

Relational Database Service (RDS)

API Reference

Issue 01
Date 2026-01-06



Copyright © Huawei Cloud Computing Technologies Co., Ltd. 2026. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Cloud Computing Technologies Co., Ltd.

Trademarks and Permissions



HUAWEI and other Huawei trademarks are the property of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei Cloud and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Huawei Cloud Computing Technologies Co., Ltd.

Address: Huawei Cloud Data Center Jiaoxinggong Road
Qianzhong Avenue
Gui'an New District
Gui Zhou 550029
People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

Contents

1 Before You Start.....	1
1.1 Overview.....	1
1.2 API Calling.....	1
1.3 Constraints.....	1
1.4 Concepts.....	2
1.5 API Types.....	3
2 API Overview.....	4
3 Calling APIs.....	6
3.1 Making an API Request.....	6
3.2 Authentication.....	10
3.3 Response.....	11
4 API v3.1 (Recommended).....	13
4.1 Applying a Parameter Template.....	13
4.2 Modifying Parameters of a Specified Instance.....	16
4.3 Restoring Data to an Existing DB Instance.....	20
4.4 Deleting a Database (RDS for SQL Server).....	25
5 API v3 (Recommended).....	29
5.1 Querying Version Information About APIs.....	29
5.1.1 Querying API Versions.....	29
5.1.2 Querying a Specified API Version.....	32
5.2 Querying Version Information About a DB Engine.....	35
5.3 Querying Database Specifications.....	38
5.4 DB Instance Management.....	41
5.4.1 Creating a DB Instance.....	41
5.4.2 Stopping an Instance.....	63
5.4.3 Starting an Instance.....	65
5.4.4 Changing a DB Instance Name.....	66
5.4.5 Querying the Auto Scaling Policy of a DB Instance.....	68
5.4.6 Changing DB Instance Specifications.....	70
5.4.7 Scaling Up Storage Space of a DB Instance.....	72
5.4.8 Changing a Single DB Instance to Primary/Standby DB Instances.....	74
5.4.9 Rebooting a DB Instance.....	76

5.4.10 Deleting a DB Instance.....	78
5.4.11 Querying DB Instances.....	79
5.4.12 Migrating a Standby DB Instance.....	95
5.5 Database Security.....	97
5.5.1 Configuring SSL.....	97
5.5.2 Changing a Database Port.....	98
5.5.3 Changing a Security Group.....	100
5.5.4 Changing a Floating IP Address.....	101
5.6 Backup and Restoration.....	103
5.6.1 Setting an Automated Backup Policy.....	103
5.6.2 Setting a Cross-Region Backup Policy.....	108
5.6.3 Obtaining an Automated Backup Policy.....	111
5.6.4 Querying Information About a Cross-Region Backup Policy.....	113
5.6.5 Creating a Manual Backup.....	115
5.6.6 Obtaining Backups.....	120
5.6.7 Querying Cross-Region Backups.....	129
5.6.8 Querying DB Instances for Which Cross-Region Backups Are Created.....	133
5.6.9 Obtaining the Link for Downloading a Backup.....	136
5.6.10 Deleting a Manual Backup.....	139
5.6.11 Querying the Restoration Time Range.....	140
5.6.12 Querying the Restoration Time Range of a Cross-Region Backup.....	142
5.6.13 Restoring Data to a New DB Instance.....	144
5.6.14 Restoring Tables to a Specified Point in Time (RDS for MySQL).....	167
5.7 Log Information Queries.....	169
5.7.1 Setting the Local Retention Period of Binlogs.....	169
5.7.2 Obtaining the Local Retention Period of Binlogs.....	171
5.8 Database and Account Management (MySQL).....	172
5.8.1 Creating a Database.....	172
5.8.2 Querying Databases.....	174
5.8.3 Modifying the Database Remarks of a Specified DB Instance.....	176
5.8.4 Deleting a Database.....	178
5.8.5 Creating a Database Account.....	180
5.8.6 Querying Database Users.....	182
5.8.7 Querying Authorized Users of a Specified Database.....	184
5.8.8 Modifying Remarks of a Database Account.....	186
5.8.9 Deleting a Database Account.....	188
5.8.10 Configuring a Password for a Database Account.....	190
5.8.11 Authorizing a Database Account.....	192
5.8.12 Revoking Permissions of a Database Account.....	195
5.8.13 Resetting the Password for User root.....	197
5.9 Database and Account Management (PostgreSQL).....	199
5.9.1 Creating a Database Account.....	199

5.9.2 Creating a Database Schema.....	201
5.9.3 Resetting a Password for a Database Account.....	204
5.9.4 Querying Databases.....	206
5.9.5 Querying Database Users.....	209
5.9.6 Querying Database Schemas.....	212
5.9.7 Modifying the Database Remarks of a Specified DB Instance.....	214
5.9.8 Modifying Remarks of a Database Account.....	216
5.9.9 Deleting a Database Account.....	218
5.9.10 Querying pg_hba.conf of a DB Instance.....	219
5.9.11 Modifying or Adding One or More Records in pg_hba.conf.....	221
5.9.12 Overwriting pg_hba.conf.....	224
5.9.13 Deleting One or More Records from pg_hba.conf.....	226
5.9.14 Querying the pg_hba.conf Change History of a DB Instance.....	229
5.10 Database and Account Management (Microsoft SQL Server).....	232
5.10.1 Querying the Available SQL Server Character Set.....	233
5.10.2 Querying Databases.....	234
5.10.3 Creating a Database Account.....	237
5.10.4 Querying Database Users.....	239
5.10.5 Querying Authorized Users of a Specified Database.....	241
5.10.6 Deleting a Database Account.....	243
5.10.7 Authorizing a Database Account.....	245
5.10.8 Revoking Permissions of a Database Account.....	247
5.11 Parameter Management.....	250
5.11.1 Obtaining a Parameter Template List.....	250
5.11.2 Creating a Parameter Template.....	252
5.11.3 Modifying a Parameter Template.....	256
5.11.4 Obtaining the Parameter Template of a Specified DB Instance.....	259
5.11.5 Obtaining Parameters in a Specified Parameter Template.....	262
5.11.6 Deleting a Parameter Template.....	266
5.12 Recycling a DB Instance.....	267
5.12.1 Modifying Recycling Policy.....	267
5.12.2 Querying the Recycling Policy.....	269
5.12.3 Querying Instances in the Recycle Bin.....	271
5.13 Tag Management.....	277
5.13.1 Adding Tags in Batches.....	277
5.13.2 Deleting Tags in Batches.....	280
5.13.3 Querying Project Tags.....	284
5.14 Quota Management.....	286
5.14.1 Querying Resource Quotas.....	286
5.15 Obtaining Task Information.....	288
5.15.1 Obtaining Information About a Task with a Specified ID.....	288
5.15.2 Obtaining Task Information of a Specified DB Instance in a Specified Time Range (RDS for SQL Server).....	297

6 Appendix.....	306
6.1 Abnormal Request Results.....	306
6.2 Status Codes.....	306
6.3 Error Codes.....	310
6.4 Obtaining a Project ID.....	315
6.5 Replication Mode.....	316
6.6 RDS Monitoring Metrics Description.....	317

1 Before You Start

1.1 Overview

Welcome to *Relational Database Service API Reference*. RDS is an online relational database service based on a cloud computing platform. RDS is reliable, scalable, and easy to manage. It provides a comprehensive performance monitoring system, multiple levels of security, and a professional database management platform, allowing you to easily set up and scale a relational database.

This document describes how to use application programming interfaces (APIs) to perform operations on RDS DB instances, such as DB instance creation, backup and restoration, query, parameter modifications, and deletions. For details about all supported operations, see [API Overview](#).

1.2 API Calling

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

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](#).

NOTE

A request throttling policy is used to limit the number of times that an API can be called within a specific time period. If there are too many API requests within a specific time period, the requests may fail.

Standard request throttling policy: 60 calls per minute for a single user and 8,000 calls per minute for an API.

1.3 Constraints

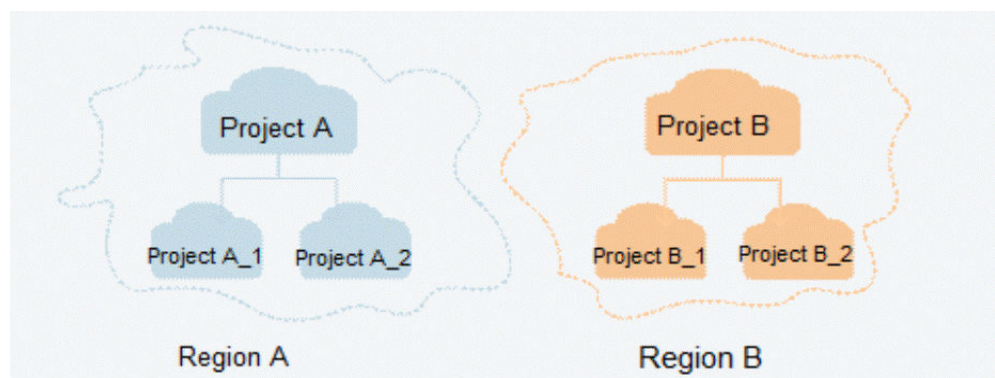
- The number of RDS DB instances that you can create is determined by your quota.

- For more constraints, see API description.

1.4 Concepts

- Account
An account is created after your registration. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used directly to perform routine management. For security purposes, create IAM users and grant them permissions for routine management.
- IAM User
An IAM user is created using an account to use cloud services. Each IAM user has its own identity credentials (password and access keys).
The account name, username, and password will be required for API authentication.
- Region
A region is a geographic area in which cloud resources are deployed. Availability zones (AZs) in the same region can communicate with each other over an intranet, while AZs in different regions are isolated from each other. Deploying cloud resources in different regions can better suit certain user requirements or comply with local laws or regulations.
- AZ
An AZ contains one or more physical data centers. Each AZ has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. Within an AZ, computing, network, storage, and other resources are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ, high-availability systems.
- Project
Projects group and isolate resources (including compute, storage, and network resources) across physical regions. A default project is provided for each region, and subprojects can be created under each default project. Users can be granted permissions to access all resources in a specific project. For more refined access control, create subprojects under a project and create resources in the subprojects. Users can then be assigned permissions to access only specific resources in the 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 in multiple regions, and resources can be directly transferred between enterprise projects.

1.5 API Types

Table 1-1 API type description

Version	Recommended	Description
v3	Yes	APIs for RDS with customized specifications
v3.1	Yes	APIs for RDS with customized specifications

2 API Overview

RDS APIs enable you to use all RDS functions, including creating DB instances, obtaining log information, and backing up and restoring data.

Type	Subtype	Description
RDS APIs (v3.1)	API v3.1 (Recommended)	Apply a parameter template, modify parameters of a specified instance, and restore data to an existing instance.
RDS APIs (v3)	Querying Version Information About APIs	Obtain API versions, including the API version list and API version information.
RDS APIs (v3)	Querying Version Information About a DB Engine	Query the DB version information of a specified DB engine.
RDS APIs (v3)	Querying Database Specifications	Query the DB specifications of a specified DB engine version.
RDS APIs (v3)	DB Instance Management	Manage DB instances, including creating a DB instance, adjusting instance storage space, rebooting a DB instance, deleting a DB instance, obtaining a DB instance list, and obtaining detailed information of a specified DB instance.
RDS APIs (v3)	Backup and Restoration	Back up and restore data, including setting an automated backup policy, obtaining an automated backup policy, creating a manual backup, and deleting a manual backup.
RDS APIs (v3)	Log Information Queries	Obtain log information, including querying database error logs and querying database slow logs.

Type	Subtype	Description
RDS APIs (v3)	Database and Account Management (MySQL)	Create and query databases, create, query, and delete accounts, and grant and revoke permissions of accounts.
RDS APIs (v3)	Database and Account Management (Microsoft SQL Server)	Create and query databases, create, query, and delete accounts, and grant and revoke permissions to accounts.
RDS APIs (v3)	Parameter Management	Configure parameters, including obtaining a parameter list, obtaining configuration parameter information, obtaining default parameters of a DB instance, setting configuration parameters, restoring parameters to their default values, obtaining a parameter template list, and obtaining a parameter template.
RDS APIs (v3)	Obtaining Task Information	Obtain information about a specified task in the task center.

3 Calling APIs

3.1 Making an API Request

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

Request URI

A request URI consists of the following:

{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 Parameters in a URI

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

 **NOTE**

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

Request Methods

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

Table 3-2 HTTP methods

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

If you use the POST method to obtain the URI of a user token, 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, to request for the authentication information, add **Content-Type**, which specifies the request body type.

Table 3-3 lists common request header fields.

Table 3-3 Common request headers

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

Name	Description	Mandatory	Example
X-Auth-Token	<p>Specifies the user token.</p> <p>The user token is a response to the API used to obtain a user token. This API is the only one that does not require authentication.</p> <p>After the request is processed, the value of X-Subject-Token in the message header is the token value.</p>	<p>No</p> <p>This parameter is mandatory for token authentication.</p>	<p>The following is part of an example token:</p> <p>MIIPAgYJKoZlhvcNAQc-Co...ggg1BBIINPXsidG9rZ</p>

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

```
POST https://{{Endpoint}}/v3/auth/tokens
Content-Type: application/json
```

(Optional) Request Body

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

The request body varies depending on APIs. Certain APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

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

NOTE

The **scope** parameter specifies where a token takes effect. You can set **scope** to an account or a project under an account. In the following example, the token takes effect only for the resources in a specified project. For more information about this API, see Obtaining a User Token.

```
POST https://{{Endpoint}}/v3/auth/tokens
Content-Type: application/json
```

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

```

    "password"
  ],
  "password": {
    "user": {
      "name": "username",
      "password": "*****",
      "domain": {
        "name": "domainname"
      }
    }
  }
},
"scope": {
  "project": {
    "name": "xxxxxxxxxxxxxxxxxxxxx"
  }
}
}
}

```

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

3.2 Authentication

Token authentication must be performed to call APIs.

Authentication using tokens: General requests are authenticated using tokens.

Token-based Authentication

NOTE

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

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API.

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

```

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

```

```
}  
  }  
}  
}
```

In [Making an API Request](#), the process of calling the API used to obtain a user token is described.

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

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

3.3 Response

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 Codes](#).

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

Response Header

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

[Figure 3-1](#) shows the response header for the API used to obtain a user token. The **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

Figure 3-1 Header fields of the response to the request for obtaining a user token

```
connection → keep-alive  
content-type → application/json  
date → Tue, 12 Feb 2019 06:52:13 GMT  
server → Web Server  
strict-transport-security → max-age=31536000; includeSubdomains;  
transfer-encoding → chunked  
via → proxy A  
x-content-type-options → nosniff  
x-download-options → noopen  
x-frame-options → SAMEORIGIN  
x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5  
x-subject-token  
→ MIIVXQYJKoZIhvcNAQcCoIIYJCCEoCAQExDQALBgIghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOansiZXhwaXJlc19hdCI6ijlwMTktMDItMTNUMC  
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkqjACgkIQ1wi4JlGzrpdl8LGXK5tdfdq4lqHCYb8P4NaYONVejcAgzJVeFYtLWT1GS00zxKZmlQHqJ82HBqHdglZO9fuEbl5dMhdavj+33wEI  
xHRCE9I87o+k9-  
j+CMZSEB7bUGd5Uj6eRASXI1jipPEGA270g1FruooL6jgglFkNPQuFSOU8+uSsttVwRtNfsC+qTp22Rkd5MCqFGQ8LcuUx3a+9CMBnOintWW7oeRUVhVpxk8pxiX1wTEboX-  
RzT6MUbpvGw-opNFYxJECKnoH3HRozv0wN--n5d6Nbxg==  
x-xss-protection → 1; mode=block;
```

(Optional) Response Body

This part is optional. The body of a response is often returned in structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The response body transfers content except the response header.

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

```
{
  "token": {
    "expires_at": "2019-02-13T06:52:13.855000Z",
    "methods": [
      "password"
    ],
    "catalog": [
      {
        "endpoints": [
          {
            "region_id": "az-01",
            .....

```

If an error occurs during API calling, an error code and a message will be displayed. The following shows an error response body.

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

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

4 API v3.1 (Recommended)

4.1 Applying a Parameter Template

Function

This API is used to apply a parameter template to one or more DB instances. This task will be executed asynchronously. You can query the execution status and result of applying a parameter template to DB instances based on **job_id** in the returned result. For details, see [Obtaining Information About a Task with a Specified ID](#).

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.

URI

- URI format
PUT /v3.1/{*project_id*}/configurations/{*config_id*}/apply
- Parameter description

Table 4-1 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
config_id	Yes	<p>Explanation: Parameter template ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

Table 4-2 Parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	<p>Explanation: Instance IDs.</p> <p>Constraints: N/A</p>

Example Request

Apply a parameter template to multiple DB instances.

```
PUT https://{endpoint}/v3.1/0483b6b16e954cb88930a360d2c4e663/configurations/463b4b58-
d0e8-4e2b-9560-5dea4552fde9/apply
{
  "instance_ids": ["73ea2bf70c73497f89ee0ad4ee008aa2in01", "fe5f5a07539c431181fc78220713aebein01"]
}
```

Response

- Normal response

Table 4-3 Parameters

Parameter	Type	Description
configuration_id	String	Explanation: Parameter template ID. Value range: N/A
configuration_name	String	Explanation: Parameter template name. Value range: N/A
success	Boolean	Explanation: Whether the parameter template is applied to all requested DB instances successfully. Value range: <ul style="list-style-type: none"> • true: The parameter template was successfully applied to all requested DB instances. • false: The parameter template failed to be applied to one or more requested DB instances.
job_id	String	Explanation: Task flow ID. Value range: N/A

- Example normal response

```
{
  "configuration_id": "cf49bbd7d2384878bc3808733c9e9d8bpr01",
  "configuration_name": "paramsGroup-bcf9",
  "job_id": "e4942c94-9d66-458e-beb7-90601664641e",
  "success": true
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

4.2 Modifying Parameters of a Specified Instance

Function

This API is used to modify parameters of a specified instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.

URI

- URI format
PUT `https://{Endpoint}/v3.1/{project_id}/instances/{instance_id}/configurations`
- Parameter description

Table 4-4 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Definition Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Mandatory	Description
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 4-5 Request body parameters

Parameter	Mandatory	Type	Description
values	Yes	Map<String,String>	<p>Definition Parameter values defined by users based on the default parameter templates.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • key: parameter name, for example, div_precision_increment or connect_timeout. If this parameter is not specified, no parameter value is to be changed. • value: parameter value, for example, 6 or 20. If key is not blank, the parameter value cannot be left blank, either. <p>Default Value N/A</p>

Example Request

- Change parameter values of an RDS for MySQL instance.

```
PUT https://{endpoint}/v3.1/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in01/configurations
```

```
{
  "values" : {
    "div_precision_increment": "6",
    "connect_timeout": "20",
```

```
"binlog_checksum" : "CRC32",
"innodb_purge_threads" : "4"
}
```

- Change parameter values of an RDS for PostgreSQL instance.

```
{
  "values" : {
    "autovacuum" : "on",
    "bytea_output" : "escape",
    "client_encoding" : "UTF8",
    "cpu_tuple_cost" : "0.01"
  }
}
```

- Change parameter values of an RDS for SQL Server instance.

```
{
  "values":{
    "max server memory (MB)": "26317",
    "max degree of parallelism": "4"
  }
}
```

Response

- Normal response

Table 4-6 Parameters

Parameter	Type	Description
job_id	String	Definition Job ID. Range N/A
restart_required	Boolean	Definition Whether a reboot is required. Range <ul style="list-style-type: none"> • true: A reboot is required. • false: A reboot is not required.

- Example normal response

```
{
  "job_id" : "e7a7535b-eb9b-45ac-a83a-020dc5016d94",
  "restart_required" : false
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal
For details, see [Status Codes](#).

