
400	DBS.200503	The VPC does not exist.	Check whether the tenant has the VPC.
400	DBS.200506	The encryption key does not exist.	Check whether the disk encryption key ID exists.
400	DBS.200507	The encryption key is not available.	Check whether the disk encryption key is available.
400	DBS.200604	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 is being bound. Not allowed to bind the EIP again.	Check whether the instance is being bound to an EIP.
400	DBS.200701	Unbinding the EIP is not allowed due to the EIP status.	Check whether the operation is allowed by the EIP status.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.200702	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.200998	The system is busy. Try again later.	The system is busy. Try again later.
403	DBS.201000	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.	Check whether the transferred parameters or URLs are correct.
403	DBS.201014	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.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.201020	Invalid DB engine.	Check whether the DB engine is supported by DDS.
403	DBS.201028	The DB instance does not exist.	Check whether the DB instance belongs to the tenant and whether the DB instance exists.
400	DBS.201201	The backup already exists.	Check whether the backup name or ID already exists.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.201202	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	The backup file does not exist.	Check whether the backup file exists and matches the instance.
400	DBS.201214	The backup file does not exist.	Check whether the backup exists and matches the instance.
400	DBS.201319	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.	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.201502	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	This parameter group does not exist.	Check whether the parameter group exists.
400	DBS.212003	This operation is not permitted.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.212006	The node associated with this parameter group is not available.	Check whether the node that is associated with the parameter group is normal.
400	DBS.212008	The database type is not supported.	Check whether the database type is supported
400	DBS.212013	This parameter group does not exist.	Check whether the parameter exists.
400	DBS.212017	Invalid parameter.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.212019	Invalid parameter.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.212028	Invalid parameter group description.	Check whether the parameter group description is valid.
400	DBS.212030	The parameter group name already exists.	Check whether the parameter group name is correct and whether the tenant has created the parameter group.
400	DBS.212031	Invalid parameter group name.	Check whether the parameter group name meets the requirements:
400	DBS.212032	The operation cannot be performed because this parameter group is applied to one or more DB instance nodes.	Check whether the parameter group has been applied to the instance.

HTTP Status Code	Error Code	Error Information	Handling Measure
500	DBS.201509	The OBS service system is faulty.	An internal error occurs. Contact the O&M personnel to locate the fault.
400	DBS.238007	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.	Check whether the SSL parameter is missing or whether the SSL option is valid.
400	DBS.280001	Parameter error.	Check whether the transferred parameters or URLs are correct and meet the requirements.
500	DBS.280005	Server error. Try again later.	Contact technical support engineers.
400	DBS.280015	Permission denied.	Check whether the token expires and whether the instance matches the tenant.
400	DBS.280016	Resource not found.	Check whether the transferred parameters are correct and whether the instance exists.
403	DBS.280019	Account suspended.	Check the account balance.
403	DBS.280032	Permission denied.	Check whether the user group to which the current user belongs has the corresponding operation permission.