Error Code

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

4.3 Restoring Data to an Existing DB Instance

Function

This API is used to restore a database to an existing DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- When data is restored to an existing DB instance, the API has the following constraints:
 - The DB engine of the original DB instance must be the same as that of the target DB instance. For example, if the original DB instance is running MySQL, the target DB instance must also run MySQL.
 - For RDS for MySQL, the DB engine version of the target DB instance must be at least equal to that of the original DB instance, for example, from MySQL 5.7.25 to 5.7.27.
 - For RDS for PostgreSQL, the DB engine version of the target DB instance must be the same as that of the original DB instance.
 - For RDS for SQL Server, the time zone of the target DB instance must be the same as that of the original DB instance. Otherwise, data inconsistency may occur.
 - For RDS for MySQL, the total storage space of the target DB instance must be at least equal to that of the original DB instance.
 - Cross-region restoration is not supported.
 - For RDS for MySQL DB instances, when data is restored to an existing DB instance, the case sensitivity setting of the existing DB instance must be the same as that of the original DB instance. Otherwise, the restoration may fail.

URI

- URI format
POST /v3.1/{project_id}/instances/recovery
- Parameter description

Table 4-7 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

Table 4-8 Parameters

Parameter	Mandatory	Type	Description
source	Yes	Object	<p>Explanation: Restoration information. For details, see Table 4-9.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Parameter	Mandatory	Type	Description
target	Yes	Object	<p>Explanation: Instance to which the backup is restored. For details, see Table 4-10.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Table 4-9 source field data structure description

Parameter	Mandatory	Type	Description
instance_id	Yes	String	<p>Explanation: Instance ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Parameter	Mandatory	Type	Description
type	No	String	<p>Explanation: Restoration mode of the instance.</p> <p>Constraints: N/A</p> <p>Value range:</p> <ul style="list-style-type: none"> • backup: indicates using backup files for restoration. In this mode, type is not mandatory and backup_id is mandatory. • timestamp: indicates the point-in-time restoration mode. In this mode, type and restore_time are mandatory. <p>Default value: N/A</p>
backup_id	No	String	<p>Explanation: ID of the backup used to restore data. This parameter must be specified when the backup file is used for restoration.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Parameter	Mandatory	Type	Description
restore_time	No	Integer	<p>Explanation: Time point of data restoration in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Table 4-10 target field data structure description

Name	Mandatory	Type	Description
instance_id	Yes	String	<p>Explanation: Specifies the ID of the DB instance where the backup will be restored to.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Example Request

- Restore data to a DB instance from a backup.

```
POST https://{endpoint}/v3.1/0483b6b16e954cb88930a360d2c4e663/instances/recovery
{
  "source": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
    "type": "backup",
    "backup_id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe"
  },
  "target": {
```

```
"instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01"
}
```

- Restore instance data to a specific point in time.

```
{
  "source": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
    "type": "timestamp",
    "restore_time": 1532001446987
  },
  "target": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01"
  }
}
```

Response

- Normal response

Table 4-11 Parameters

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

- Example normal response

```
{
  "job_id": "ff80808157127d9301571bf8160c001d"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

4.4 Deleting a Database (RDS for SQL Server)

Function

This API is used to delete a database from a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).

- Before calling this API, learn about [request header parameters](#).

Constraints

This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
DELETE /v3.1/{project_id}/instances/{instance_id}/database/{db_name}
- Parameter description

Table 4-12 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
instance_id	Yes	<p>Explanation: Instance ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
db_name	Yes	<p>Explanation: Name of the database to be deleted.</p>

Request

Table 4-13 Parameters

Parameter	Mandatory	Type	Description
is_force_delete	No	Boolean	<p>Explanation: Whether to forcibly delete the database.</p> <p>Constraints: N/A</p> <p>Value range:</p> <ul style="list-style-type: none"> true: The database is forcibly deleted. false: The database is not forcibly deleted. <p>Default value: false</p>

Example Request

```
DELETE https://{endpoint}/v3.1/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/database/rds-test

{
  "is_force_delete" : false
}
```

Response

- Normal response

Table 4-14 Parameters

Parameter	Type	Description
job_id	String	<p>Explanation: Job ID.</p> <p>Value range: N/A</p>

- Example normal response


```
{
  "job_id" : "e7a7535b-eb9b-45ac-a83a-020dc5016d94"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5 API v3 (Recommended)

5.1 Querying Version Information About APIs

5.1.1 Querying API Versions

Function

This API is used to query the supported RDS API versions.

NOTICE

The v1 API documentation has been brought offline, and so will the corresponding software. To prevent your services from being affected, you are advised to switch services to the v3 APIs.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /rds
- Parameter description
None

Request

- Request parameters
None
- URI example

Response

- Normal response

Table 5-1 Parameter description

Name	Type	Description
versions	Array of objects	Indicates the list of detailed API version information. For details, see Table 5-2 .

Table 5-2 versions field data structure description

Name	Type	Description
id	String	Indicates the API version. <ul style="list-style-type: none"> • v1: indicates the API v1 version. <p>NOTICE The v1 API documentation has been brought offline, and so will the corresponding software. To prevent your services from being affected, you are advised to switch services to the v3 APIs.</p> <ul style="list-style-type: none"> • v3: indicates the API v3 version.
links	Array of objects	Indicates the API link information. The value is empty when the version is v3. For details, see Table 5-3 .

Name	Type	Description
status	String	Indicates the version status. <ul style="list-style-type: none"> • CURRENT: indicates that the version is recommended. • DEPRECATED: indicates a deprecated version which may be deleted later.
updated	String	Indicates the version update time in the "yyyy-mm-dd Thh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the Coordinated Universal Time (UTC).

Table 5-3 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 href is a local link.

- Example normal response

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

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

- 200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.1.2 Querying a Specified API Version

Function

This API is used to query the specified API version.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /rds/{*version*}
- Parameter description

Table 5-4 Parameters

Parameter	Mandatory	Description
version	Yes	<p>Explanation: API version.</p> <p>Constraints: N/A</p> <p>Value range: The value is case-sensitive. For details, see id in Table 5-2 in section Querying API Versions.</p> <p>Default value: N/A</p>

Request

- Request parameters
None
- URI example
GET https://{*endpoint*}/rds/v1

Response

- Normal response

Table 5-5 Parameters

Parameter	Type	Description
versions	Object	Explanation: API version details. For details, see Table 5-6 .
version	Object	Explanation: API version details. For details, see Table 5-6 .

Table 5-6 versions field data structure description

Parameter	Type	Description
id	String	Explanation: API version. Value range: N/A
links	Array	Explanation: API version link information. Its value is empty. For details, see Table 5-7 .
status	String	Explanation: Version status. Value range: N/A

Parameter	Type	Description
updated	String	<p>Explanation: Version update time.</p> <p>Value range: The format is yyyy-mm-dd Thh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the UTC.</p>

Table 5-7 links field data structure description

Parameter	Type	Description
href	String	<p>Explanation: URL of the API.</p> <p>Value range: The value is "".</p>
rel	String	<p>Explanation: URL type.</p> <p>Value range: The value is self, indicating that href is a local link.</p>

- Example normal response

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

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.2 Querying Version Information About a DB Engine

Function

This API is used to query the database version information of a specified DB engine.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{*project_id*}/datastores/{*database_name*}
- Parameter description

Table 5-8 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Definition Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Mandatory	Description
database_name	Yes	<p>Definition DB engine.</p> <p>Constraints N/A</p> <p>Range The value can be any of the following and is case-insensitive:</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer <p>Default Value N/A</p>

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/datastores/mysql

Response

- Normal response

Table 5-9 Parameters

Parameter	Type	Description
dataStores	Array of objects	<p>Definition Database versions. For details, see Table 5-10.</p>

Table 5-10 dataStores field data structure description

Parameter	Type	Description
id	String	<p>Definition Database version ID. The value is unique.</p> <p>Range N/A</p>
name	String	<p>Definition Database version number. Only the major version number (two digits) is returned. For example, if the version number is MySQL 5.7.X, only 5.7 is returned.</p> <p>Range</p> <ul style="list-style-type: none"> For MySQL, the minor version number can be returned. For example, if the DB engine version is MySQL 5.6.51, 5.6.51 is returned. For PostgreSQL and Microsoft SQL Server, only the major version number (two digits) is returned. For example, if the DB engine version is PostgreSQL 9.6.X, only 9.6 is returned.

- Example normal response

```
{
  "dataStores": [{
    "id": "87620726-6802-46c0-9028-a8785e1f1922",
    "name": "5.7"
  }, {
    "id": "e8a8b8cc-63f8-4fb5-8d4a-24c502317a62",
    "name": "5.6"
  }
]}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal

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

Error Code

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

5.3 Querying Database Specifications

Function

This API is used to query the database specifications of a specified DB engine version.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/flavors/{database_name}?
version_name={version_name}&spec_code={spec_code}
- Parameter description

Table 5-11 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Definition Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
database_name	Yes	<p>Definition DB engine name.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer <p>Default Value N/A</p>

Parameter	Mandatory	Description
version_name	No	<p>Definition Database version. For details about how to obtain the database version, see section Querying Version Information About a DB Engine.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
spec_code	No	<p>Definition Specification code.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/flavors/mysql?version_name=5.7&spec_code=rds.mysql.m1.xlarge.rr

Response

- Normal response

Table 5-12 Parameters

Parameter	Type	Description
flavors	Array of objects	<p>Definition DB instance specifications information list. For details, see Table 5-13.</p>

Table 5-13 flavors field data structure description

Parameter	Type	Description
vcpus	String	<p>Definition Number of vCPUs. For example, the value 1 indicates 1 vCPU.</p> <p>Range N/A</p>
ram	Integer	<p>Definition Memory size in GB.</p> <p>Range N/A</p>
spec_code	String	<p>Definition Resource specification code. Use rds.mysql.m1.xlarge.rr as an example.</p> <ul style="list-style-type: none"> • rds indicates the RDS product. • mysql indicates the DB engine. • m1.xlarge indicates the high memory performance specifications. • rr indicates read replicas (.ha indicates primary/standby DB instances). <p>Range N/A</p>
instance_mode	String	<p>Definition Instance type.</p> <p>Range</p> <ul style="list-style-type: none"> • ha indicates primary/standby instances. • replica indicates read replicas. • single indicates single DB instances.
az_status	Map<String, String>	<p>Definition Specification status in an AZ.</p> <p>Range</p> <ul style="list-style-type: none"> • normal: The specifications in the AZ are available. • unsupported: The specifications are not supported by the AZ. • sellout: The specifications in the AZ are sold out.

- Example normal response

```
{
  "flavors": [{
```

```
"vcpus": "1",  
"ram": 2,  
"spec_code": "rds.mysql.c2.medium.ha",  
"instance_mode": "ha",  
"az_status": {  
  "az1": "normal",  
  "az2": "normal"  
}  
}, {  
  "vcpus": "1",  
  "ram": 2,  
  "spec_code": "rds.mysql.c2.medium.rr",  
  "instance_mode": "replica",  
  "az_status": {  
    "az1": "normal",  
    "az2": "normal"  
  }  
}  
}]
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4 DB Instance Management

5.4.1 Creating a DB Instance

Function

This API is used to create a single RDS DB instance, primary/standby DB instance, or read replica.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

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

Table 5-14 Parameters

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

Request

Table 5-15 Parameters (creating single, primary/standby, and cluster instances, except RDS for SQL Server instances configured with the AD domain)

Parameter	Mandatory	Type	Description
name	Yes	String	DB instance name. Instances of the same type can have the same name under the same tenant. <ul style="list-style-type: none"> RDS for MySQL: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_). RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).
datastore	Yes	Object	Database information. For details, see Table 5-17 .

Parameter	Mandatory	Type	Description
flavor_ref	Yes	String	Specification code. The value cannot be left blank. For details, see spec_code in Table 5-13 of section Querying Database Specifications .
volume	Yes	Object	Instance storage. For details, see Table 5-20 .
region	Yes	String	Region ID. The value cannot be left blank. For details about how to obtain this parameter value, see Regions and Endpoints .
availability_zone	Yes	String	AZ ID. If the DB instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (.). For details, see the example. The value cannot be left blank. For details about how to obtain this parameter value, see Regions and Endpoints .
vpc_id	Yes	String	VPC ID. To obtain this parameter value, use either of the following methods: <ul style="list-style-type: none"> Method 1: Log in to VPC console and view the VPC ID in the VPC details. Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.

Parameter	Mandatory	Type	Description
subnet_id	Yes	String	<p>Subnet ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> Method 1: Log in to the 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 <i>Virtual Private Cloud API Reference</i>.
security_group_id	Yes	String	<p>Security group which the DB instance belongs to. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> Method 1: Log in to VPC console. 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 <i>Virtual Private Cloud API Reference</i>.
ha	No	Object	<p>HA configuration, which is used when you create primary/standby instances.</p> <p>For details, see Table 5-18.</p>

Parameter	Mandatory	Type	Description
configuration_id	No	String	Parameter template ID. For details, see id in Table 5-250 in section Obtaining a Parameter Template List .
port	No	String	Database port information. <ul style="list-style-type: none"> • RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017 and 33071, which are reserved for RDS system use. • RDS for PostgreSQL instances can use database ports 2100 to 9500. • RDS for SQL Server instances can use database port 1433 or ports 2100 to 9500, excluding 5355 and 5985. <p>If this parameter is not set, the default value is as follows:</p> <ul style="list-style-type: none"> • RDS for MySQL: 3306 • RDS for PostgreSQL: 5432 • RDS for SQL Server: 1433

Parameter	Mandatory	Type	Description
password	No	String	<p>Database password.</p> <p>Range</p> <p>A database password must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters. Different DB engines support different special characters.</p> <ul style="list-style-type: none"> • RDS for MySQL: ~!@#%&^*-_+=?, • RDS for SQL Server: ~!@#%&^*-_+=?, • RDS for PostgreSQL: ~!@#%&^*-_+=?, <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking. If the password you provide is regarded as a weak password by the system, you will be prompted to enter a stronger password.</p>
backup_strategy	No	Object	<p>Advanced backup policy.</p> <p>For details, see Table 5-19.</p>

Parameter	Mandatory	Type	Description
data_vip	No	String	<p>Floating IP address of a DB instance. You can use the following methods to obtain the floating IP address:</p> <ul style="list-style-type: none"> • Method 1: Log in to the VPC console and click the target subnet on the Subnets page. View the subnet CIDR block and select an IP address that is not in use. • Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.
time_zone	No	String	<p>UTC time zone.</p> <ul style="list-style-type: none"> • If this parameter is not specified, the time zone of each engine is as follows: <ul style="list-style-type: none"> – MySQL uses UTC by default. – PostgreSQL uses UTC by default. – Microsoft SQL Server uses UTC by default. • If this parameter is specified for MySQL or PostgreSQL, the value range is from UTC-12:00 to UTC+12:00 on the hour. For example, the parameter can be UTC+08:00 rather than UTC+08:30.

Parameter	Mandatory	Type	Description
tags	No	Array of objects	<p>Tag list. Each DB instance can be associated with tag key-value pairs while being created.</p> <ul style="list-style-type: none"> • <i>{key}</i> indicates the tag key. It must be unique and cannot be empty. • <i>{value}</i> indicates the tag value, which can be left blank. <p>If you want to create DB instances with multiple tag key-value pairs, separate them with commas (.). A maximum of 10 key-value pairs can be added.</p> <p>For details, see Table 5-21.</p>
collation	No	String	<p>This parameter applies only to RDS for SQL Server DB instances.</p> <p>Value range: character sets queried in Querying the Available SQL Server Character Set.</p>

Table 5-16 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	<p>DB instance name.</p> <p>The DB instance name of the same type must be unique for the same tenant.</p> <p>Valid value:</p> <ul style="list-style-type: none"> • RDS for MySQL: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_). • RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).
flavor_ref	Yes	String	<p>Specification code. The value cannot be left blank.</p> <p>For details, see spec_code in Table 5-13 of section Querying Database Specifications.</p>
volume	Yes	Object	<p>Volume information.</p> <p>For details, see Table 5-20.</p>
availability_zone	Yes	String	<p>AZ ID.</p> <p>The value cannot be left blank. For details about how to obtain this parameter value, see Regions and Endpoints.</p>

Parameter	Mandatory	Type	Description
region	No	String	Region ID. Currently, read replicas can be created only in the same region as that of the primary DB instance. The value cannot be left blank. For details about how to obtain this parameter value, see Regions and Endpoints .

Table 5-17 datastore field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	DB engine. Value: <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer

Parameter	Mandatory	Type	Description
version	Yes	String	<p>Database version.</p> <ul style="list-style-type: none"> • For RDS for MySQL, 5.6, 5.7, and 8.0 are supported. Example value: 5.7 • For RDS for PostgreSQL, PostgreSQL 1.0 (Enhanced Edition), 9.5, 9.6, 10, 11, 12, 13, 14, and 15 are supported. Example value: 9.6 • Microsoft SQL Server databases only support 2017 Enterprise Edition, 2017 Standard Edition, 2017 Web Edition, 2014 Standard Edition, 2014 Enterprise Edition, 2016 Standard Edition, 2016 Enterprise Edition, 2012 Enterprise Edition, 2012 Standard Edition, 2012 Web Edition, 2008 R2 Enterprise Edition, 2008 R2 Web Edition, 2014 Web Edition, and 2016 Web Edition. Example value: 2014_SE <p>For details about supported database versions, see section Querying Version Information About a DB Engine.</p>

Table 5-18 ha field data structure description

Parameter	Mandatory	Type	Description
mode	Yes	String	Primary/standby instance type. The value is HA (case-insensitive).
replication_mode	Yes	String	<p>Replication mode for the standby DB instance.</p> <p>Value:</p> <ul style="list-style-type: none"> For RDS for MySQL, the value is async or semisync. For RDS for PostgreSQL, the value is async or sync. For RDS for SQL Server, the value is sync. <p>NOTE</p> <ul style="list-style-type: none"> async indicates the asynchronous replication mode. semisync indicates the semi-synchronous replication mode. sync indicates the synchronous replication mode.

Table 5-19 backup_strategy field data structure description

Parameter	Mandatory	Type	Description
start_time	Yes	String	<p>Backup time window. Automated backups will be triggered during the backup time window.</p> <p>The value cannot be left blank. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> The HH value must be 1 greater than the hh value. The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. <p>Example value:</p> <ul style="list-style-type: none"> 08:15-09:15 23:00-00:00
keep_days	No	Integer	<p>Retention days for specific backup files.</p> <p>The value range is from 0 to 732. If this parameter is not specified or set to 0, the automated backup policy is disabled.</p> <p>NOTICE Primary/standby DB instances of RDS for SQL Server do not support disabling the automated backup policy.</p>

Table 5-20 volume field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Storage type. Its value can be any of the following and is case-sensitive: <ul style="list-style-type: none"> ● ULTRAHIGH: ultra-high I/O ● CLOUDSSD: cloud SSD. This storage type is supported only with general-purpose and dedicated DB instances. ● ESSD: extreme SSD
size	Yes	Integer	Storage size. Its value must be a multiple of 10 and the value range is from 40 GB to 4,000 GB. NOTE For read replicas, this parameter is invalid. The storage size is the same as that of the primary DB instance by default.

Table 5-21 tags field data structure description

Parameter	Mandatory	Type	Description
key	Yes	String	Tag key. It must consist of 1 to 128 Unicode characters, including letters, digits, spaces, and special characters <code>._:=-@</code> . However, it cannot start or end with a space, or start with <code>_sys_</code> . It can contain uppercase and lowercase letters, digits, hyphens (-), underscores (_), and Unicode characters (<code>\u4E00-\u9FFF</code>).

Parameter	Mandatory	Type	Description
value	Yes	String	<p>Tag value. It can be left blank or contain a maximum of 255 Unicode characters, including letters, digits, spaces, and the following special characters: <code>._:=-@</code></p> <p>It can contain uppercase and lowercase letters, digits, periods (<code>.</code>), hyphens (<code>-</code>), underscores (<code>_</code>), and Unicode characters (<code>\u4E00-\u9FFF</code>).</p>

Example Request

- Creating an RDS for MySQL single-node instance

POST `https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances`

```
{
  "name": "rds-instance-rep2",
  "datastore": {
    "type": "MySQL",
    "version": "5.7"
  },
  "flavor_ref": "rds.mysql.s1.large",
  "volume": {
    "type": "ULTRAHIGH",
    "size": 100
  },
  "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
  "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
  "data_vip": "192.168.0.1",
  "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
  "port": 8635,
  "backup_strategy": {
    "start_time": "08:15-09:15",
    "keep_days": 12
  },
  "charge_info": {
    "charge_mode": "postPaid"
  },
  "password": "*****",
  "configuration_id": "452408-ef4b-44c5-94be-305145fg"
  "time_zone": "UTC+04:00"
}
```

- Creating an RDS for MySQL primary/standby instance

```
{
  "name": "rds-instance-rep2",
  "datastore": {
    "type": "MySQL",
    "version": "5.7"
  },
  "ha": {
    "mode": "ha",
    "replication_mode": "semisync"
  },
  "flavor_ref": "rds.mysql.s1.large.ha",
  "volume": {
    "type": "ULTRAHIGH",
    "size": 100
  },
}
```

```

"region": "aaa",
"availability_zone": "bbb,ccc",
"vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
"subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
"data_vip": "192.168.0.1",
"security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
"port": 8635,
"backup_strategy": {
  "start_time": "08:15-09:15",
  "keep_days": 12
},
"charge_info": {
  "charge_mode": "postPaid"
},
"password": "*****",
"configuration_id": "452408-ef4b-44c5-94be-305145fg"
}

```

- Creating a read replica for an RDS for MySQL instance

```

{
  "name": "rds-instance-rep2",
  "replica_of_id": "afdsad-fds-fdsagin01",
  "flavor_ref": "rds.mysql.s1.large.rr",
  "volume": {
    "type": "ULTRAHIGH"
  },
  "region": "aaa",
  "availability_zone": "bbb"
}

```

Response

- Normal response

Table 5-22 Parameters

Parameter	Type	Description
instance	Object	DB instance information. For details, see Table 5-23 .
job_id	String	ID of the DB instance creation task.

Table 5-23 instance field data structure description

Parameter	Type	Description
id	String	DB instance ID. NOTE The v3 DB instance ID is incompatible with the v1 DB instance ID.

Parameter	Type	Description
name	String	DB instance name. Instances of the same type can have the same name under the same tenant.
status	String	DB instance status. For example, BUILD indicates that the DB instance is being created.
datastore	Object	Database information. For details, see Table 5-24 .
ha	Object	HA configuration parameters. This parameter is returned only when primary/standby DB instances are created. For details, see Table 5-25 .
configuration_id	String	Parameter template ID. This parameter is returned only when a custom parameter template is used during DB instance creation.
port	String	Database port, which is the same as the request parameter.
backup_strategy	Object	Automated backup policy. For details, see Table 5-26 .
flavor_ref	String	Specification code. The value cannot be left blank. For details, see spec_code in Table 5-13 of section Querying Database Specifications .

Parameter	Type	Description
volume	Object	Volume information. For details, see Table 5-27 .
region	String	Region ID.
availability_zone	String	AZ ID.
vpc_id	String	VPC ID. To obtain this parameter value, use either of the following methods: <ul style="list-style-type: none"> Method 1: Log in to VPC console and view the VPC ID in the VPC details. Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.
subnet_id	String	Subnet ID. To obtain this parameter value, use either of the following methods: <ul style="list-style-type: none"> Method 1: Log in to the 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 <i>Virtual Private Cloud API Reference</i>.

Parameter	Type	Description
security_group_id	String	Security group which the DB instance belongs to. To obtain this parameter value, use either of the following methods: <ul style="list-style-type: none"> Method 1: Log in to VPC console. Choose Access Control > Security Groups in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: See the "Querying Security Groups" section in the <i>Virtual Private Cloud API Reference</i>.
charge_info	Object	Billing information. For details, see Table 5-28 .
collation	String	Collation set for RDS for SQL Server.

Table 5-24 datastore field data structure description

Parameter	Type	Description
type	String	DB engine. Value: <ul style="list-style-type: none"> MySQL PostgreSQL SQLServer
version	String	Database version. For details about supported database versions, see section Querying Version Information About a DB Engine .

Table 5-25 ha field data structure description

Parameter	Type	Description
mode	String	Primary/standby instance type. The value is Ha .
replication_mode	String	<p>Replication mode for the standby DB instance. This parameter is valid only when the instance is an HA instance.</p> <p>Value:</p> <ul style="list-style-type: none"> For RDS for MySQL, the value is async or semisync. For RDS for PostgreSQL, the value is async or sync. For RDS for SQL Server, the value is sync. <p>NOTE</p> <ul style="list-style-type: none"> async indicates the asynchronous replication mode. semisync indicates the semi-synchronous replication mode. sync indicates the synchronous replication mode.

Table 5-26 backupStrategy field data structure description

Parameter	Type	Description
start_time	String	<p>Backup time window. Automated backups will be triggered during the backup time window.</p> <p>The value cannot be left blank. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> The HH value must be 1 greater than the hh value. The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. <p>Example value:</p> <ul style="list-style-type: none"> 08:15-09:15 23:00-00:00 <p>If backup_strategy in the request body is empty, 02:00-03:00 is returned for start_time by default.</p>

Parameter	Type	Description
keep_days	Integer	Retention days for specific backup files. The value range is from 0 to 732. If this parameter is not specified or set to 0, the automated backup policy is disabled. If backup_strategy in the request body is empty, 7 is returned for keep_days by default.

Table 5-27 volume field data structure description

Parameter	Type	Description
type	String	Storage type. Its value can be any of the following and is case-sensitive: <ul style="list-style-type: none"> • ULTRAHIGH: ultra-high I/O • CLOUDSSD: cloud SSD. This storage type is supported only with general-purpose and dedicated DB instances. • ESSD: extreme SSD
size	Integer	Storage size. Its value range is from 40 GB to 4,000 GB. The value must be a multiple of 10.

Table 5-28 chargeInfo field data structure description

Parameter	Type	Description
charge_mode	String	Billing information.

- Example normal response
RDS for MySQL single instance created.

```
{
  "instance": {
    "id": "dsfae23fsfdsae3435in01",
    "name": "trove-instance-rep2",
    "datastore": {
      "type": "MySQL",
      "version": "5.7"
    },
    "flavor_ref": "rds.mysql.s1.large",
    "volume": {
      "type": "ULTRAHIGH",
      "size": 100
    }
  }
}
```

```

    },
    "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
    "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
    "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
    "port": "8635",
    "backup_strategy": {
      "start_time": "08:15-09:15",
      "keep_days": 3
    },
    "configuration_id": "452408-44c5-94be-305145fg",
    "charge_info": {
      "charge_mode": "postPaid"
    }
  },
  "job_id": "dff1d289-4d03-4942-8b9f-463ea07c000d"
}

```

RDS for MySQL primary/standby instance created.

```

{
  "instance": {
    "id": "dsfae23fsfsdae3435in01",
    "name": "trove-instance-rep2",
    "datastore": {
      "type": "MySQL",
      "version": "5.7"
    },
    "ha": {
      "mode": "ha",
      "replication_mode": "semisync"
    },
    "flavor_ref": "rds.mysql.s1.large.ha",
    "volume": {
      "type": "ULTRAHIGH",
      "size": 100
    },
    "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
    "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
    "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
    "port": "8635",
    "backup_strategy": {
      "start_time": "08:15-09:15",
      "keep_days": 3
    },
    "configuration_id": "452408-44c5-94be-305145fg",
    "charge_info": {
      "charge_mode": "postPaid"
    }
  },
  "job_id": "dff1d289-4d03-4942-8b9f-463ea07c000d"
}

```

Read replica created for the RDS for MySQL instance.

```

{
  "instance": {
    "id": "dsfae23fsfsdae3435in01",
    "name": "trove-instance-rep2",
    "flavor_ref": "rds.mysql.s1.large.rr",
    "volume": {
      "type": "ULTRAHIGH",
      "size": 100
    },
    "region": "",
    "availability_zone": "",
    "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
    "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
    "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
    "port": "8635",
    "configuration_id": "452408-44c5-94be-305145fg"
  },
}

```

```
"job_id": "dff1d289-4d03-4942-8b9f-463ea07c000d"
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
202
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.2 Stopping an Instance

Function

This API is used to stop a pay-per-use DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- A stopped instance will not be moved to the recycle bin after being deleted.
- If you stop a primary instance, read replicas (if there are any) will also be stopped. You cannot stop a read replica without stopping the primary instance.
- An instance cannot be stopped if it is in any of the following statuses: Creating, rebooting, scaling up, changing instance class, restoring, and changing port.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/action/shutdown
- Parameter description

Table 5-29 Parameter description

Name	Mandator y	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .

Name	Mandatory	Description
instance_id	Yes	Instance ID.

Request

None

Example Request

Stop an instance.

```
POST https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/  
5b409baece064984a1b3eef6addae50cin01/action/shutdown  
{}
```

Response

- Normal response

Table 5-30 Parameter description

Name	Type	Description
job_id	String	Task ID.

- Example normal response

```
{  
  "job_id": "2b414788a6004883a02390e2eb0ea227"  
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.3 Starting an Instance

Function

This API is used to start a DB instance. You can stop your instance temporarily to save money. After stopping your instance, you can restart it to begin using it again.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- If you start a primary instance, read replicas (if there are any) will also be started.
- Only instances in **Stopped** state can be started.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/action/startup
- Parameter description

Table 5-31 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

None

Example Request

```
POST https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/5b409baece064984a1b3eef6addae50cin01/action/startup
{ }
```

Response

- Normal response

Table 5-32 Parameter description

Name	Type	Description
job_id	String	Task ID.

- Example normal response

```
{
  "job_id": "2b414788a6004883a02390e2eb0ea227"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.4.4 Changing a DB Instance Name

Function

This API is used to change a DB instance name.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format

PUT /v3/{project_id}/instances/{instance_id}/name

- Parameter description

Table 5-33 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-34 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	<p>Specifies the DB instance name. DB instances of the same type can have same names under the same tenant. Valid value:</p> <ul style="list-style-type: none"> RDS for MySQL: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_). RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).

Example Request

Change the name of a DB instance.

```
PUT https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/5b409baece064984a1b3eef6addae50cin01/name
{
  "name": "Test_2345674"
}
```

Response

- Normal response
None
- Example normal response
None
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.5 Querying the Auto Scaling Policy of a DB Instance

Function

This API is used to query the auto scaling policy of a DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This API is supported for the MySQL DB engine only.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/auto-scaling/policy
- Parameter description

Table 5-35 Parameters

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

Request

None

Example Request

Query the auto scaling policy of a DB instance.

```
GET https://{Endpoint}/v3/54623db08b174c858ba779d2aa7923a3/instances/aa650a108f034e83b24486fd1ff7be2fin01/auto-scaling/policy
```

Response

- Normal response

Table 5-36 Parameters

Parameter	Type	Description
instance_id	String	Instance ID.
status	String	Whether auto scaling is enabled. Range <ul style="list-style-type: none"> ● ON: Auto scaling is enabled. ● OFF: Auto scaling is disabled.
monitor_cycle	Integer	Observation window, in seconds.
silence_cycle	Integer	Silent period, in seconds.
enlarge_threshold	Integer	Threshold for triggering auto scale-up, in percentage.
max_flavor	String	Maximum specifications.
reduce_enabled	String	Whether auto scale-down is enabled. Range <ul style="list-style-type: none"> ● ON: Auto scale-down is enabled. ● OFF: Auto scale-down is disabled.
reduce_threshold	Integer	Threshold for triggering auto scale-down.
min_flavor	String	Minimum specifications.

- Example normal response

```
{
  "instance_id": "aea4d8a8d302484ea0319f04566e48e2in01",
  "status": "ON",
  "monitor_cycle": 300,
  "silence_cycle": 300,
  "enlarge_threshold": 50,
  "min_flavor": "rds.mysql.n1.large.2.ha",
  "max_flavor": "rds.mysql.n1.4xlarge.2.ha",
  "reduce_enabled": "ON",
  "reduce_threshold": 30
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.6 Changing DB Instance Specifications

Function

This API is used to change DB instance specifications.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

NOTE

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

Constraints

- The new DB instance specifications must be different from the original DB instance specifications.
- The instance specifications can be modified only for DB instances in the **Available** status.
- The specifications of a DB instance can be changed only to the specifications of the same DB instance type. (For example, the specifications of a single DB instance cannot be changed to those of primary/standby DB instances.)

URI

- URI format
POST /v3/{*project_id*}/instances/{*instance_id*}/action
- Parameter description

Table 5-37 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-38 Parameter description

Name	Mandatory	Type	Description
resize_flavor	Yes	Object	For details, see Table 5-39 .

Table 5-39 resize_flavor field data structure description

Name	Mandatory	Type	Description
spec_code	Yes	String	Specifies the resource specification code. Use rds.mysql.m1.xlarge as an example. rds indicates the RDS product, mysql indicates the DB engine, and m1.xlarge indicates the high memory performance specifications. The parameter containing rr indicates the read replica specifications. The parameter not containing rr indicates the single or primary/standby DB instance specifications.

Example Request

- Change the specifications of an RDS for MySQL DB instance to **rds.mysql.m1.xlarge**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in01/action
{
  "resize_flavor": {
    "spec_code": "rds.mysql.m1.xlarge"
  }
}
```

- Change the specifications of an RDS for PostgreSQL DB instance to **rds.pg.c2.medium.ha**.

```
{
  "resize_flavor": {
    "spec_code": "rds.pg.c2.medium.ha"
  }
}
```

- Change the specifications of an RDS for SQL Server DB instance to **rds.mssql.2014.se.s3.large.2**.

```
{
  "resize_flavor": {
```

```

    "spec_code": "rds.mssql.2014.se.s3.large.2"
  }
}

```

Response

- Normal response

Table 5-40 Parameter description

Name	Type	Description
job_id	String	Indicates the job ID.

- Example normal response


```

{
  "job_id": "2b414788a6004883a02390e2eb0ea227"
}

```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
202
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.7 Scaling Up Storage Space of a DB Instance

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The sizes of the primary and standby DB instances are the same. When you scale the primary DB instance, its standby DB instance is also scaled.
- The storage space can be scaled up only when your instance status is **Available** or **Storage full**.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/action

- Parameter description

Table 5-41 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-42 Parameter description

Name	Mandatory	Type	Description
enlarge_volume	Yes	Object	Specifies the target storage space after scaling up. For details, see Table 5-43 .

Table 5-43 enlarge_volume field data structure description

Name	Mandatory	Type	Description
size	Yes	Integer	A DB instance can be scaled up only by a multiple of 10 GB. Value range: 40 GB to 4,000 GB

Example Request

Scale up storage space of a DB instance to 400 GB.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfcae23fsfdae3435in01/action
{
  "enlarge_volume": {
    "size": 400
  }
}
```

Response

- Normal response

Table 5-44 Parameter description

Name	Type	Description
job_id	String	Task ID.

- Example normal response

```
{
  "job_id": "2b414788a6004883a02390e2eb0ea227"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
202
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.8 Changing a Single DB Instance to Primary/Standby DB Instances

Function

This API is used to change a single DB instance to primary/standby DB instances.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- Single DB instances with certain specifications cannot be changed to primary/standby DB instances.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/action
- Parameter description

Table 5-45 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-46 Parameter description

Name	Mandatory	Type	Description
single_to_ha	Yes	Object	For details, see Table 5-47 .

Table 5-47 single_to_ha field data structure description

Name	Mandatory	Type	Description
az_code_new_node	Yes	String	Specifies the AZ code of the DB instance node.

Example Request

- Change a DB instance from single to primary/standby.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in01/action
{
  "single_to_ha": {
    "az_code_new_node": "az2xahz"
  }
}
```
- Change a pay-per-use RDS for SQL Server DB instance from single to primary/standby.

```
{
  "single_to_ha": {
    "az_code_new_node": "az2xahz",
    "password": "Test@1234567"
  }
}
```

Response

- Pay-per-use DB instances**
 - Normal response

Table 5-48 Parameter description

Name	Type	Description
job_id	String	Task ID.

- Example normal response

```
{  
  "job_id": "2b414788a6004883a02390e2eb0ea227"  
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
202
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.9 Rebooting a DB Instance

Function

This API is used to reboot a DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

NOTICE

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

Constraints

The DB instance cannot reboot when it is being created, scaled, backed up, restored, or its instance class or port is being changed.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/action
- Parameter description

Table 5-49 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-50 Parameter description

Name	Mandatory	Type	Description
restart	Yes	None	This parameter is left blank.

Example Request

Reboot a DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/action
{
  "restart": {}
}
```

Response

- Normal response

Table 5-51 Parameter description

Name	Type	Description
job_id	String	Task ID.

- Example normal response


```
{
  "job_id": "2b414788a6004883a02390e2eb0ea227"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
202

- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.10 Deleting a DB Instance

Function

This API is used to delete a DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}
- Parameter description

Table 5-52 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID compliant with the UUID format.

Request

- Request parameters
None
- URI example
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01

Response

- Normal response

Table 5-53 Parameter description

Name	Type	Description
job_id	String	ID of the instance deletion task.

- Example normal response


```
{
  "job_id": "dff1d289-4d03-4942-8b9f-463ea07c000d"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
202
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.11 Querying DB Instances

Function

This API is used to query DB instances according to search criteria.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/instances?
id={id}&name={name}&type={type}&datastore_type={datastore_type}&vpc_id={vpc_id}&subnet_id={subnet_id}&offset={offset}&limit={limit}&tags={key}={value}
- Parameter description

Table 5-54 Parameter description

Parameter	Type	Mandatory	Description
project_id	String	Yes	<p>Definition Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
id	String	No	<p>Definition Instance ID. The asterisk (*) is reserved for the system. If the instance ID starts with *, it indicates that fuzzy match is performed based on the value following *. Otherwise, the exact match is performed based on the instance ID. The value cannot contain only asterisks (*).</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Type	Mandatory	Description
name	String	No	<p>Definition Instance name.</p> <p>The asterisk (*) is reserved for the system. If the instance name starts with *, it indicates that fuzzy match is performed based on the value following *. Otherwise, the exact match is performed based on the instance name. The value cannot contain only asterisks (*).</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
type	String	No	<p>Definition Instance type.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • Single: single-node instance • Ha: primary/standby instance • Replica: read replica • Enterprise: distributed instance (Enterprise Edition) <p>Default Value N/A</p>
datastore_type	String	No	<p>Definition DB engine.</p> <p>Constraints The value is case-sensitive.</p> <p>Range</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer <p>Default Value N/A</p>

Parameter	Type	Mandatory	Description
vpc_id	String	No	<p>Definition VPC ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to VPC console and view the VPC ID in the VPC details. • Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>. <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
subnet_id	String	No	<p>Definition Subnet ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to the 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 <i>Virtual Private Cloud API Reference</i>. <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Type	Mandatory	Description
offset	Integer	No	<p>Definition Index offset. The query starts from the next piece of data indexed by this parameter.</p> <p>Constraints The value must be a non-negative number.</p> <p>Range An integer greater than or equal to 0</p> <p>Default Value 0</p>
limit	Integer	No	<p>Definition Number of records to be queried.</p> <p>Constraints N/A</p> <p>Range The default value is 100. The value cannot be a negative number. The minimum value is 1 and the maximum value is 100.</p> <p>Default Value 100</p>

Request

- Request parameters
None
- URI example
 - Querying all DB instances
GET https://{endpoint}/v3/97b026aa9cc4417888c14c84a1ad9860/instances
 - Querying DB instances based on search criteria
GET https://{endpoint}/v3/97b026aa9cc4417888c14c84a1ad9860/instances?id=ed7cc6166ec24360a5ed5c5c9c2ed726in01&name=hy&type=Ha&datastore_type=MySQL&vpc_id=19e5d45d-70fd-4a91-87e9-b27e71c9891f&subnet_id=bd51fb45-2dcb-4296-8783-8623bfe89bb7&offset=0&limit=10&tags=rds001=001,rds002=002