HTTP Status Code	Error Code	Error Information	Handling Measure
403	DBS.280042	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.
401	DBS.280056	Invalid token.	Check whether the instance belongs to the tenant and whether the token has been obtained again.
403	DBS.280063	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.
500	DBS.280064	Fine-grained authentication failed.	Contact the customer service.
400	DBS.280110	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.	Check whether the storage engine matches the instance engine.
400	DBS.280123	Invalid node number.	Check whether the number of nodes to be added to the instance meets the requirements.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.280124	Invalid backup.	Check whether the backup ID is correct and meets the requirements.
400	DBS.280127	Invalid backup description.	Check whether the backup description is correct and meets the requirements.
400	DBS.280200	The password contains invalid characters.	Check whether the password is correct and meets the requirements.
400	DBS.280214	Invalid retention period.	Check whether the backup retention period is correct.
400	DBS.280215	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.	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.	Check whether the instance name is correct and whether the instance exists.
400	DBS.280235	Invalid DB engine.	Check whether the DB engine information is correct.
400	DBS.280236	Invalid database version.	Check whether the database version is supported.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.280239	Invalid specifications.	Check whether the specification code is correct, whether the specification exists in the current AZ, and whether the specification is supported.
400	DBS.280241	Invalid storage type.	Check whether the storage type is correct and meets the requirements.
400	DBS.280242	The storage space is out of range.	Check whether the disk size is correct.
400	DBS.280244	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.	Check whether the VPC ID is correct and whether the VPC exists.
400	DBS.280248	Invalid subnet.	Check whether the subnet ID is correct and whether the subnet exists.
400	DBS.280249	Invalid security group.	Check whether the security group ID is correct and whether the security group exists.
400	DBS.280266	Invalid storage space.	Check whether the storage space is correct and meets the requirements.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.280267	Specifications not match.	Check whether the specification information is correct and whether the specification matches the instance.
400	DBS.280277	Invalid backup name.	Check whether the backup name is correct and meets the requirements.
400	DBS.280280	Invalid DB instance number.	Check whether the number of DB instances is correct and meets the requirements.
400	DBS.280284	Invalid IP address.	Check whether the IP address is correct and meets the requirements.
400	DBS.280292	Invalid username.	Check whether the username is correct and meets the requirements.
400	DBS.280311	Invalid storage space.	Check whether the storage space is correct and meets the requirements.
400	DBS.280314	Invalid storage type.	Check whether the storage type is correct and whether the instance supports the disk type.
400	DBS.280327	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.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.280342	Invalid DB instance mode.	Check whether the instance mode is correct and whether the instance mode matches the instance ID.
400	DBS.280347	Unsupported database type.	Check whether the DB instance type is correct and meets the requirements.
400	DBS.280365	Invalid payment mode.	Check whether the payment mode is correct and meets the requirements.
400	DBS.280404	Invalid DB instance ID.	Check whether the instance ID is correct and meets the requirements.
403	DBS.280406	The DB instance cannot be deleted.	Check whether the instance deletion operation is supported by the DB engine.
400	DBS.280407	Invalid node ID.	Check whether the node ID is correct and meets the requirements.
400	DBS.280408	Unauthorized tenant ID	Check whether the tenant ID is correct and meets the requirements.
400	DBS.280414	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.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.280416	Invalid backup end time	Check whether the backup end time is missing and whether the backup end time period and format meet the requirements.
400	DBS.280421	Invalid EIP.	Check whether the EIP exists and meets the requirements.
403	DBS.280433	Invalid enterprise project ID.	Check whether the enterprise project ID is valid.
400	DBS.280434	Invalid resource specifications code.	Check whether the resource specifications code exists and meets the requirements.
400	DBS.280446	The database information does not exist.	Check whether the **datastore** field exists.
400	DBS.280437	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.280439	Invalid query limit.	Check whether the value of the **limit** parameter is valid.
400	DBS.280440	Invalid offset.	Check whether the value of the **offset** parameter is valid.
400	DBS.280441	Invalid key.	Check whether the tag key is valid.
429	DBS.280443	The maximum number of connections has been reached.	APIs are frequently called by the same tenant. Reduce the frequency of API calls.

HTTP Status Code	Error Code	Error Information	Handling Measure
400	DBS.280445	The DB instance class is not available.	The current DB instance class is unavailable. Select another one.
400	DBS.280469	Invalid ECS group policy.	Check whether the policy associated with the ECS group is correct.
400	DBS.290000	Parameter error.	Check whether the transferred parameters or URLs are correct and meet the requirements.

7.3 Obtaining a Project ID

Scenarios

A project ID is required for some URLs when an API is called. Therefore, you need to obtain a project ID in advance. 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 IAM 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 **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.

7.4 DDS Metrics

Function

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

Metrics	Metrics Name	Description	Value Range	Remarks
mongo001_command_ps	COMMAND Statements per Second	Number of COMMAND statements executed per second	≥ 0 Count/s	Monitored object: database Monitored object type: • Cluster instance • mongos node • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo002_delete_ps	DELETE Statements per Second	Number of DELETE statements executed per second	≥ 0 Count/s	Monitored object: database Monitored object type: • Cluster instance • mongos node • Primary node • Secondary node
mongo003_insert_ps	INSERT Statements per Second	Number of INSERT statements executed per second	≥ 0 Count/s	Monitored object: database Monitored object type: • Cluster instance • mongos node • Primary node • Secondary node
mongo004_query_ps	QUERY Statements per Second	Number of QUERY statements executed per second	≥ 0 Count/s	Monitored object: database Monitored object type: • Cluster instance • mongos node • Primary node • Secondary node
mongo005_update_ps	UPDATE Statements per Second	Number of UPDATE statements executed per second	≥ 0 Count/s	Monitored object: database Monitored object type: • Cluster instance • mongos node • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo006_getmore_ps	GETMORE Statements per Second	Number of GETMORE statements executed per second	≥ 0 Count/s	Monitored object: database Monitored object type: • Cluster instance • mongos node • Primary node • Secondary node
mongo007_chunk_num1	Chunks of Shard 1	Number of chunks in shard 1	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num2	Chunks of Shard 2	Number of chunks in shard 2	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num3	Chunks of Shard 3	Number of chunks in shard 3	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num4	Chunks of Shard 4	Number of chunks in shard 4	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num5	Chunks of Shard 5	Number of chunks in shard 5	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num6	Chunks of Shard 6	Number of chunks in shard 6	0–64 Counts	Monitored object: database Monitored object type: cluster instance