Response

- Normal response

Table 5-55 Parameter description

Parameter	Type	Description
instances	Array of objects	Definition Indicates the DB instance information. For details, see Table 5-56 .
total_count	Integer	Definition Indicates the total number of records. Range N/A

Table 5-56 instances field data structure description

Parameter	Type	Description
id	String	Definition Indicates the DB instance ID. Range N/A
name	String	Definition Indicates the created DB instance name. Range N/A

Parameter	Type	Description
status	String	<p>Definition Indicates the DB instance status.</p> <p>Range</p> <ul style="list-style-type: none"> • BUILD: The instance is being created. • CREATE FAIL: The instance failed to be created. • ACTIVE: The instance is running properly. • FAILED: The instance is abnormal. • MODIFYING: The vCPU, memory, or storage space of the instance is being changed. • REBOOTING: The instance is being rebooted. • RESTORING: The instance is being restored. • MODIFYING INSTANCE TYPE: The instance is changing from single to primary/standby. • SWITCHOVER: The instance is performing a primary/standby switchover. • MIGRATING: The instance is being migrated. • BACKING UP: The instance is being backed up. • MODIFYING DATABASE PORT: The database port is being changed.
alias	String	<p>Definition Indicates the DB instance alias.</p> <p>Range N/A</p>
private_ips	List<String>	<p>Definition Indicates the private IP address list. It is a blank string until an ECS is created.</p> <p>Range N/A</p>

Parameter	Type	Description
private_dns_names	List<String>	<p>Definition Indicates the private domain name list of the DB instance. After a DB instance is created, you need to manually apply for a private domain name, or the private domain name is left blank.</p> <p>Range N/A</p>
public_ips	List<String>	<p>Definition Indicates the public IP address list.</p> <p>Range N/A</p>
port	Integer	<p>Definition Indicates the database port number.</p> <p>Range</p> <ul style="list-style-type: none"> • RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017 and 33071, which are reserved for RDS system use. • RDS for PostgreSQL instances can use database ports 2100 to 9500. • RDS for SQL Server instances can use database port 1433 or ports 2100 to 9500, excluding 5355 and 5985. <p>If this parameter is not set, the default value is as follows:</p> <ul style="list-style-type: none"> • RDS for MySQL: 3306 • RDS for PostgreSQL: 5432 • RDS for SQL Server: 1433
type	String	<p>Definition Instance type.</p> <p>Range</p> <ul style="list-style-type: none"> • Single: single-node instance • Ha: primary/standby instance • Replica: read replica • Enterprise: distributed instance (Enterprise Edition)

Parameter	Type	Description
ha	Object	<p>Definition Indicates the primary/standby DB instance information. Returned only when you obtain a primary/standby DB instance list. For details, see Table 5-57.</p>
region	String	<p>Definition Indicates the region where the DB instance is deployed.</p> <p>Range N/A</p>
datastore	Object	<p>Definition Indicates the database information. For details, see Table 5-58.</p>
created	String	<p>Definition Indicates the creation time.</p> <p>Range The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100. The value is empty when the instance is being created. After the instance is created, the value is not empty.</p>
updated	String	<p>Definition Indicates the update time.</p> <p>Range The format is the same as that of the created field. The value is empty when the instance is being created. After the instance is created, the value is not empty.</p>
db_user_name	String	<p>Definition Indicates the default username.</p> <p>Range N/A</p>

Parameter	Type	Description
vpc_id	String	Definition Indicates the VPC ID. Range N/A
subnet_id	String	Definition Indicates the network ID of the subnet. Range N/A
security_group_id	String	Definition Indicates the security group ID. Range N/A
flavor_ref	String	Definition Indicates the specification code. Range N/A
volume	Object	Definition Indicates instance storage. For details, see Table 5-59 .
switch_strategy	String	Definition Indicates the database failover priority. Range <ul style="list-style-type: none"> • reliability: Reliability is given priority during the failover. • availability: Availability is given priority during the failover.
backup_strategy	Object	Definition Indicates the backup policy. For details, see Table 5-60 .
maintenance_window	String	Definition Indicates the start time of the maintenance time window in the UTC format. Range N/A

Parameter	Type	Description
nodes	Array of objects	Definition Indicates the primary/standby DB instance information. For details, see Table 5-61 .
related_instance	Array of objects	Definition Indicates all associated DB instances. For details, see Table 5-62 .
time_zone	String	Definition Indicates the time zone. Range N/A
backup_used_space	Double	Definition Indicates the backup space usage in GB. This field is returned only when you query information about a specified RDS for MySQL, RDS for PostgreSQL or RDS for SQL Server DB instance. Range N/A
storage_used_space	Double	Definition Indicates the storage space usage in GB. This field is returned only when you query information about a specified RDS for PostgreSQL or RDS for SQL Server DB instance. Range N/A

Table 5-57 ha field data structure description

Parameter	Type	Description
replication_mode	String	<p>Definition Indicates the replication mode for the standby instance.</p> <p>Range</p> <ul style="list-style-type: none"> • For RDS for MySQL, the value is async or semisync. • For RDS for PostgreSQL, the value is async or sync. • For RDS for SQL Server, the value is sync. <p>NOTE</p> <ul style="list-style-type: none"> • async indicates the asynchronous replication mode. • semisync indicates the semi-synchronous replication mode. • sync indicates the synchronous replication mode.

Table 5-58 datastore field data structure description

Parameter	Type	Description
type	String	<p>Definition Indicates the DB engine. Its value can be any of the following and is case-insensitive:</p> <p>Range</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer
version	String	<p>Definition Indicates the database version.</p> <p>Range N/A</p>

Table 5-59 volume field data structure description

Parameter	Type	Description
type	String	Definition Storage type. The value is case-sensitive.
size	Integer	Definition Storage space in GB. Range N/A

Table 5-60 backup_strategy field data structure description

Parameter	Type	Description
start_time	String	Definition Indicates the backup time window. Automated backups will be triggered during the backup time window. The time is in the UTC format. Range N/A
keep_days	Integer	Definition Indicates the number of days to retain the generated backup files. Range 0-732 If the value is 0, the automated backup policy is not configured or has been disabled.

Table 5-61 nodes field data structure description

Parameter	Type	Description
id	String	Definition Indicates the node ID. Range N/A
name	String	Definition Indicates the node name. Range N/A

Parameter	Type	Description
role	String	Definition Indicates the node type. Range <ul style="list-style-type: none"> • master: primary node • slave: standby node • readreplica: read replica node
status	String	Definition Indicates the node status.
availability_zone	String	Definition Indicates the AZ. Range N/A

Table 5-62 related_instance field data structure description

Parameter	Type	Description
id	String	Definition ID of the associated DB instance. Range N/A
type	String	Definition Type of the associated DB instance. Range <ul style="list-style-type: none"> • replica_of: indicates a primary DB instance. • replica: indicates a read replica.

- Example normal response

Query DB instances based on search criteria.

```
{
  "instances": [{
    "id": "ed7cc6166ec24360a5ed5c5c9c2ed726in01",
    "status": "ACTIVE",
    "name": "mysql-0820-022709-01",
    "port": 3306,
    "type": "Single",
    "region": "aaa",
    "datastore": {
      "type": "MySQL",
      "version": "5.7"
    }
  },
  "created": "2018-08-20T02:33:49+0800",
  "updated": "2018-08-20T02:33:50+0800",
```

```

"volume": {
  "type": "ULTRAHIGH",
  "size": 100
},
"nodes": [{
  "id": "06f1c2ad57604ae89e153e4d27f4e4b8no01",
  "name": "mysql-0820-022709-01_node0",
  "role": "master",
  "status": "ACTIVE",
  "availability_zone": "bbb"
}],
"alias": "description",
"private_ips": ["192.168.0.1"],
"private_dns_names": ["ed7cc6166ec24360a5ed5c5c9c2ed726in01.internal.xxx.com"],
"public_ips": [],
"db_user_name": "root",
"vpc_id": "b21630c1-e7d3-450d-907d-39ef5f445ae7",
"subnet_id": "45557a98-9e17-4600-8aec-999150bc4eef",
"security_group_id": "38815c5c-482b-450a-80b6-0a301f2afd97",
"flavor_ref": "rds.mysql.s1.large",

"switch_strategy": "",
"backup_strategy": {
  "start_time": "19:00-20:00",
  "keep_days": 7
},
"maintenance_window": "02:00-06:00",
"related_instance": [],
"time_zone": ""
}], "total_count": 1
}

```

- Query all DB instances.

```

{
  "instances": [{
    "id": "ed7cc6166ec24360a5ed5c5c9c2ed726in01",
    "status": "ACTIVE",
    "name": "mysql-0820-022709-01",
    "port": 3306,
    "type": "Single",
    "region": "aaa",
    "datastore": {
      "type": "MySQL",
      "version": "5.7"
    },
    "created": "2018-08-20T02:33:49+0800",
    "updated": "2018-08-20T02:33:50+0800",
    "volume": {
      "type": "ULTRAHIGH",
      "size": 100
    },
    "nodes": [{
      "id": "06f1c2ad57604ae89e153e4d27f4e4b8no01",
      "name": "mysql-0820-022709-01_node0",
      "role": "master",
      "status": "ACTIVE",
      "availability_zone": "bbb"
    }],
    "alias": "description",
    "private_ips": ["192.168.0.1"],

    "private_dns_names": ["ed7cc6166ec24360a5ed5c5c9c2ed726in01.internal.xxx.com"],
    "public_ips": [],
    "db_user_name": "root",
    "vpc_id": "b21630c1-e7d3-450d-907d-39ef5f445ae7",
    "subnet_id": "45557a98-9e17-4600-8aec-999150bc4eef",
    "security_group_id": "38815c5c-482b-450a-80b6-0a301f2afd97",
    "flavor_ref": "rds.mysql.s1.large",
  }
]
}

```

```

"switch_strategy": "",
"backup_strategy": {
  "start_time": "19:00-20:00",
  "keep_days": 7
},
"maintenance_window": "02:00-06:00",
"related_instance": [],
"time_zone": ""
}, {
  "id": "ed7cc6166ec24360a5ed5c5c9c2ed726in02",
  "status": "ACTIVE",
  "name": "mysql-0820-022709-02",
  "port": 3306,
  "type": "Single",
  "region": "aaa",
  "datastore": {
    "type": "MySQL",
    "version": "5.7"
  },
  "created": "2018-08-20T02:33:49+0800",
  "updated": "2018-08-20T02:33:50+0800",
  "volume": {
    "type": "ULTRAHIGH",
    "size": 100
  },
  "nodes": [{
    "id": "06f1c2ad57604ae89e153e4d27f4e4b8no01",
    "name": "mysql-0820-022709-01_node0",
    "role": "master",
    "status": "ACTIVE",
    "availability_zone": "bbb"
  }],
  "alias": "description",
  "private_ips": ["192.168.0.1"],
  "private_dns_names": ["ed7cc6166ec24360a5ed5c5c9c2ed726in01.internal.xxx.com"],
  "public_ips": [],

  "db_user_name": "root",
  "vpc_id": "b21630c1-e7d3-450d-907d-39ef5f445ae7",
  "subnet_id": "45557a98-9e17-4600-8aec-999150bc4eef",
  "security_group_id": "38815c5c-482b-450a-80b6-0a301f2afd97",
  "flavor_ref": "rds.mysql.s1.large",
  "cpu": "2",
  "mem": "4",
  "switch_strategy": "",
  "backup_strategy": {
    "start_time": "19:00-20:00",
    "keep_days": 7
  },
  "maintenance_window": "02:00-06:00",
  "related_instance": [],
  "time_zone": ""
}],
"total_count": 2
}

```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.4.12 Migrating a Standby DB Instance

Function

This API is used to migrate a standby DB instance to another AZ based on service requirements.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- Primary/standby instances running MySQL 5.6, 5.7, or 8.0 support standby instance migration to another AZ.
- This API is supported for primary/standby DB instances only.
- The standby DB instance cannot be migrated if the primary DB instance is in any of the following statuses: creating, rebooting, upgrading, changing instance class, changing port, creating users, or deleting users.

URI

- URI format
POST /v3/{*project_id*}/instances/{*instance_id*}/migrateslave
- Parameter description

Table 5-63 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-64 Parameter description

Name	Mandatory	Type	Description
nodeId	Yes	String	ID of the standby DB instance.

Name	Mandatory	Type	Description
azCode	Yes	String	Code of the AZ to which the standby DB instance is to be migrated. Specify an AZ code other than the original one after obtaining the codes of the AZs where the instance specifications are supported from Querying Database Specifications .

Example Request

Migrate a standby DB instance to az2.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfcae23fsfdsae3435in01/migrateslave
{
  "nodeId": "0119b1068b874cb4a5202989a06b6094no01",
  "azCode": "az2"
}
```

Response

- Normal response

Name	Description
workflowId	Indicates the workflow ID.

- Example normal response

```
{
  "workflowId": "7b55d6ca-dc8e-4844-a9da-6c53a1506db3"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.5 Database Security

5.5.1 Configuring SSL

Function

This API is used to configure SSL to encrypt connections.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

SSL cannot be configured if the DB instance is in any of the following statuses: creating, rebooting, upgrading, changing instance class, creating users, or deleting users.

This API is supported only for RDS for MySQL instances.

URI

- URI format
PUT `/v3/{project_id}/instances/{instance_id}/ssl`
- Parameter description

Table 5-65 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-66 Parameter description

Name	Mandatory	Type	Description
ssl_option	Yes	boolean	Specifies whether to enable SSL. <ul style="list-style-type: none"> • true: Enable SSL. • false: Disable SSL.

Example Request

- Enable SSL for a DB instance.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
dsfae23fsfdsae3435in01/ssl
```

```
{
  "ssl_option": true
}
```

- Disable SSL for a DB instance.

```
{
  "ssl_option": false
}
```

Response

- Normal response

Parameter	Description
job_id	Task ID.

- Example normal response

```
{
  "job_id": "83abc7bc-2c70-4534-8565-351187b37715"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.5.2 Changing a Database Port

Function

This API is used to change a database port.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

The database port cannot be changed if the DB instance is in any of the following statuses: creating, rebooting, changing instance class, backing up, creating users, or deleting users.

URI

- URI format
PUT /v3/{*project_id*}/instances/{*instance_id*}/port
- Parameter description

Table 5-67 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-68 Parameter description

Name	Mandatory	Type	Description
port	Yes	Integer	Specifies the port number. <ul style="list-style-type: none"> • The RDS for MySQL port number ranges from 1024 to 65535, excluding 12017, 33062, and 33071. • The RDS for PostgreSQL port number ranges from 2100 to 9500.

Example Request

Change the database port of a DB instance to 8836.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in01/port
{
  "port": 8836
}
```

Response

- Normal response

Name	Description
workflowId	Workflow ID.

- Example normal response


```
{
  "workflowId":"83abc7bc-2c70-4534-8565-351187b37715"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.5.3 Changing a Security Group

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

The security group cannot be changed if the DB instance is in any of the following statuses: creating, upgrading, changing instance class, creating users, or deleting users.

URI

- URI format
PUT /v3/{*project_id*}/instances/{*instance_id*}/security-group
- Parameter description

Table 5-69 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-70 Parameter description

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

Example Request

Change the security group of a DB instance.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/security-group
{
  "security_group_id": "23423klj432lk0sdf0234eaa"
}
```

Response

- Normal response

Name	Description
workflowId	Workflow ID.

- Example normal response

```
{
  "workflowId": "83abc7bc-2c70-4534-8565-351187b37715"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.5.4 Changing a Floating IP Address

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

The floating IP address cannot be changed if the DB instance is in any of the following statuses: creating, rebooting, upgrading, changing instance class, creating users, or deleting users.

URI

- URI format
PUT /v3/{*project_id*}/instances/{*instance_id*}/ip
- Parameter description

Table 5-71 Parameters

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

Request

Table 5-72 Parameters

Parameter	Mandatory	Type	Description
new_ip	Yes	String	Indicates the floating IP address.

Example Request

Change the floating IP address of a DB instance.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in01/ip
{
  "new_ip": "192.168.0.1"
}
```

Response

- Normal response

Parameter	Description
workflowId	Workflow ID.

- Example normal response

```
{
  "workflowId": "83abc7bc-2c70-4534-8565-351187b37715"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6 Backup and Restoration

5.6.1 Setting an Automated Backup Policy

Function

This API is used to set an automated backup policy.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/backups/policy
- Parameter description

Table 5-73 Parameter description

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

Request

Table 5-74 Parameter description

Parameter	Mandatory	Type	Description
backup_policy	Yes	Object	Backup policy objects, including the backup retention period (days) and backup start time. For details, see Table 5-75 .

Table 5-75 backup_policy field data structure description

Parameter	Mandatory	Type	Description
keep_days	Yes	Integer	<p>Number of days to retain the generated full backups.</p> <p>The value range is from 0 to 732.</p> <p>The value 0 indicates that the automated backup policy is disabled.</p> <p>NOTICE</p> <p>Once the automated backup policy is disabled, automated backups are no longer created and all incremental backups are deleted immediately. Operations related to the incremental backups, including downloads, replications, restorations, and rebuilds, may fail.</p>

Parameter	Mandatory	Type	Description
start_time	No	String	<p>Backup time window. Automated backups will be triggered during the backup time window. This parameter is mandatory except that the automated backup policy is disabled.</p> <p>The value must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. <p>Example value:</p> <ul style="list-style-type: none"> • 08:15-09:15 • 23:00-00:00

Parameter	Mandatory	Type	Description
period	No	String	<p>Backup cycle. Data will be automatically backed up on the selected days every week. This parameter is mandatory except that the automated backup policy is disabled.</p> <p>Value range: The value is a number separated by commas (,), indicating the days of the week. For example, the value 1,2,3,4 indicates that the backup period is Monday, Tuesday, Wednesday, and Thursday.</p>

Example Request

- Configure an automated backup policy for a DB instance, with backup cycle set to Monday and Tuesday, backup window to 19:00–20:00, and retention period to 7 days.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in01/backups/policy
```

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

- Disable an automated backup policy.

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

Response

- Normal response
None

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.2 Setting a Cross-Region Backup Policy

Function

This API is used to set a cross-region backup policy in the source backup region.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- If the cross-region backup policy has been enabled, call the API to set the cross-region backup policy. Only the retention period can be changed.
- For RDS for MySQL and RDS for PostgreSQL DB instances, the retention period of automated full backups must be the same as that for automated incremental backups.
- For RDS for MySQL and RDS for PostgreSQL DB instances, automated incremental backup cannot be enabled unless automated full backup is enabled first.
- For RDS for MySQL and RDS for PostgreSQL DB instances, if you want to disable automated full backup and automated incremental backup, disable automated incremental backup first.
- Cross-region backup is not supported for RDS for MySQL or RDS for PostgreSQL instances with volume snapshot backup enabled.

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/backups/offsite-policy
- Parameter description

Table 5-76 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-77 Parameter description

Name	Mandatory	Type	Description
policy_para	Yes	Object	Specifies the backup policy object, including the backup type, backup retention days, target region ID, and target project ID. For details, see Table 5-78 .

Table 5-78 policy_para field data structure description

Name	Mandatory	Type	Description
backup_type	Yes	String	Specifies the backup type. Its value can be any of the following: <ul style="list-style-type: none"> • auto: automated full backup • incremental: automated incremental backup • all: all backup types <ul style="list-style-type: none"> - RDS for MySQL: Enable automated full backup and automated incremental backup. - RDS for PostgreSQL: Enable automated full backup and automated incremental backup.

Name	Mandatory	Type	Description
keep_days	Yes	Integer	Specifies the number of days to retain the generated backup files. Value range: 0-1825 The value 0 indicates that the cross-region backup policy is disabled. NOTICE Once the automated backup policy is disabled, automated backups are no longer created and all incremental backups, if any, are deleted immediately. Operations related to the incremental backups, including downloads, replications, restorations, and rebuilds, may fail.
destination_region	Yes	String	Specifies the target region ID for the cross-region backup policy.
destination_project_id	Yes	String	Specifies the target project ID for the cross-region backup policy.

Example Request

- Configure a cross-region automated full backup policy for an RDS for MySQL or RDS for PostgreSQL DB instance.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsdae3435in01/backups/offsite-policy
```

```
{
  "policy_para": {
    "backup_type": "auto",
    "keep_days": 7,
    "destination_region": "aaa",
    "destination_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c"
  }
}
```

- Disable the cross-region automated full backup policy for an RDS for MySQL or RDS for PostgreSQL DB instance.

```
{
  "policy_para": {
    "backup_type": "auto",
    "keep_days": 0,
    "destination_region": "aaa",
    "destination_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c"
  }
}
```

Response

- Normal Response
None
- Abnormal Response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.3 Obtaining an Automated Backup Policy

Function

This API is used to obtain an automated backup policy.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/backups/policy
- Parameter description

Table 5-79 Parameter description

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

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/backups/policy

Response

- Normal response

Table 5-80 Parameter description

Parameter	Type	Description
backup_policy	Object	Indicates the backup policy objects, including the backup retention period (days) and backup start time. For details, see Table 5-81 .

Table 5-81 backup_policy field data structure description

Parameter	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. The current time is the UTC time.
period	String	Indicates the backup cycle. Data will be automatically backed up on the selected days every week.

- Example normal response

When the automated backup policy is disabled:

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

When the automated backup policy is enabled:

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

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.4 Querying Information About a Cross-Region Backup Policy

Function

This API is used to query information about a cross-region backup policy in the source backup region.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/backups/offsite-policy
- Parameter description

Table 5-82 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

- Request parameters
None

- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/backups/offsite-policy

Response

- Normal response

Table 5-83 Parameter description

Name	Type	Description
policy_para	Array of objects	Indicates the backup policy object, including the backup type, backup retention days, target region ID, and target project ID. For details, see Table 5-84 .

Table 5-84 policy_para field data structure description

Name	Type	Description
backup_type	String	Indicates the backup type. Its value can be any of the following: <ul style="list-style-type: none"> • auto: automated full backup • incremental: automated incremental backup
keep_days	Integer	Indicates the number of days to retain the backup files.
destination_region	String	Indicates the target region ID for the cross-region backup policy.
destination_project_id	String	Indicates the target project ID for the cross-region backup policy.

- Example normal response

When the backup policy is disabled:

```
{
  "policy_para": {
    "keep_days": 0
  }
}
```

When both the automated backup policy and incremental backup policy are enabled for RDS for MySQL and RDS for PostgreSQL DB instances:

```
{
  "policy_para": [
    {
      "keep_days": 7,
      "backup_type": "auto",
      "destination_region": "aaa",
      "destination_project_id": "0503fd7f7580d3262fc5c001170fbab9"
    }
  ]
}
```

```
    },  
    {  
      "keep_days": 7,  
      "backup_type": "incremental",  
      "destination_region": "aaa",  
      "destination_project_id": "0503fd7f7580d3262fc5c001170fbab9"  
    }  
  ]  
}
```

- Abnormal Response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.5 Creating a Manual Backup

Function

This API is used to create a manual backup.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- Read replicas do not support manual backup creation.
- The backup name must be unique.

URI

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

Table 5-85 Parameters

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

Request

Table 5-86 Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Instance ID.
name	Yes	String	Backup name. It must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_). The backup name must be unique.
description	No	String	Backup description. It contains a maximum of 256 characters and cannot contain the following special characters: >!<"&'=

Parameter	Mandatory	Type	Description
databases	No	Array of objects	List of self-managed RDS for SQL Server databases that are partially backed up. (Only RDS for SQL Server supports partial backups.) For details, see Table 5-87 .

Table 5-87 databases field data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Names of self-managed databases.

Example Request

- Create a manual backup **mybackup** for an RDS for MySQL DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/backups
```

```
{
  "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
  "name": "mybackup",
  "description": "manual backup"
}
```

- Create a manual backup **mybackup** for an RDS for PostgreSQL DB instance.

```
{
  "instance_id": "a8a5fc65b1a04ceb9d72212891ad73f8in03",
  "name": "mybackup",
  "description": "manual backup"
}
```

- Create a manual backup **mybackup** for an RDS for SQL Server DB instance.

```
{
  "instance_id": "34029da944074135a3bc24c75b3bb3edin04",
  "name": "mybackup",
  "description": "manual backup",
  "databases": [{
    "name": "db1"
  }, {
    "name": "db2"
  }]
}
```

Response

- Normal response

Table 5-88 Parameters

Parameter	Type	Description
backup	Object	Indicates the backup information. For details, see Table 5-89 .

Table 5-89 backup field data structure description

Parameter	Type	Description
id	String	Indicates the backup ID.
instance_id	String	Indicates the DB instance ID.
name	String	Indicates the backup name.
description	String	Indicates the backup description.
databases	Array of objects	Indicates a list of self-built RDS for SQL Server databases that are partially backed up. (Only RDS for SQL Server supports partial backups.) For details, see Table 5-87 .
begin_time	String	Indicates the backup start time in the "yyyy-mm-ddThh:mm:ssZ" format, where "T" indicates the start time of the time field, and "Z" indicates the time zone offset.

Parameter	Type	Description
status	String	Indicates the backup status. Value: <ul style="list-style-type: none"> ● BUILDING: backup in progress ● COMPLETED: backup completed ● FAILED: backup failed ● DELETING: backup being deleted
type	String	Indicates the backup type. Value: <ul style="list-style-type: none"> ● auto: automated full backup ● manual: manual full backup ● fragment: differential full backup ● incremental: automated incremental backup

- Example normal response

Creating a manual backup for an RDS for MySQL DB instance:

```
{
  "backup": {
    "id": "cb211c0075104151a748a854bc8bd87dbr01",
    "name": "mybackup",
    "description": "manual backup",
    "begin_time": "2022-08-23T07:41:50Z",
    "status": "BUILDING",
    "type": "manual",
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01"
  }
}
```

Creating a manual backup for an RDS for PostgreSQL DB instance:

```
{
  "backup": {
    "id": "104b59afd83d4fc7b2c03ad14c4be080br03",
    "name": "mybackup",
    "description": "manual backup",
    "begin_time": "2022-08-23T07:20:36Z",
    "status": "BUILDING",
    "type": "manual",
    "instance_id": "a8a5fc65b1a04ceb9d72212891ad73f8in03"
  }
}
```

Creating a manual backup for an RDS for SQL Server DB instance:

```
{
  "backup": {
    "id": "6f7b5904b04043b38ad764e33daba810br04",
```

```
"name": "mybackup",
"description": "manual backup",
"begin_time": "2022-08-23T07:15:28Z",
"status": "BUILDING",
"type": "manual",
"instance_id": "34029da944074135a3bc24c75b3bb3edin04",
"databases": [{
  "name": "db1"
}, {
  "name": "db2"
}]
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.6 Obtaining Backups

Function

This API is used to obtain backups of a DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This API is used to query full backups of RDS for MySQL, RDS for PostgreSQL, and RDS for SQL Server instances, binlog backups of RDS for MySQL, and incremental backups of and RDS for PostgreSQL instances.

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}
- Parameter description

Table 5-90 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
instance_id	Yes	<p>Explanation: Instance ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
backup_id	No	<p>Explanation: Backup ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Parameter	Mandatory	Description
backup_type	No	<p>Explanation: Backup type.</p> <p>Constraints: N/A</p> <p>Value range:</p> <ul style="list-style-type: none"> • auto: automated full backup • manual: manual full backup • fragment: differential full backup • incremental: automated incremental backup (binlog backup for RDS for MySQL) <p>Default value: N/A</p>
status	No	<p>Explanation: Backup status. Only the statuses of RDS for SQL Server full backups can be filtered.</p> <p>Constraints: N/A</p> <p>Value range:</p> <ul style="list-style-type: none"> • BUILDING: backup in progress • COMPLETED: backup completed • FAILED: backup failed <p>Default value: N/A</p>

Parameter	Mandatory	Description
offset	No	<p>Explanation: Index offset.</p> <p>Constraints: If offset is set to N, the resource query starts from the $N+1$ piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value must be a number but cannot be a negative number.</p> <p>Value range: An integer greater than or equal to 0</p> <p>Default value: 0</p>
limit	No	<p>Explanation: Number of records to be queried.</p> <p>Constraints: The value cannot be a negative number.</p> <p>Value range: 1-100</p> <p>Default value: 100</p>
begin_time	No	<p>Explanation: Query start time.</p> <p>Constraints: When begin_time is not empty, end_time is mandatory.</p> <p>Value range: The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.</p> <p>Default value: N/A</p>

Parameter	Mandatory	Description
end_time	No	<p>Explanation: Query end time.</p> <p>Constraints: When end_time is not empty, begin_time is mandatory.</p> <p>Value range: The value is in the "yyyy-mm-ddThh:mm:ssZ" format and must be later than the query start time.</p> <p>T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.</p> <p>Default value: N/A</p>

Request

- Request parameters

None

- URI example

GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/backups?instance_id=43e4feaab48f11e89039fa163ebaa7e4in01&offset=0&limit=10&begin_time=2018-08-06T10:41:14+0800&end_time=2018-08-16T10:41:14+0800

Response

- Normal response

Table 5-91 Parameters

Parameter	Type	Description
backups	Array of objects	<p>Explanation: Indicates the backup list. For details, see Table 5-92.</p>
total_count	Integer	<p>Explanation: Indicates the total number of records.</p> <p>Value range: N/A</p>

Table 5-92 backups field data structure description

Parameter	Type	Description
id	String	Explanation: Indicates the backup ID. Value range: N/A
name	String	Explanation: Indicates the backup name. Value range: N/A
type	String	Explanation: Indicates the backup type. Value range: <ul style="list-style-type: none"> • auto: automated full backup • manual: manual full backup • fragment: differential full backup • incremental: automated incremental backup (binlog backup for RDS for MySQL)
size	Long	Explanation: Indicates the backup size in KB. Value range: N/A
status	String	Explanation: Indicates the backup status. Value range: <ul style="list-style-type: none"> • BUILDING: backup in progress • COMPLETED: backup completed • FAILED: backup failed • DELETING: backup being deleted

Parameter	Type	Description
begin_time	String	<p>Explanation: Indicates the backup start time.</p> <ul style="list-style-type: none"> For a full backup, it indicates the full backup start time. <p>Value range: The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.</p>
end_time	String	<p>Explanation: Indicates the backup end time.</p> <ul style="list-style-type: none"> For a full backup, it indicates the full backup end time. For an RDS for MySQL incremental backup, it indicates the time when the last transaction is committed. <p>Value range: The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.</p>
datastore	Object	<p>Explanation: Indicates the database version. For details, see Table 5-93.</p>
databases	Array of objects	<p>Explanation: Indicates a list of self-built Microsoft SQL Server databases that support partial backups. For details, see Table 5-94.</p>
instance_id	String	<p>Explanation: Indicates the ID of the DB instance for which the backup is created.</p> <p>Value range: N/A</p>

Parameter	Type	Description
associated_with_ddm	Boolean	<p>Explanation: Indicates whether this instance is associated with a DDM instance.</p> <p>Value range:</p> <ul style="list-style-type: none"> • false: The instance is not associated with any DDM instance. • true: The instance is associated with a DDM instance.

Table 5-93 datastore field data structure description

Parameter	Type	Description
type	String	<p>Explanation: Indicates the DB engine.</p> <p>Value range: The value is case-insensitive.</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer
version	String	<p>Explanation: Indicates the database version.</p> <p>Value range: N/A</p>

Table 5-94 databases field data structure description

Parameter	Type	Description
name	String	<p>Explanation: Indicates the name of the self-built database.</p> <p>Value range: N/A</p>

- Example normal response

Obtaining all backups of an RDS for MySQL instance:

```
{
  "backups": [{
    "id": "43e4feaab48f11e89039fa163ebaa7e4br01",
```

```

    "name": "xxxx.xxx",
    "type": "auto",
    "size": 2803,
    "status": "COMPLETED",
    "begin_time": "2018-08-06T12:41:14+0800",
    "end_time": "2018-08-06T12:43:14+0800",
    "datastore": {
      "type": "MySQL",
      "version": "5.7"
    },
    "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin01",
    "associated_with_ddm": false
  }],
  "total_count": 1
}

```

Obtaining all backups of an RDS for PostgreSQL instance:

```

{
  "backups": [{
    "id": "43e4feaab48f11e89039fa163ebaa7e4br03",
    "name": "xxxx.xxx",
    "type": "incremental",
    "size": 2803,
    "status": "COMPLETED",
    "begin_time": "2018-08-06T12:41:14+0800",
    "end_time": "2018-08-06T12:43:14+0800",
    "datastore": {
      "type": "PostgreSQL",
      "version": "11"
    },
    "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin03 ",
    "associated_with_ddm": false
  }],
  "total_count": 1
}

```

Obtaining all backups of an RDS for SQL Server instance:

```

{
  "backups": [{
    "id": "43e4feaab48f11e89039fa163ebaa7e4br04",
    "name": "xxxx.xxx",
    "type": "manual",
    "size": 2803,
    "status": "COMPLETED",
    "begin_time": "2018-08-06T12:41:14+0800",
    "end_time": "2018-08-06T12:43:14+0800",
    "datastore": {
      "type": "SQLServer",
      "version": "2014_WEB"
    },
    "databases": [{
      "name": "user01"
    }, {
      "name": "user02"
    }
  ]],
  "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin04",
  "associated_with_ddm": false
}],
  "total_count": 1
}

```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.7 Querying Cross-Region Backups

Function

This API is used to obtain cross-region backups of an instance in the target backup region.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/offsite-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}
- Parameter description

Table 5-95 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
backup_type	Yes	Specifies the backup type. Its value can be any of the following: <ul style="list-style-type: none"> auto: indicates automated full backups and manual backups. incremental: indicates automated incremental backups.
backup_id	No	Specifies the backup ID.
offset	No	Specifies the index position. If offset is set to N , the resource query starts from the $N+1$ piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.

Parameter	Mandatory	Description
limit	No	Specifies the number of records to be queried. The default value is 100 . The value cannot be a negative number. The minimum value is 1 and the maximum value is 100 .
begin_time	No	Specifies the start time for obtaining the cross-region backup list. The format of the start time is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE When begin_time is not empty, end_time is mandatory.
end_time	No	Specifies the end time for obtaining the cross-region backup list. The format of the end time is "yyyy-mm-ddThh:mm:ssZ" and the end time must be later than the start time. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE When end_time is not empty, begin_time is mandatory.

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/offsite-backups?
instance_id=43e4feaab48f11e89039fa163ebaa7e4br01&offset=0&limit=10&begin_time=2018-08-06T10:41:14+0800&end_time=2018-08-16T10:41:14+0800

Response

- Normal response

Table 5-96 Parameters

Parameter	Type	Description
backups	Array of objects	Indicates the backup list. For details, see Table 5-97 .

Parameter	Type	Description
total_count	Integer	Indicates the total number of records.

Table 5-97 backups field data structure description

Parameter	Type	Description
id	String	Indicates the backup ID.
name	String	Indicates the backup name.
type	String	Indicates the backup type. Its value can be any of the following: <ul style="list-style-type: none"> • auto: indicates automated full backups and manual backups. • incremental: indicates automated incremental backups.
size	Long	Indicates the backup size in KB.
status	String	Indicates the backup status. Its value can be any of the following: <ul style="list-style-type: none"> • BUILDING: backup in progress • COMPLETED: backup completed • FAILED: backup failed • DELETING: backup being deleted
begin_time	String	Indicates the backup start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Parameter	Type	Description
end_time	String	Indicates the backup end time. <ul style="list-style-type: none"> For a full backup, it indicates the full backup end time. For an incremental backup, it indicates the time when the last transaction in the backup file was submitted. The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
datastore	Object	Indicates the database version. For details, see Table 5-98 .
instance_id	String	Indicates the ID of the DB instance for which the backup is created.
associated_with_ddm	Boolean	Indicates whether to associate with DDM. This parameter is returned only for RDS for MySQL DB instances.

Table 5-98 datastore field data structure description

Name	Type	Description
type	String	DB engine.
version	String	DB engine version.

- Example normal response

MySQL:

```
{
  "backups": [{
    "id": "43e4feaab48f11e89039fa163ebaa7e4br01",
    "name": "xxxx.xxx",
    "type": "auto",
    "size": 2803,
    "status": "COMPLETED",
    "begin_time": "2018-08-06T12:41:14+0800",
    "end_time": "2018-08-06T12:43:14+0800",
    "datastore": {
      "type": "MySQL",
      "version": "5.6"
    },
    "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin01",
    "associated_with_ddm": false
  }],
  "total_count": 1
}
```

PostgreSQL:

```
{
  "backups": [{
    "id": "43e4feaab48f11e89039fa163ebaa7e4br01",
    "name": "xxxx.xxx",
    "type": "auto",
    "size": 2803,
    "status": "COMPLETED",
    "begin_time": "2018-08-06T12:41:14+0800",
    "end_time": "2018-08-06T12:43:14+0800",
    "datastore": {
      "type": "PostgreSQL",
      "version": "13"
    },
    "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin01"
  }],
  "total_count": 1
}
```

- Abnormal Response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.8 Querying DB Instances for Which Cross-Region Backups Are Created

Function

This API is used to query DB instances for which cross-region backups are created in the target backup region.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/backups/offsite-backup-instance?offset={offset}&limit={limit}
- Parameter description

Table 5-99 Parameter description

Name	Type	Mandatory	Description
offset	Integer	No	Specifies the index position. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	Integer	No	Specifies the number of records to be queried. The default value is 100 . The value cannot be a negative number. The minimum value is 1 and the maximum value is 100 .

Request

- Request parameters
None
- URI example
 - Querying all DB instance lists
GET https://{endpoint}/v3/backups/offsite-backup-instance
 - Querying DB instance lists based on search criteria
GET https://{endpoint}/v3/backups/offsite-backup-instance?offset=0&limit=10

Response

- Normal response

Table 5-100 Parameter description

Name	Type	Description
offsite_backup_instances	Array of objects	Indicates information about DB instances for which cross-region backups are created. For details, see Table 5-101 .
total_count	Integer	Indicates the total number of records.

Table 5-101 offsite_backup_instances field data structure description

Name	Type	Description
id	String	Indicates the DB instance ID.

Name	Type	Description
name	String	Indicates the name of the DB instance for which cross-region backups are created.
source_region	String	Indicates the source backup region.
source_project_id	String	Indicates the project ID in the source backup region.
datastore	Object	Indicates the database information. For details, see Table 5-102 .
destination_region	String	Indicates the region where the cross-region backup is located.
destination_project_id	String	Indicates the project ID in the target backup region.

Table 5-102 datastore field data structure description

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

- Example normal response

Querying instances based on search criteria:

```
{
  "total_count": 1,
  "offsite_backup_instances": [{
    "id": "ed7cc6166ec24360a5ed5c5c9c2ed726in01",
    "name": "rds-instance-rep2",
    "source_region": "aaa",
    "source_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c",
    "datastore": {
      "type": "MySQL",
      "version": "5.7"
    },
    "destination_region": "bbb",
    "destination_project_id": "0503fd7f7580d3262fc5c001170fbab9",
    "keep_days": 7
  }
]
```

Querying all instances:

```
{
  "total_count": 1,
  "offsite_backup_instances": [{
    "id": "ed7cc6166ec24360a5ed5c5c9c2ed726in01",
    "name": "rds-instance-rep2",
    "source_region": "aaa",
    "source_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c",
    "datastore": {
      "type": "MySQL",
      "version": "5.7"
    }
  }
]
```

```
    },  
    "destination_region": "bbb",  
    "destination_project_id": "0503fd7f7580d3262fc5c001170fbab9",  
    "keep_days": 7  
  }  
]
```

- Abnormal Response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.9 Obtaining the Link for Downloading a Backup

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This API is used to obtain the link for downloading a full backup or binlog backup of an RDS for MySQL instance, or the link for downloading a full backup or an incremental backup of an RDS for PostgreSQL or RDS for SQL Server instance.