Metrics	Metrics Name	Description	Value Range	Remarks
mongo007_chunk_num7	Chunks of Shard 7	Number of chunks in shard 7	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num8	Chunks of Shard 8	Number of chunks in shard 8	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num9	Chunks of Shard 9	Number of chunks in shard 9	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num10	Chunks of Shard 10	Number of chunks in shard 10	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num11	Chunks of Shard 11	Number of chunks in shard 11	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo007_chunk_num12	Chunks of Shard 12	Number of chunks in shard 12	0–64 Counts	Monitored object: database Monitored object type: cluster instance
mongo008_connections	Active Instance Connections	Total number of connections attempting to connect to a DDS DB instance	≥ 0 Counts	Monitored object: database Monitored object type: cluster instance
mongo009_migFail_num	Chunk Migration Failures in Last 24 hrs	Number of chunk migration failures in the last 24 hours	≥ 0 Counts	Monitored object: database Monitored object type: cluster instance

Metrics	Metrics Name	Description	Value Range	Remarks
mongo007_connections	Active Node Connections	Total number of connections attempting to connect to a DDS DB instance node	0–200 Counts	Monitored object: database Monitored object type: • mongos node • Primary node • Secondary node
mongo008_mem_resident	Resident Memory	Size of resident memory in MB	≥ 0 MB	Monitored object: database Monitored object type: • mongos node • Primary node • Secondary node
mongo009_mem_virtual	Virtual Memory	Size of virtual memory in MB	≥ 0 MB	Monitored object: database Monitored object type: • mongos node • Primary node • Secondary node
mongo010_regular_asserts_ps	Regular Asserts per Second	Number of regular asserts per second	≥ 0 Count/s	Monitored object: database Monitored object type: • mongos node • Primary node • Secondary node
mongo011_warning_asserts_ps	Warning Asserts per Second	Number of warning asserts per second	≥ 0 Count/s	Monitored object: database Monitored object type: • mongos node • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo012_msg_asserts_ps	Message Asserts per Second	Number of message asserts per second	≥ 0 Count/s	Monitored object: database Monitored object type: • mongos node • Primary node • Secondary node
mongo013_user_asserts_ps	User Asserts per Second	Number of user asserts per second	≥ 0 Count/s	Monitored object: database Monitored object type: • mongos node • Primary node • Secondary node
mongo014_queues_total	Operations Queued Waiting for a Lock	Number of operations queued waiting for a lock	≥ 0 Counts	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo015_queues_readers	Operations Queued Waiting for a Read Lock	Number of operations queued waiting for a read lock	≥ 0 Counts	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo016_queues_writers	Operations Queued Waiting for a Write Lock	Number of operations queued waiting for a write lock	≥ 0 Counts	Monitored object: database Monitored object type: • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo017_page_faults	Page Faults	Number of page faults on the monitored nodes	≥ 0 Counts	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo018_porfling_num	Slow Queries	Number of slow queries on the monitored nodes	≥ 0 Counts	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo019_cursors_open	Current Maintained Cursors	Number of maintained cursors on the monitored nodes	≥ 0 Counts	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo020_cursors_timeOut	Timeout Cursors	Number of timed out cursors on the monitored nodes	≥ 0 Counts	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo021_wt_cahe_usage	Bytes in WiredTiger Cache	Size of data in the WiredTiger cache in MB	≥ 0 MB	Monitored object: database Monitored object type: • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo022_wt_cahe_dirty	Tracked Dirty Bytes in WiredTiger Cache	Size of tracked dirty data in the WiredTiger cache in MB	≥ 0 MB	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo023_wInto_wtCache	Bytes Written Into Cache per Second	Bytes written into WiredTiger cache per second	≥ 0 bytes/s	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo024_wFrom_wtCache	Bytes Written From Cache per Second	Bytes written from the WiredTiger cache to the disk per second	≥ 0 bytes/s	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo025_repl_oplog_win	Oplog Window	Available time in hour in the monitored primary node's oplog	≥ 0 Hours	Monitored object: database Monitored object type: primary node
mongo026_oplog_size_ph	Oplog Growth Rate	Speed in MB/hour at which oplogs are generated on the monitored primary node	≥ 0 MB/Hour	Monitored object: database Monitored object type: primary node
mongo025_repl_headroom	Replication Headroom	Time difference in seconds between the primary's oplog window and the replication lag of the secondary	≥ 0 Seconds	Monitored object: database Monitored object type: secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
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	Monitored object: database Monitored object type: secondary node