URI

- URI format
GET /v3/{project_id}/backup-files?backup_id={backup_id}
- Parameter description

Table 5-103 Parameter description

Name	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
backup_id	Yes	<p>Explanation: Specifies the backup ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/97b026aa9cc4417888c14c84a1ad9860/backup-files?backup_id=c0c9f155c7b7423a9d30f0175998b63bbr01

Response

- Normal response

Table 5-104 Parameter description

Name	Type	Description
files	Array of objects	<p>Explanation: Indicates the list of backup files. For details, see Table 5-105.</p>

Name	Type	Description
bucket	String	Explanation: Indicates the name of the bucket where the file is located. Value range: N/A

Table 5-105 files field data structure description

Name	Type	Description
name	String	Explanation: Indicates the file name. Value range: N/A
size	Long	Explanation: Indicates the file size in KB. Value range: N/A
download_link	String	Explanation: Indicates the link for downloading the backup file. Value range: N/A
link_expired_time	String	Explanation: Indicates the link expiration time. The format is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Value range: N/A

- Example normal response

```
{
  "files": [
    {
      "name": "43e4feaab48f11e89039fa163ebaa7e4br01.xxx",
      "size": 2803,
      "download_link": "https://obs.domainname.com/rdsbucket.username.1/xxxxxx",
      "link_expired_time": "2018-08-16T10:15:14+0800"
    }
  ],
  "bucket": "rdsbucket.bucketname"
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.10 Deleting a Manual Backup

Function

This API is used to delete a manual backup.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
DELETE /v3/{project_id}/backups/{backup_id}
- Parameter description

Table 5-106 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
backup_id	Yes	Specifies the ID of the manual backup.

Request

- Request parameters
None
- URI example
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/backups/2f4ddb93-b901-4b08-93d8-1d2e472f30fe

Response

- Normal response
None
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.11 Querying the Restoration Time Range

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/restore-time?date=2020-12-26
- Parameter description

Table 5-107 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Name	Mandatory	Description
date	No	Specifies the date to be queried. The value is in the yyyy-mm-dd format, and the time zone is UTC.

Request

- Request parameters
None
- URI example
 - Querying all restoration time ranges
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/restore-time
 - Querying the restoration time range based on a specified date
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/restore-time?date=2020-12-26

Response

- Normal response

Table 5-108 Parameter description

Name	Type	Description
restore_time	Array of objects	Indicates the list of restoration time ranges. For details, see Table 5-109 .

Table 5-109 restore_time field data structure description

Name	Type	Description
start_time	Integer	Indicates the start time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.

Name	Type	Description
end_time	Integer	Indicates the end time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.

- Example normal response

```
{
  "restore_time": [
    {
      "start_time": 1532001446987,
      "end_time": 1532742139000
    }
  ]
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.6.12 Querying the Restoration Time Range of a Cross-Region Backup

Function

This API is used to query the restoration time range of a cross-region backup in the backup target region.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/offsite-restore-time?date=2020-12-26
- Parameter description

Table 5-110 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
date	No	Specifies the date to be queried. The value is in the yyyy-mm-dd format, and the time zone is UTC.

Request

- Request parameters
None
- URI example
 - Querying all restoration time ranges of a cross-region backup
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsae3435in01/offsite-restore-time
 - Querying the restoration time range of a cross-region backup based on a specified date
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsae3435in01/offsite-restore-time?date=2020-12-26

Response

- Normal response

Table 5-111 Parameter description

Name	Type	Description
restore_time	Array of objects	Indicates the list of restoration time ranges. For details, see Table 5-112 .

Table 5-112 restore_time field data structure description

Name	Type	Description
start_time	Integer	Indicates the start time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.

Name	Type	Description
end_time	Integer	Indicates the end time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.

- Example normal response

```
{
  "restore_time": [
    {
      "start_time": 1532001446987,
      "end_time": 1532742139000
    }
  ]
}
```

- Abnormal Response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.6.13 Restoring Data to a New DB Instance

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The DB engine of the original DB instance must be the same as that of the target DB instance. For example, if the original DB instance is running MySQL, the target DB instance must also run MySQL.
- The constraints on the original and target DB instances are as follows:
 - For RDS for MySQL and RDS for PostgreSQL, the DB engine versions of the original and target DB instances must be the same.
 - For RDS for SQL Server, the time zones of the original and target DB instances must be the same. Otherwise, data inconsistency may occur.
- The total disk size of the target DB instance must be at least equal to that of the original DB instance.

URI

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

Table 5-113 Parameters

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

Request

Table 5-114 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	<p>DB instance name.</p> <p>The DB instance name of the same type must be unique for the same tenant.</p> <p>Range</p> <ul style="list-style-type: none"> • RDS for MySQL: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_). • RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).

Parameter	Mandatory	Type	Description
password	No	String	<p>Database password. If this parameter is not specified, you can reset the password after the instance is created.</p> <p>Range</p> <p>A database password must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters.</p> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p>
flavor_ref	Yes	String	<p>Specification code. The value cannot be left blank.</p> <p>For details, see spec_code in section Querying Database Specifications.</p>
volume	Yes	Object	<p>Volume information.</p> <p>For details, see Table 5-119.</p>

Parameter	Mandatory	Type	Description
availability_zone	Yes	String	AZ ID. If the DB instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (,). For details, see the example. The value cannot be left blank. For details about how to obtain this parameter value, see Regions and Endpoints .
restore_point	Yes	Object	Restoration information. For details, see Table 5-120 .
datastore	No	Object	Database information. This parameter is used for RDS for SQL Server DB instances only and is mandatory for cross-version restoration to new DB instances. For details, see Table 5-116 .
ha	No	Object	HA configuration parameters, which are used when creating primary/standby DB instances. For details, see Table 5-115 .
configuration_id	No	String	Parameter template ID.

Parameter	Mandatory	Type	Description
port	No	String	<p>Database port information.</p> <ul style="list-style-type: none"> RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017 and 33071, which are reserved for RDS system use. RDS for PostgreSQL instances can use database ports 2100 to 9500. RDS for SQL Server instances can use database port 1433 or ports 2100 to 9500, excluding 5355 and 5985. <p>If this parameter is not set, the default value is as follows:</p> <ul style="list-style-type: none"> RDS for MySQL: 3306 RDS for PostgreSQL: 5432 RDS for SQL Server: 1433
backup_strategy	No	Object	<p>Advanced backup policy.</p> <p>For details, see Table 5-118.</p>

Parameter	Mandatory	Type	Description
vpc_id	No	String	<p>VPC ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to VPC console and view the VPC ID in the VPC details. • Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.
subnet_id	No	String	<p>Subnet ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to the 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 <i>Virtual Private Cloud API Reference</i>.

Parameter	Mandatory	Type	Description
security_group_id	No	String	<p>Security group which the DB instance belongs to. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to VPC console. 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 <i>Virtual Private Cloud API Reference</i>.
collation	No	String	<p>This parameter applies only to RDS for SQL Server DB instances.</p> <p>Value range: character sets queried in Querying the Available SQL Server Character Set.</p>

Table 5-115 ha field data structure description

Parameter	Mandatory	Type	Description
mode	Yes	String	Primary/standby instance type. The value is Ha (case-insensitive).
replication_mode	Yes	String	<p>Replication mode for the standby DB instance.</p> <p>The value cannot be left blank.</p> <ul style="list-style-type: none"> RDS for MySQL: The value is async or semisync. RDS for PostgreSQL: The value is async or sync. RDS for SQL Server: The value is sync. <p>NOTE</p> <ul style="list-style-type: none"> async indicates asynchronous replication. semisync indicates semi-synchronous replication. sync indicates synchronous replication.

Table 5-116 datastore field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	DB engine. Value: SQLServer

Parameter	Mandatory	Type	Description
version	Yes	String	<p>Database version.</p> <ul style="list-style-type: none"> For Microsoft SQL Server, only the following editions are supported: 2017 Enterprise Edition, 2017 Standard Edition, 2017 Web Edition, 2014 Standard Edition, 2014 Enterprise Edition, 2016 Standard Edition, 2016 Enterprise Edition, 2012 Enterprise Edition, 2012 Standard Edition, 2012 Web Edition, 2008 R2 Enterprise Edition, 2008 R2 Standard Edition, 2008 R2 Web Edition, 2014 Web Edition, and 2016 Web Edition. Example value: 2014_SE <p>For details about supported database versions, see section Querying Version Information About a DB Engine.</p>

Table 5-117 Version mapping for RDS for SQL Server restoration

Original	Restore To
2014	2014 2014
2014	2014
2016	2016 2016
2016	2016

Table 5-118 backup_strategy field data structure description

Parameter	Mandatory	Type	Description
start_time	Yes	String	<p>Backup time window. Automated backups will be triggered during the backup time window.</p> <p>The value cannot be left blank. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> The HH value must be 1 greater than the hh value. The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. <p>Example value:</p> <ul style="list-style-type: none"> 08:15-09:15 23:00-00:00
keep_days	No	Integer	<p>Retention days for specific backup files.</p> <p>The value range is from 0 to 732. If this parameter is not specified or set to 0, the automated backup policy is disabled.</p>

Table 5-119 volume field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Storage type. Its value can be any of the following and is case-sensitive: <ul style="list-style-type: none"> • ULTRAHIGH: ultra-high I/O • CLOUDSSD: cloud SSD • ESSD: extreme SSD
size	Yes	Integer	Storage size. Its value range is from 40 GB to 4,000 GB. The value must be a multiple of 10. NOTICE The storage of the new DB instance must be at least equal to that of the original DB instance.

Table 5-120 restore_point field data structure description

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Instance ID.

Parameter	Mandatory	Type	Description
type	Yes	String	Restoration mode. Enumerated values include: <ul style="list-style-type: none"> • backup: indicates restoration from backup files. In this mode, backup_id is mandatory when type is not mandatory. • timestamp: indicates point-in-time restoration. In this mode, restore_time is mandatory when type is mandatory.
backup_id	No	String	ID of the backup used to restore data. This parameter must be specified when backups are used for restoration. <p>NOTICE When type is not mandatory, backup_id is mandatory.</p>
restore_time	No	Integer	Time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC. <p>NOTICE When type is mandatory, restore_time is mandatory.</p>

Example Request

- Restore a backup to a new DB instance.

POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances

```
{
  "name": "targetInst",
  "availability_zone": "bbb,ccc",
  "ha": {
    "mode": "ha",
    "replication_mode": "async"
  },
  "flavor_ref": "rds.mysql.s1.large",
  "volume": {
    "type": "ULTRAHIGH",
    "size": 40
  },
  "region": "aaa",
  "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
  "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
  "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
  "backup_strategy": {
    "keep_days": 2,
    "start_time": "19:00-20:00"
  },
  "password": "Demo@12345678",
  "configuration_id": "52e86e87445847a79bf807ceda213165pr01",
  "time_zone": "UTC+04:00",
  "restore_point": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
    "type": "backup",
    "backup_id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe"
  }
}
```

- Restore instance data to a specific point in time.

```
{
  "name": "targetInst",
  "availability_zone": "bbb,ccc",
  "ha": {
    "mode": "ha",
    "replication_mode": "async"
  },
  "flavor_ref": "rds.mysql.s1.large",
  "volume": {
    "type": "ULTRAHIGH",
    "size": 40
  },
  "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
  "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
  "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
  "backup_strategy": {
    "keep_days": 2,
    "start_time": "19:00-20:00"
  },
  "password": "Demo@12345678",
  "configuration_id": "52e86e87445847a79bf807ceda213165pr01",
  "restore_point": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
    "type": "timestamp",
    "restore_time": 1532001446987
  }
}
```

Response

- Normal response

Table 5-121 Parameters

Parameter	Type	Description
instance	Object	DB instance information. For details, see Table 5-122 .
job_id	String	ID of the DB instance creation task. This parameter is returned only for the restoration to a new DB instance billed on the pay-per-use basis.

Table 5-122 instance description

Parameter	Type	Description
id	String	Instance ID.
name	String	DB instance name. The DB instance name of the same type must be unique for the same tenant.
status	String	DB instance status. For example, BUILD indicates that the DB instance is being created.
datastore	Object	Database information. For details, see Table 5-123 .
ha	Object	HA configuration parameters. This parameter is returned only when primary/standby DB instances are created. For details, see Table 5-124 .

Parameter	Type	Description
configuration_id	String	Parameter template ID. This parameter is returned only when a custom parameter template is used during DB instance creation.
port	String	<p>Database port information.</p> <ul style="list-style-type: none"> • RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017 and 33071, which are reserved for RDS system use. • RDS for PostgreSQL instances can use database ports 2100 to 9500. • RDS for SQL Server instances can use database port 1433 or ports 2100 to 9500, excluding 5355 and 5985. <p>If this parameter is not set, the default value is as follows:</p> <ul style="list-style-type: none"> • RDS for MySQL: 3306 • RDS for PostgreSQL: 5432 • RDS for SQL Server: 1433
backup_strategy	Object	<p>Automated backup policy.</p> <p>For details, see Table 5-125.</p>
flavor_ref	String	<p>Specification ID.</p> <p>For details, see spec_code in Table 5-13 of section Querying Database Specifications.</p>

Parameter	Type	Description
volume	Object	Volume information. For details, see Table 5-126 .
region	String	Region ID.
availability_zone	String	AZ ID.
vpc_id	String	VPC ID. To obtain this parameter value, use either of the following methods: <ul style="list-style-type: none"> Method 1: Log in to VPC console and view the VPC ID in the VPC details. Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.
subnet_id	String	Subnet ID. To obtain this parameter value, use either of the following methods: <ul style="list-style-type: none"> Method 1: Log in to the 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 <i>Virtual Private Cloud API Reference</i>.

Parameter	Type	Description
security_group_id	String	<p>Security group which the DB instance belongs to. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to VPC console. 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 <i>Virtual Private Cloud API Reference</i>.
collation	String	Collation for RDS for SQL Server.

Table 5-123 datastore field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	<p>DB engine. Its value can be any of the following and is case-insensitive:</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer

Parameter	Mandatory	Type	Description
version	Yes	String	Database version. For details about supported database versions, see section Querying Version Information About a DB Engine .

Table 5-124 ha field data structure description

Parameter	Mandatory	Type	Description
mode	Yes	String	Primary/standby instance type. The value is Ha .

Parameter	Mandatory	Type	Description
replication_mode	Yes	String	<p>Replication mode for the standby DB instance.</p> <p>The value cannot be left blank.</p> <ul style="list-style-type: none"> • RDS for MySQL: The value is async or semisync. • RDS for PostgreSQL: The value is async or sync. • RDS for SQL Server: The value is sync. <p>NOTE</p> <ul style="list-style-type: none"> • async indicates the asynchronous replication mode. • semisync indicates the semi-synchronous replication mode. • sync indicates the synchronous replication mode.

Table 5-125 backupStrategy field data structure description

Parameter	Mandatory	Type	Description
start_time	Yes	String	<p>Backup time window. Automated backups will be triggered during the backup time window.</p> <p>The value cannot be left blank. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> The HH value must be 1 greater than the hh value. The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. <p>Example value:</p> <ul style="list-style-type: none"> 08:15-09:15 23:00-00:00
keep_days	No	Integer	<p>Retention days for specific backup files.</p> <p>The value range is from 0 to 732. If this parameter is not specified or set to 0, the automated backup policy is disabled.</p>

Table 5-126 volume field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Storage type. Its value can be any of the following and is case-sensitive: <ul style="list-style-type: none"> ● ULTRAHIGH: ultra-high I/O ● CLOUDSSD: cloud SSD ● ESSD: extreme SSD
size	Yes	Integer	Storage size. Its value range is from 40 GB to 4,000 GB. The value must be a multiple of 10.

- Example normal response

RDS for MySQL

```
{
  "instance": {
    "id": "f5ffdd8b1c98434385eb001904209eacin01",
    "name": "demoname",
    "status": "BUILD",
    "datastore": {
      "type": "MySQL",
      "version": "5.7.31"
    },
    "port": "3306",
    "volume": {
      "type": "ULTRAHIGH",
      "size": "40"
    },
    "backup_strategy": {
      "start_time": "02:00-03:00",
      "keep_days": "7"
    },
    "flavor_ref": "rds.mysql.s1.large",
    "vpc_id": "19e5d45d-70fd-4a91-87e9-b27e71c9891f",
    "subnet_id": "bd51fb45-2dcb-4296-8783-8623bfe89bb7",
    "security_group_id": "23fd0cd4-15dc-4d65-bdb3-8844cc291be0"
  },
  "job_id": "bf003379-afea-4aa5-aa83-4543542070bc"
}
```

RDS for PostgreSQL

```
{
  "instance": {
    "id": "f5ffdd8b1c98434385eb001904209eacin01",
    "name": "demoname",
    "status": "BUILD",
    "datastore": {
      "type": "PostgreSQL",

```

```

    "version": "12.13"
  },
  "port": "5432",
  "volume": {
    "type": "ULTRAHIGH",
    "size": "40"
  },
  "backup_strategy": {
    "start_time": "02:00-03:00",
    "keep_days": "7"
  },
  "flavor_ref": "rds.pg.s1.large",
  "vpc_id": "19e5d45d-70fd-4a91-87e9-b27e71c9891f",
  "subnet_id": "bd51fb45-2dcb-4296-8783-8623bfe89bb7",
  "security_group_id": "23fd0cd4-15dc-4d65-bdb3-8844cc291be0"
},
"job_id": "bf003379-afea-4aa5-aa83-4543542070bc"
}

```

RDS for SQL Server

```

{
  "instance": {
    "id": "f5ffdd8b1c98434385eb001904209eacin01",
    "name": "demoname",
    "status": "BUILD",
    "datastore": {
      "type": "sqlserver",
      "version": "2014_SE"
    },
    "port": "2100",
    "volume": {
      "type": "ULTRAHIGH",
      "size": "40"
    },
    "backup_strategy": {
      "start_time": "02:00-03:00",
      "keep_days": "7"
    },
    "flavor_ref": "rds.mssql.2014.se.s3.large.2",
    "vpc_id": "19e5d45d-70fd-4a91-87e9-b27e71c9891f",
    "subnet_id": "bd51fb45-2dcb-4296-8783-8623bfe89bb7",
    "security_group_id": "23fd0cd4-15dc-4d65-bdb3-8844cc291be0",
    "charge_info": {
      "charge_mode": "prePaid",
      "period_num": 1
    },
    "collation": "Cyrillic_General_CI_AS"
  },
  "order_id": "CS20122919584LQ7K"
}

```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
202
- Abnormal
For details, see [Status Codes](#).

Error Code

- For details, see [Error Codes](#).

5.6.14 Restoring Tables to a Specified Point in Time (RDS for MySQL)

Function

To ensure data integrity and reduce impact on the original instance performance, the system restores the full and incremental data at the selected time point to a temporary DB instance, automatically exports the tables to be restored, and then restores the tables to the original DB instance.

NOTICE

This operation will generate restored tables on the original DB instance. Ensure that the original DB instance has sufficient storage capacity.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This API is supported for RDS for MySQL only.
- This API is not supported for RDS for MySQL 8.0 DB instances.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/restore/tables
- Parameter description

Table 5-127 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-128 Parameter description

Name	Mandatory	Type	Description
restoreTime	Yes	Long	Backup time point.

Name	Mandatory	Type	Description
restoreTables	Yes	Array of objects	Database information. For details, see Table 5-129 .

Table 5-129 restoreTables field data structure description

Name	Mandatory	Type	Description
database	Yes	String	Specifies the database name.
tables	Yes	Array of objects	Specifies the table information. For details, see Table 5-130 .

Table 5-130 tables field data structure description

Name	Mandatory	Type	Description
oldName	Yes	String	Specifies the original table name before the restoration.
newName	Yes	String	Specifies the table name after the restoration.

Example Request

Restoring table data to a specific point in time

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/restore/tables
```

```
{
  "restoreTime": 1583720991838,
  "restoreTables": [
    {
      "database": "restoretest",
      "tables": [
        {
          "oldName": "test",
          "newName": "test_1583720991838"
        }
      ]
    }
  ]
}
```

Response

- Normal response

Table 5-131 Response body parameters

Name	Type	Description
jobId	String	Indicates the task ID.

- Example normal response

```
{
  "jobId": "7b55d6ca-dc8e-4844-a9da-6c53a1506db3"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.7 Log Information Queries

5.7.1 Setting the Local Retention Period of Binlogs

Function

This API is used to set the local retention period of binlogs.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The local retention period of binlogs cannot be set during the DB instance creation.
- This API is supported for RDS for MySQL DB instances only.

URI

- URI format

PUT /v3/{project_id}/instances/{instance_id}/binlog/clear-policy

- Parameter description

Table 5-132 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-133 Parameter description

Name	Mandatory	Type	Description
binlog_retention_hours	Yes	Integer	Specifies the binlog retention period. Value range: 0 to 168 (7 x 24)

Example Request

Set the local retention period of binlogs to 3 hours.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
fa60258325f6424ca1ba28653629d7b1in01/binlog/clear-policy
{
  "binlog_retention_hours": 3
}
```

Response

- Normal response

Table 5-134 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.7.2 Obtaining the Local Retention Period of Binlogs

Function

This API is used to obtain the local retention period of binlogs.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET `/v3/{project_id}/instances/{instance_id}/binlog/clear-policy`
- Parameter description

Table 5-135 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

- Request parameters
None
- URI example
GET `https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/fa60258325f6424ca1ba28653629d7b1in01/binlog/clear-policy`

Response

- Normal response

Table 5-136 Parameter description

Name	Mandatory	Type	Description
binlog_retention_hours	Yes	Integer	Binlog retention period.
binlog_clear_type	No	String	Binlog retention policy. The value can be time or fast . <ul style="list-style-type: none"> time: indicates that binlogs are retained by time. fast: indicates that binlogs are not retained.

- Example normal response

```
{
  "binlog_retention_hours": 3,
  "binlog_clear_type": "time"
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8 Database and Account Management (MySQL)

5.8.1 Creating a Database

Function

This API is used to create a database in a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/database
- Parameter description

Table 5-137 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-138 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	Specifies the database name. The database name can contain 1 to 64 characters. Only letters, digits, hyphens (-), underscores (_), and dollar signs (\$) are allowed. The total number of hyphens (-) and dollar signs (\$) cannot exceed 10. RDS for MySQL 8.0 does not support dollar signs (\$).
character_set	Yes	String	Specifies the character set used by the database, such as utf8, gbk, and ascii.

Example Request

Create a database named **rds-test**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsdfsae3435in01/database
```

```
{  
  "name": "rds-test",  
  "character_set": "utf8"  
}
```

Response

- Normal response

Table 5-139 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{  
  "resp": "successful"  
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

202

- Abnormal

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

Error Code

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

5.8.2 Querying Databases

Function

This API is used to query databases in a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- Databases cannot be queried when the DB instance is in the abnormal state.
- The database list of read replicas cannot be queried.

URI

- URI format

GET /v3/{project_id}/instances/{instance_id}/database/detail?
page={page}&limit={limit}

- Parameter description

Table 5-140 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
page	Yes	Specifies the page number. The value starts from 1 .
limit	Yes	Specifies the number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters

None

- URI example

GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in01/database/detail?page=1&limit=10

Response

- Normal response

Table 5-141 Parameter description

Name	Type	Description
databases	Array of objects	Each element in the list indicates a database. For details, see Table 5-142 .
total_count	Integer	Indicates the total number of databases.

Table 5-142 databases element structure description

Name	Type	Description
name	String	Indicates the database name.
character_set	String	Indicates the character set used by the database, such as utf8, gbk, and ascii.

- Example normal response

```
{
  "databases": [
    {
      "name": "rds-test",
      "character_set": "utf8"
    },
    {
      "name": "testdb1",
      "character_set": "utf8"
    },
    {
      "name": "tt",
      "character_set": "utf8"
    }
  ],
  "total_count": 3
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.3 Modifying the Database Remarks of a Specified DB Instance

Function

This API is used to modify the database remarks of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.
- This operation can be performed no matter whether the database exists.
 - The remarks will be updated or created when this operation is performed, depending on whether the remarks already exist.
 - The remarks will be deleted if its value is changed to an empty string or null.
 - If the database does not exist or is deleted when remarks are created, the remarks will still be saved.
- This operation is supported only for specified kernel versions. If your kernel version does not meet the requirements, upgrade the kernel to the latest version.
 - RDS for MySQL 5.6: 5.6.51.3 or later.
 - RDS for MySQL 5.7: 5.7.33.1 or later.
 - RDS for MySQL 8.0: 8.0.25.1 or later.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/database/update
- Parameter description

Table 5-143 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-144 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	Specifies the database name.
comment	No	String	Specifies the database remarks. The value can contain 0 to 512 characters.

Example Request

Modify the database remarks of a DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsfdsae3435in01/
database/update
{
  "name": "rds",
  "comment": "this is a comment"
}
```

Response

- Normal response

Table 5-145 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.4 Deleting a Database

Function

This API is used to delete a database from a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}/database/{db_name}
- Parameter description

Table 5-146 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
db_name	Yes	Specifies the name of the database to be deleted.

Request

Empty request body.

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in01/
database/rds-test
{}

```

Response

- Normal response

Table 5-147 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
202
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.5 Creating a Database Account

Function

This API is used to create a database account for a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.
- If you want to call this API repeatedly to create database accounts for your DB instance, call it in serial.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/db_user
- Parameter description

Table 5-148 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-149 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	<p>Specifies the username of the database account.</p> <p>The username consists of 1 to 32 characters. Only lowercase letters, digits, hyphens (-), and underscores (_) are allowed.</p> <ul style="list-style-type: none"> • If the database version is MySQL 5.6, the username consists of 1 to 16 characters. • If the database version is MySQL 5.7 or 8.0, the username consists of 1 to 32 characters.
password	Yes	String	<p>Specifies the password of the database account.</p> <p>Valid value:</p> <p>The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#%^*_-=+?,). The value must be different from the account name or account name spelled backwards.</p> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p>

Example Request

Creating a database account named **rds**

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/db_user
{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-150 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

202

- Abnormal

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

Error Code

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

5.8.6 Querying Database Users

Function

This API is used to query database users of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in the abnormal state.
- The database user list of read replicas cannot be queried.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/db_user/detail? page={page}&limit={limit}
- Parameter description

Table 5-151 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
page	Yes	Specifies the page number. The value starts from 1.
limit	Yes	Specifies the number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/db_user/detail?page=1&limit=10

Response

- Normal response

Table 5-152 Parameter description

Name	Type	Description
users	Array of objects	Database account information. For details, see Table 5-153 .

Name	Type	Description
total_count	Integer	Total number of database accounts.

Table 5-153 users element structure description

Name	Type	Description
name	String	Account name.

- Example normal response

```
{
  "users": [
    {
      "name": "rdsuser"
    },
    {
      "name": "login001"
    }
  ],
  "total_count": 2
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.7 Querying Authorized Users of a Specified Database

Function

This API is used to query authorized users of a specified database.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in the abnormal state.
- The accounts of read replicas cannot be queried.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/database/db_user?db-name={db-name}&page={page}&limit={limit}
- Parameter description

Table 5-154 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
db-name	Yes	Specifies the database name.
page	Yes	Specifies the page number. The value starts from 1.
limit	Yes	Specifies the number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/database/db_user?db-name=rds&page=1&limit=10

Response

- Normal response

Table 5-155 Parameter description

Name	Type	Description
users	Array of objects	Each element in the list indicates a database account. For details, see Table 5-156 .
total_count	Integer	Indicates the total number of database users.

Table 5-156 users element structure description

Name	Type	Description
name	String	Account name.
readonly	Boolean	Whether the permission is read-only. <ul style="list-style-type: none"> • true: read-only • false: read/write

- Example normal response

```
{
  "users": [
    {
      "name": "rds",
      "readonly": false
    },
    {
      "name": "rds001",
      "readonly": false
    }
  ],
  "total_count": 2
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.8 Modifying Remarks of a Database Account

Function

This API is used to modify remarks of a database account for a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

- This operation can be performed no matter whether the associated database exists.
 - The remarks will be updated or created when this operation is performed, depending on whether the remarks already exist.
 - The remarks will be deleted if its value is changed to an empty string or null.
 - If the associated database does not exist or is deleted when remarks are created, the remarks will still be saved.
- This operation is supported only for specified kernel versions. If your kernel version does not meet the requirements, upgrade the kernel to the latest version.
 - RDS for MySQL 5.6: Not supported.
 - RDS for MySQL 5.7: Not supported.
 - RDS for MySQL 8.0: 8.0.25 or later.

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/db-users/{user_name}/comment
- Parameter description

Table 5-157 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Instance ID.
user_name	Yes	Database username.

Request

Table 5-158 Parameters

Parameter	Mandatory	Type	Description
comment	No	String	Remarks of the database username. Value range: 1 to 512 characters.

Example Request

Modify the remarks of user **root** for a DB instance.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsae3435in01/db-  
users/root/comment  
  
{  
  "comment": "this is a comment"  
}
```

Response

- Normal response

Table 5-159 Parameters

Parameter	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{  
  "resp": "successful"  
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

202

- Abnormal

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

Error Code

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

5.8.9 Deleting a Database Account

Function

This API is used to delete a database account from a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}/db_user/{user_name}
- Parameter description

Table 5-160 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
user_name	Yes	Specifies the username of the account to be deleted.

Request

Empty request body.

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in01/db_user/rds
{}
```

Response

- Normal response

Table 5-161 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal

- 202
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.10 Configuring a Password for a Database Account

Function

This API is used to configure a password for a database account.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/db_user/resetpwd
- Parameter description

Table 5-162 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-163 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	Specifies the username of the database account.

Name	Mandator y	Type	Description
password	Yes	String	<p>Specifies the password of the database account.</p> <p>Valid value:</p> <p>The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#\$\$%^*_-=+?,). The value must be different from the account name or account name spelled backwards.</p> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p>

Example Request

Set a password for user **rds**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsdsae3435in01/db_user/resetpwd
{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-164 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.11 Authorizing a Database Account

Function

This API is used to set permissions of a database account in a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/db_privilege
- Parameter description

Table 5-165 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-166 Parameter description

Name	Mandatory	Type	Description
db_name	Yes	String	Database name.
users	Yes	Array of objects	Database accounts. Each element is a database account. A single request supports a maximum of 50 elements. For details on the element structure, see Table 5-167 .

Table 5-167 users field data structure description

Name	Mandatory	Type	Description
name	Yes	String	Specifies the username of the database account. The username consists of 1 to 32 characters. Only lowercase letters, digits, hyphens (-), and underscores (_) are allowed. <ul style="list-style-type: none"> • If the database version is MySQL 5.6, the username consists of 1 to 16 characters. • If the database version is MySQL 5.7 or 8.0, the username consists of 1 to 32 characters.
readonly	Yes	Boolean	Specifies the read-only permission. <ul style="list-style-type: none"> • true: indicates the read-only permission. • false: indicates the read and write permission.

Example Request

Grant read and write permissions to **rds** and read-only permissions to **rds001**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/db_privilege

{
  "db_name": "rds-test",
  "users": [
    {
      "name": "rds",
      "readonly": false
    },
    {
      "name": "rds001",
      "readonly": true
    }
  ]
}
```

Response

- Normal response

Table 5-168 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.8.12 Revoking Permissions of a Database Account

Function

This API is used to revoke permissions of a database account in a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}/db_privilege
- Parameter description

Table 5-169 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-170 Parameter description

Name	Mandatory	Type	Description
db_name	Yes	String	Database name.
users	Yes	Array of objects	Database accounts. Each element is a database account. A single request supports a maximum of 50 elements. For more information about the element structure, see Table 5-171 .

Table 5-171 users field data structure description

Name	Mandatory	Type	Description
name	Yes	String	<p>Specifies the username of the database account.</p> <p>The username consists of 1 to 32 characters. Only lowercase letters, digits, hyphens (-), and underscores (_) are allowed.</p> <ul style="list-style-type: none"> • If the database version is RDS for MySQL 5.6, the username consists of 1 to 16 characters. • If the database version is RDS for MySQL 5.7 or 8.0, the username consists of 1 to 32 characters.

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in01/db_privilege

{
  "db_name": "rds-test",
  "users": [
    {
      "name": "rds"
    },
    {
      "name": "rds001"
    }
  ]
}
```

Response

- Normal response

Table 5-172 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal

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

Error Code

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

5.8.13 Resetting the Password for User root

Function

This API is used to reset the password if you forget the password of your database account when using RDS. If there is a problem with the **root** account, for example, if your **root** account credentials are lost or deleted, you can reset the **root** password to restore access.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

The password cannot be reset if the DB instance is in any of the following statuses: creating, rebooting, upgrading, changing instance class, creating users, or deleting users.

URI

- URI format
POST /v3/{*project_id*}/instances/{*instance_id*}/password
- Parameter description

Table 5-173 Parameter description

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

Name	Mandatory	Description
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-174 Parameter description

Name	Mandatory	Type	Description
db_user_pwd	Yes	String	<p>Specifies the database password.</p> <p>Valid value:</p> <p>The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#%^*_-=+?,).</p> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p>

Example Request

Reset the password for user **root**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/
password
{
  "db_user_pwd": "*****"
}
```

Response

- Normal response
None
- Example normal response

```
{}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9 Database and Account Management (PostgreSQL)

5.9.1 Creating a Database Account

Function

This API is used to create a database account for a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.
- If you want to call this API repeatedly to create database accounts for your DB instance, call it in serial.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/db_user
- Parameter description

Table 5-175 Parameter description

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

Request

Table 5-176 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	<p>Specifies the username of the database account.</p> <p>The username contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with pg or a digit and must be different from system usernames.</p> <p>System users include rdsAdmin, rdsMetric, rdsBackup, rdsRepl, rdsProxy, rdsDdm, and rdsDisaster.</p>
password	Yes	String	<p>Specifies the password of the database account.</p> <p>The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#%^*_-=+?,.). The value cannot contain the username or the username spelled backwards.</p> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p>

Example Request

Creating a database account named **rds**

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_user
```

```
{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-177 Parameter description

Parameter	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
202

- Abnormal

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

Error Code

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

5.9.2 Creating a Database Schema

Function

This API is used to create a database schema in a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/schema
- Parameter description

Table 5-178 Parameters

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

Request

Table 5-179 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Specifies the database name. The database name can contain 1 to 63 characters. Only letters, digits, and underscores (_) are allowed. It cannot start with pg or a digit and cannot be the same as RDS for PostgreSQL template database names. RDS for PostgreSQL template databases include postgres, template0, and template1.
schemas	Yes	Array of objects	Specifies schemas. Each element is the schema information associated with the database. A single request supports a maximum of 20 elements. For details on the element structure, see Table 5-180 .

Table 5-180 schemas field data structure description

Parameter	Mandatory	Type	Description
schema_name	Yes	String	<p>Specifies the schema name.</p> <p>The value contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with pg or a digit, and must be different from RDS for PostgreSQL template database names and existing schema names.</p> <p>RDS for PostgreSQL template databases include postgres, template0, and template1.</p> <p>Existing schemas include public and information_schema.</p>
owner	Yes	String	<p>Specifies the database owner.</p> <p>The value contains 1 to 63 characters. It cannot start with pg or a digit, and must be different from system usernames.</p> <p>System users include rdsAdmin, rdsMetric, rdsBackup, rdsRepl, rdsProxy, and rdsDdm.</p>

Example Request

Create a database schema.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/schema
{
  "db_name": "rds_test",
  "schemas": [
    {
      "schema_name": "teste123",
```

```
    "owner": "teste123"  
  }  
]  
}
```

Response

- Normal response

Table 5-181 Parameters

Parameter	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{  
  "resp": "successful"  
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.3 Resetting a Password for a Database Account

Function

This API is used to reset a password for a database account.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

The password of a database account cannot be reset if the DB instance is in any of the following statuses: creating, changing instance class, changing port, rebooting, or abnormal.

URI

- URI format

- POST /v3/{project_id}/instances/{instance_id}/db_user/resetpwd
- Parameter description

Table 5-182 Parameter description

Name	Mandator y	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-183 Parameter description

Name	Mandator y	Type	Description
name	Yes	String	Specifies the username of the database account.
password	Yes	String	Specifies the password of the database account. Valid value: The parameter must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#%^*_-=+?,.). The value cannot contain the username or the username spelled backwards. You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.

Example Request

Reset the password of **rds**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_user/resetpwd

{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-184 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{  
  "resp": "successful"  
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal

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

Error Code

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

5.9.4 Querying Databases

Function

This API is used to query databases of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in the abnormal state.
- The details about databases of read replicas cannot be queried.

URI

- URI format

```
GET /v3/{project_id}/instances/{instance_id}/database/detail?  
page={page}&limit={limit}
```

- Parameter description

Table 5-185 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Instance ID.
page	Yes	Page number. The value starts from 1 .
limit	Yes	Number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters

None

- URI example

GET <https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/database/detail?page=1&limit=10>

Response

- Normal response

Table 5-186 Parameter description

Name	Type	Description
databases	Array of objects	Each element in the list indicates a database. For details, see Table 5-187 .
total_count	Integer	Indicates the total number of databases.

Table 5-187 databases element structure description

Name	Type	Description
name	String	Indicates the database name.
owner	String	Indicates the database owner.

Name	Type	Description
character_set	String	Indicates the character set used by the database, such as UTF8 .
collate_set	String	Indicates the database collation, such as en_US.UTF-8 .
size	Integer	Indicates the database size, in bytes.

- Example normal response

```
{
  "databases": [
    {
      "name": "rds_test",
      "owner": "root",
      "character_set": "UTF8",
      "collate_set": "en_US.UTF-8",
      "size": 10777247
    },
    {
      "name": "rds_test2",
      "owner": "root",
      "character_set": "UTF8",
      "collate_set": "en_US.UTF-8",
      "size": 1055623
    },
    {
      "name": "rds_test3",
      "owner": "root",
      "character_set": "UTF8",
      "collate_set": "en_US.UTF-8",
      "size": 107772488
    }
  ],
  "total_count": 3
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.5 Querying Database Users

Function

This API is used to query database users for a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/db_user/detail?
page={page}&limit={limit}
- Parameter description

Table 5-188 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
page	Yes	Specifies the page number. The value starts from 1.
limit	Yes	Specifies the number of records on each page. The value range is from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/db_user/detail?page=1&limit=10

Response

- Normal response

Table 5-189 Parameter description

Name	Type	Description
users	Array of objects	Each element in the list indicates a database account. For details, see Table 5-190 .
total_count	Integer	Indicates the total number of database users.

Table 5-190 users element structure description

Name	Type	Description
name	String	Indicates the account name.
attributes	Object	Indicates permission attributes of a user. For details, see Table 5-191 .
memberof	Array of strings	Indicates default rights of a user.

Table 5-191 attributes element structure description

Name	Type	Description
rolsuper	Boolean	Indicates whether a user has the super user permission. The value is false .
rolinherit	Boolean	Indicates whether a user automatically inherits the permissions of the role to which the user belongs. The value can be true or false .
rolcreatorole	Boolean	Indicates whether a user can create other sub-users. The value can be true or false .

Name	Type	Description
rolcreatedb	Boolean	Indicates whether a user can create a database. The value can be true or false .
rolcanlogin	Boolean	Indicates whether a user can log in to the database. The value can be true or false .
rolconlimit	Integer	Indicates the maximum number of concurrent connections to a DB instance. The value -1 indicates that there are no limitations on the number of concurrent connections.
rolreplication	Boolean	Indicates whether the user is a replication role. The value can be true or false .
rolbypassrls	Boolean	Indicates whether a user bypasses each row-level security policy. The value can be true or false .