mongo027_repl_command_ps	Replicated COMMAND Statements per Second	Number of replicated COMMAND statements executed on the secondary node per second	≥ 0 Count/s	Monitored object: database Monitored object type: secondary node
mongo028_repl_update_ps	Replicated UPDATE Statements per Second	Number of replicated UPDATE statements executed on the secondary node per second	≥ 0 Count/s	Monitored object: database Monitored object type: secondary node
mongo029_repl_delete_ps	Replicated DELETE Statements per Second	Number of replicated DELETE statements executed on the secondary node per second	≥ 0 Count/s	Monitored object: database Monitored object type: secondary node
mongo030_repl_insert_ps	Replicated INSERT Statements per Second	Number of replicated INSERT statements executed on the secondary node per second	≥ 0 Count/s	Monitored object: database Monitored object type: secondary node
mongo031_cpu_usage	CPU Usage	CPU usage of the monitored object	0–1	Monitored object: ECS Monitored object type: • mongos node • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo032_mem_usage	Memory Usage	Memory usage of the monitored object	0–1	Monitored object: ECS Monitored object type: • mongos node • Primary node • Secondary node
mongo033_bytes_out	Network Output Throughput	Outgoing traffic in bytes per second	≥ 0 bytes/s	Monitored object: ECS Monitored object type: • mongos node • Primary node • Secondary node
mongo034_bytes_in	Network Input Throughput	Incoming traffic in bytes per second	≥ 0 bytes/s	Monitored object: ECS Monitored object type: • mongos node • Primary node • Secondary node
mongo035_disk_usage	Disk Utilization	Disk usage of the monitored object	0–1	Monitored object: ECS Monitored object type: • Primary node • Secondary node
mongo036_iops	IOPS	Average number of I/O requests processed by the system in a specified period	≥ 0 Count/s	Monitored object: ECS Monitored object type: • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo037_read_throughput	Disk Read Throughput	Number of bytes read from the disk per second	≥ 0 bytes/s	Monitored object: ECS Monitored object type: • Primary node • Secondary node
mongo038_write_throughput	Disk Write Throughput	Number of bytes written into the disk per second	≥ 0 bytes/s	Monitored object: ECS Monitored object type: • Primary node • Secondary node
mongo039_avg_disk_sec_per_read	Disk Read Time	Average time required for each disk read in a specified period	≥ 0 Seconds	Monitored object: ECS Monitored object type: • Primary node • Secondary node
mongo040_avg_disk_sec_per_write	Disk Write Time	Average time required for each disk write in a specified period	≥ 0 Seconds	Monitored object: ECS Monitored object type: • Primary node • Secondary node
mongo042_disk_total_size	Total Storage Space	Total storage space of the monitored object	0–1000 GB	Monitored object: ECS Monitored object type: • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo043_disk_used_size	Used Storage Space	Used storage space of the monitored object	0–1000 GB	Monitored object: ECS Monitored object type: • Primary node • Secondary node
mongo044_swap_usage	SWAP Usage	Swap usage, in percentage	0~100 %	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo050_top_total_time	Total Time Spent on Collections	Mongotop-total time: total time spent on collection operations, in milliseconds.	0.001~60000.00 ms	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo051_top_read_time	Total Time Spent Reading Collections	Mongotop-read time: total time spent reading collections, in milliseconds.	0.001~60000.00 ms	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo052_top_write_time	Total Time Spent Writing Collections	Mongotop-write time: total time spent writing collections, in milliseconds.	0.001~60000.00 ms	Monitored object: database Monitored object type: • Primary node • Secondary node

Metrics	Metrics Name	Description	Value Range	Remarks
mongo053_wt_flushes_status	Number of Times that Checkpoints Are Triggered	Number of times that WiredTiger checkpoints are triggered during a polling interval	0~10000000 Times	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo054_wt_cache_used_percent	Percentage of the Cache Used by WiredTiger	Cache size used by WiredTiger, in percentage	0~100 %	Monitored object: database Monitored object type: • Primary node • Secondary node
mongo055_wt_cache_dirty_percent	Percentage of Dirty Data in the WiredTiger Cache	Dirty size in the WiredTiger cache, in percentage	0~100 %	Monitored object: database Monitored object type: • Primary node • Secondary node

Dimensions

Key	Value
mongodb_cluster_id	DDS DB instance ID Supports cluster and replica set instances.
mongos_instance_id	mongos node ID
mongod_primary_instance_id	Primary node ID Includes the primary config and shard nodes of cluster instances and the primary nodes of replica set instances.
mongod_secondary_instance_id	Secondary node ID Includes the secondary config and shard nodes of cluster instances and the secondary nodes of replica set instances.

A Change History

Date	Description
2020-11-05	This issue is the first official release.