- Example normal response

```
{
  "users": [
    {
      "name": "rdsuser",
      "attributes": {
        "rolsuper": false,
        "rolinherit": true,
        "rolcreatorole": true,
        "rolcreatedb": true,
        "rolcanlogin": true,
        "rolconlimit": -1,
        "rolreplication": true,
        "rolbypassrls": false
      },
      "memberof": ["pg_monitor", "pg_read_all_stats", "pg_stat_scan_tables", "pg_signal_backend"]
    },
    {
      "name": "rdsuser1",
      "attributes": {
        "rolsuper": false,
        "rolinherit": true,
        "rolcreatorole": true,
        "rolcreatedb": true,
        "rolcanlogin": true,
        "rolconlimit": -1,
        "rolreplication": true,
        "rolbypassrls": false
      }
    }
  ]
}
```

```

    },
    "memberof": []
  }],
  "total_count": 2
}

```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.6 Querying Database Schemas

Function

This API is used to query database schemas of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in the abnormal state.
- The database schemas of read replicas cannot be queried.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/schema/detail?
db_name={name}&page={page}&limit={limit}
- Parameter description

Table 5-192 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Name	Mandatory	Description
db_name	Yes	Specifies the database name. Database names must be different from RDS for PostgreSQL template database names. RDS for PostgreSQL template databases include postgres, template0, and template1.
page	Yes	Specifies the page number. The value starts from 1.
limit	Yes	Specifies the number of records on each page. The value range is from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/schema/detail?db_name=rds_test&page=1&limit=10

Response

- Normal response

Table 5-193 Parameter description

Name	Type	Description
database_schemas	Array of objects	Each element in the list indicates a database schema. For details, see Table 5-194 .
total_count	Integer	Indicates the total number of database schemas.

Table 5-194 users element structure description

Name	Type	Description
schema_name	String	Indicates a schema name.

Name	Type	Description
owner	String	Indicates a schema owner.

- Example normal response

```
{
  "database_schemas": [{
    "schema_name": "rds_user1",
    "owner": "root"
  }],
  "total_count": 1
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.9.7 Modifying the Database Remarks of a Specified DB Instance

Function

This API is used to modify the database remarks of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.
- The remarks will be deleted if its value is changed to an empty string or null.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/database/update
- Parameter description

Table 5-195 Parameters

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

Request

Table 5-196 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Database name.
comment	No	String	Database remarks. The value can contain 1 to 512 characters.

Example Request

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/database/update

{
  "name": "rds",
  "comment": "this is a comment"
}
```

Response

- Normal response

Table 5-197 Parameters

Parameter	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.8 Modifying Remarks of a Database Account

Function

This API is used to modify remarks of a database account for a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.
- The remarks will be deleted if its value is changed to an empty string or null.

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/db-users/{user_name}/comment
- Parameter description

Table 5-198 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Instance ID.
user_name	Yes	Database username.

Request

Table 5-199 Parameters

Parameter	Mandatory	Type	Description
comment	No	String	Remarks of the database username. Value range: 1 to 512 characters.

Example Request

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db-users/root/comment
{
  "comment": "this is a comment"
}
```

Response

- Normal response

Table 5-200 Parameters

Parameter	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.9 Deleting a Database Account

Function

This API is used to delete a database account from a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}/db_user/{user_name}
- Parameter description

Table 5-201 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Instance ID.
user_name	Yes	Username of the account to be deleted.

Request

Empty request body.

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_user/rds
{}

```

Response

- Normal response

Table 5-202 Parameters

Parameter	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.9.10 Querying pg_hba.conf of a DB Instance

Function

This API is used to query the **pg_hba.conf** file configurations of a DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format

GET /v3/{project_id}/instances/{instance_id}/hba-info

- Parameter description

Table 5-203 Parameters

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

Request

- Request parameters
None
- URI example
GET <https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/e28979107ed04d3b8b2f1b819b8d2be3in03/hba-info>

Response

- Normal response

Table 5-204 Parameters

Parameter	Type	Description
Array elements	Array of objects	Parameter list. For details, see Table 5-205 .

Table 5-205 Parameters

Parameter	Type	Description
type	String	Connection type. Enumerated values: host , hostssl , and hostnossl
database	String	Database name other than template0 and template1 . Use commas (,) to separate multiple names.
user	String	Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . <ul style="list-style-type: none"> all indicates all database users of the DB instance. Use commas (,) to separate usernames.
address	String	Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address.
mask	String	Subnet mask. The default value is an empty string.

Parameter	Type	Description
method	String	Authentication mode. Enumerated values: reject , md5 , and scram-sha-256
priority	Integer	Configuration priority.

- Example normal response

```
[ {
  "type" : "host",
  "database" : "all",
  "user" : "all",
  "address" : "0.0.0.0/0",
  "mask" : "",
  "method" : "md5",
  "priority" : 0
}]
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.11 Modifying or Adding One or More Records in pg_hba.conf

Function

This API is used to modify or add one or more records in the **pg_hba.conf** file.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/hba-info
- Parameter description

Table 5-206 Parameters

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

Request

Table 5-207 Request parameters

Parameter	Mandatory	Type	Description
Array elements	No	Array of objects	Parameters to be modified. For details, see Table 5-208 .

Table 5-208 Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Connection type. Enumerated values: host , hostssl , and hostnossl
database	Yes	String	Database name other than template0 and template1 . Use commas (,) to separate multiple names.
user	Yes	String	Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . <ul style="list-style-type: none"> all indicates all database users of the DB instance. Use commas (,) to separate multiple user names.
address	Yes	String	Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address.
mask	No	String	Subnet mask. The default value is an empty string.

Parameter	Mandatory	Type	Description
method	Yes	String	Authentication mode. Enumerated values: reject , md5 , and scram-sha-256
priority	Yes	Integer	Configuration priority. The priority you specified determines whether to modify or add a record in the pg_hba.conf file. <ul style="list-style-type: none"> • If the priority you specified does not exist, a new record will be added to the pg_hba.conf file. • If the priority you specified already exists, the record will be modified in the pg_hba.conf file.

Example Request

```
PUT https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/e28979107ed04d3b8b2f1b819b8d2be3in03/hba-info
```

```
[ {
  "type": "host",
  "database": "all",
  "user": "all",
  "address": "0.0.0.0/0",
  "mask": "",
  "method": "md5",
  "priority": 0
}]
```

Response

- Normal response

Table 5-209 Parameters

Parameter	Type	Description
code	String	Result code.
message	String	Result description.

- Example normal response

```
{
  "code": 0,
  "message": ""
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.12 Overwriting pg_hba.conf

Function

This API is used to overwrite the **pg_hba.conf** file with the input configurations. If the input parameters are left blank, the file is overwritten with the default configurations.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/hba-info
- Parameter description

Table 5-210 Parameters

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

Request

Table 5-211 Request parameters

Parameter	Mandatory	Type	Description
Array elements	No	Array of objects	Parameters to be modified. For details, see Table 5-212 .

Table 5-212 Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Connection type. Enumerated values: host , hostssl , and hostnossl
database	Yes	String	Database name other than template0 and template1 . Use commas (,) to separate multiple names.
user	Yes	String	Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . <ul style="list-style-type: none"> all indicates all database users of the DB instance. Use commas (,) to separate multiple user names.
address	Yes	String	Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address.
mask	No	String	Subnet mask. The default value is an empty string.
method	Yes	String	Authentication mode. Enumerated values: reject , md5 , and scram-sha-256
priority	Yes	Integer	Configuration priority.

Example Request

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/e28979107ed04d3b8b2f1b819b8d2be3in03/hba-info
```

```
[ {
```

```
"type" : "host",  
"database" : "all",  
"user" : "all",  
"address" : "0.0.0.0/0",  
"mask" : "",  
"method" : "md5",  
"priority" : 0  
}]
```

Response

- Normal response

Table 5-213 Parameters

Parameter	Type	Description
code	String	Result code.
message	String	Result description.

- Example normal response

```
{  
  "code" : 0,  
  "message" : ""  
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.13 Deleting One or More Records from pg_hba.conf

Function

This API is used to delete one or more records from the **pg_hba.conf** file. The priority is used as the unique identifier.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}/hba-info
- Parameter description

Table 5-214 Parameters

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

Request

Table 5-215 Request parameters

Parameter	Mandatory	Type	Description
Array elements	No	Array of objects	Parameters to be modified. For details, see Table 5-216 .

Table 5-216 Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Connection type. Enumerated values: host , hostssl , and hostnssl
database	Yes	String	Database name other than template0 and template1 . Use commas (,) to separate multiple names.
user	Yes	String	Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . <ul style="list-style-type: none"> • all indicates all database users of the DB instance. • Use commas (,) to separate multiple user names.

Parameter	Mandatory	Type	Description
address	Yes	String	Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address.
mask	No	String	Subnet mask. The default value is an empty string.
method	Yes	String	Authentication mode. Enumerated values: reject , md5 , and scram-sha-256
priority	Yes	Integer	Configuration priority.

Example Request

```
DELETE https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/e28979107ed04d3b8b2f1b819b8d2be3in03/hba-info

[ {
  "type": "host",
  "database": "all",
  "user": "all",
  "address": "0.0.0.0/0",
  "mask": "",
  "method": "md5",
  "priority": 0
}]
```

Response

- Normal response

Table 5-217 Parameters

Parameter	Type	Description
code	String	Result code.
message	String	Result description.

- Example normal response

```
{
  "code": 0,
  "message": ""
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200

- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.9.14 Querying the pg_hba.conf Change History of a DB Instance

Function

This API is used to query the **pg_hba.conf** change history of a DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/hba-info/history
- Parameter description

Table 5-218 Parameters

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

Table 5-219 Request parameters

Parameter	Mandatory	Type	Description
start_time	No	String	Start time. If this parameter is not specified, 00:00 (UTC time zone) on the current day is used by default.
end_time	No	String	End time. If this parameter is not specified, the current time (UTC time zone) is used by default.

Request

- Request parameters
None
- URI example
GET https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/e28979107ed04d3b8b2f1b819b8d2be3in03/hba-info/history?start_time=2023-08-01 00:00:00&end_time=2023-08-03 00:00:00

Response

- Normal response

Table 5-220 Parameters

Parameter	Type	Description
Array elements	Array of objects	Parameter list. For details, see Table 5-221 .

Table 5-221 Parameters

Parameter	Type	Description
status	String	Change result. <ul style="list-style-type: none"> success: The change has taken effect. failed: The change did not take effect. setting: The change is in progress.
time	String	Time when the change was made.
fail_reason	String	Reason for a change failure.
before_confs	Array of objects	Original values. For details, see Table 5-222 .
after_confs	Array of objects	New values. For details, see Table 5-223 .

Table 5-222 before_confs field description

Parameter	Type	Description
type	String	Connection type. Enumerated values: host , hostssl , and hostnossl

Parameter	Type	Description
database	String	Database name other than template0 and template1 . Use commas (,) to separate multiple names.
user	String	Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . <ul style="list-style-type: none"> • all indicates all database users of the DB instance. • Use commas (,) to separate multiple user names.
address	String	Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address.
mask	String	Subnet mask. The default value is an empty string.
method	String	Authentication mode. Enumerated values: reject , md5 , and scram-sha-256
priority	Integer	Configuration priority.

Table 5-223 after_confs field description

Parameter	Type	Description
type	String	Connection type. Enumerated values: host , hostssl , and hostnossl
database	String	Database name other than template0 and template1 . Use commas (,) to separate multiple names.
user	String	Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . <ul style="list-style-type: none"> • all indicates all database users of the DB instance. • Use commas (,) to separate multiple user names.
address	String	Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address.

Parameter	Type	Description
mask	String	Subnet mask. The default value is an empty string.
method	String	Authentication mode. Enumerated values: reject , md5 , and scram-sha-256
priority	Integer	Configuration priority.

- Example normal response

```
[ {
  "status": "success",
  "time": "2023-08-01 09:00:00",
  "fail_reason": "",
  "before_confs": [ {
    "type": "host",
    "database": "all",
    "user": "all",
    "address": "0.0.0.0/0",
    "mask": "",
    "method": "md5",
    "priority": 0
  } ],
  "after_confs": [ {
    "type": "hostssl",
    "database": "all",
    "user": "all",
    "address": "0.0.0.0/0",
    "mask": "",
    "method": "md5",
    "priority": 0
  } ]
} ]
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.10 Database and Account Management (Microsoft SQL Server)

5.10.1 Querying the Available SQL Server Character Set

Function

This API is used to query the SQL Server character set list.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/collations
- Parameter description

Table 5-224 Parameter description

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

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/collations

Response

- Normal response

Table 5-225 Parameter description

Name	Type	Description
charSets	List<String>	Indicates the character set information list.

- Example normal response


```
{
  "charSets": ["Chinese_PRC_CI_AS", "SQL_Latin1_General_CP1_CI_AS", "French_BIN",
    "Chinese_PRC_Stroke_BIN", "Chinese_PRC_CI_AI"]
}
```
- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.10.2 Querying Databases

Function

This API is used to query databases of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or switchover in progress state.
- The databases of read replicas cannot be queried.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/database/detail?
page={page}&limit={limit}&db-name={db-
name}&recover_model={recover_model}
- Parameter description

Table 5-226 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
page	Yes	Specifies the page number. The value starts from 1.

Name	Mandatory	Description
limit	Yes	Specifies the number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive).
db-name	No	Specifies the database name. When this parameter is specified, the page and limit parameters need to be specified but do not take effect.
recover_mode	No	Specifies recovery models of databases. Value: <ul style="list-style-type: none"> ● FULL: full recovery model ● SIMPLE: simple recovery model ● BULK_LOGGED: bulk-logged recovery model

Request

- Request parameters

None

- URI example

GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/a8abe84a41364097be7c233c39275087in04/database/detail?page=1&limit=10&db-name=testdb1

Response

- Normal response

Table 5-227 Parameter description

Name	Type	Description
databases	Array of objects	Each element in the list indicates a database. For details, see Table 5-228 .
total_count	Integer	Indicates the total number of databases.

Table 5-228 databases element structure description

Name	Type	Description
name	String	Indicates the database name.

Name	Type	Description
character_set	String	Indicates the character set used by the database.
state	String	Indicates the database status. Its value can be any of the following: <ul style="list-style-type: none"> • Creating: The database is being created. • Running: The database is running. • Deleting: The database is being deleted. • NotExists: The database does not exist.

- Example normal response

```
{
  "databases": [
    {
      "name": "master",
      "character_set": "Chinese_PRC_CI_AS",
      "state": "Running"
    },
    {
      "name": "msdb",
      "character_set": "Chinese_PRC_CI_AS",
      "state": "Running"
    },
    {
      "name": "model",
      "character_set": "Chinese_PRC_CI_AS",
      "state": "Running"
    },
    {
      "name": "tempdb",
      "character_set": "Chinese_PRC_CI_AS",
      "state": "Running"
    },
    {
      "name": "rdsadmin",
      "character_set": "Chinese_PRC_CI_AS",
      "state": "Running"
    },
    {
      "name": "rds-test",
      "character_set": "Chinese_PRC_CI_AS",
      "state": "Running"
    }
  ],
  "total_count": 6
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.10.3 Creating a Database Account

Function

This API is used to create a database account for a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.
- If you want to call this API repeatedly to create database accounts for your DB instance, call it in serial.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/db_user
- Parameter description

Table 5-229 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-230 Parameter description

Name	Mandatory	Type	Description
name	Yes	String	Specifies the username of the database account. It consists of 1 to 128 characters and must be different from system usernames. System users include rdsadmin , rdsuser , rdsbackup , and rdsmirror .
password	Yes	String	Specifies the password of the database account. The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#\$\$%^*_+?,.). The value must be different from the username or username spelled backwards. You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.

Example Request

Creating a database account named **rds**

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/db_user
{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-231 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{  
  "resp": "successful"  
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

202

- Abnormal

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

Error Code

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

5.10.4 Querying Database Users

Function

This API is used to query database users of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in the abnormal state.
- The database user list of read replicas cannot be queried.

URI

- URI format

```
GET /v3/{project_id}/instances/{instance_id}/db_user/detail?  
page={page}&limit={limit}
```

- Parameter description

Table 5-232 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
page	Yes	Specifies the page number. The value starts from 1.
limit	Yes	Specifies the number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters
None
- URI example
GET `https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/a8abe84a41364097be7c233c39275087in04/db_user/detail?page=1&limit=10`

Response

- Normal response

Table 5-233 Parameter description

Name	Type	Description
users	Array of objects	Each element in the list indicates a database account. For details, see Table 5-234 .
total_count	Integer	Indicates the total number of database users.

Table 5-234 users element structure description

Name	Type	Description
name	String	Indicates the account name.

Name	Type	Description
state	String	Indicates the database user status. <ul style="list-style-type: none"> ● unavailable: The database user is unavailable. ● available: The database user is available.

- Example normal response

```
{
  "users": [
    {
      "name": "rdsuser",
      "state": "available"
    },
    {
      "name": "login001",
      "state": "available"
    }
  ],
  "total_count": 2
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.10.5 Querying Authorized Users of a Specified Database

Function

This API is used to query authorized users of a specified database.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This operation cannot be performed when the DB instance is in the abnormal state.

- Authorized users of a specified database for read replicas cannot be queried.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/database/db_user?db-name={db-name}&page={page}&limit={limit}
- Parameter description

Table 5-235 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
db-name	Yes	Specifies the database name.
page	Yes	Specifies the page number. The value starts from 1 .
limit	Yes	Specifies the number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive).

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/a8abe84a41364097be7c233c39275087in04/database/db_user?db-name=rds&page=1&limit=10

Response

- Normal response

Table 5-236 Parameter description

Name	Type	Description
users	Array of objects	Each element in the list indicates a database account. For details, see Table 5-237 .

Name	Type	Description
total_count	Integer	Indicates the total number of database users.

Table 5-237 users element structure description

Name	Type	Description
name	String	Account name.

- Example normal response

```
{
  "users": [
    {
      "name": "rds"
    },
    {
      "name": "rds001"
    }
  ],
  "total_count": 3
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.10.6 Deleting a Database Account

Function

This API is used to delete a database account from a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}/db_user/{user_name}
- Parameter description

Table 5-238 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.
user_name	Yes	Specifies the username of the account to be deleted.

Request

Empty request body.

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/db_user/rds
{}

```

Response

- Normal response

Table 5-239 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.10.7 Authorizing a Database Account

Function

This API is used to set permissions of a database account in a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/db_privilege
- Parameter description

Table 5-240 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-241 Parameter description

Name	Mandatory	Type	Description
db_name	Yes	String	Database name.
users	Yes	Array of objects	Database accounts. Each element is a database account. A single request supports a maximum of 50 elements. For details on the element structure, see Table 5-242 .

Table 5-242 users field data structure description

Name	Mandatory	Type	Description
name	Yes	String	Username of the database account. Currently, SQL users without login names cannot be authorized. It can contain up to 128 characters and must be different from system usernames. System users include rdsadmin , rdsuser , rdsbackup , and rdsmirror .
readonly	No	Boolean	Whether the permission is read-only. The default value is false . <ul style="list-style-type: none"> true: indicates the read-only permission. false: indicates the read and write permission.

Example Request

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/db_privilege

{
  "db_name": "rds-test",
  "users": [
    {
      "name": "rds",
      "readonly": true
    }
  ],
}
```

```
{
  "name": "rds001",
  "readonly": false
}
]
```

Response

- Normal response

Table 5-243 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.10.8 Revoking Permissions of a Database Account

Function

This API is used to revoke permissions of a database account in a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, or abnormal.

URI

- URI format
DELETE /v3/{project_id}/instances/{instance_id}/db_privilege
- Parameter description

Table 5-244 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-245 Parameter description

Name	Mandatory	Type	Description
db_name	Yes	String	Database name.
users	Yes	Array of objects	Database accounts. Each element is a database account. A single request supports a maximum of 50 elements. For more information about the element structure, see Table 5-246 .

Table 5-246 users field data structure description

Name	Mandatory	Type	Description
name	Yes	String	Username of the database account. It contains 1 to 128 characters and must be different from system usernames. System users include rdsadmin , rdsuser , rdsbackup , and rdsmirror .

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/db_privilege

{
  "db_name": "rds-test",
  "users": [
    {
      "name": "rds"
    },
    {
      "name": "rds001"
    }
  ]
}
```

Response

- Normal response

Table 5-247 Parameter description

Name	Type	Description
resp	String	Returns successful if the invoking is successful.

- Example normal response

```
{
  "resp": "successful"
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.11 Parameter Management

5.11.1 Obtaining a Parameter Template List

Function

This API is used to obtain the parameter template list, including default parameter templates of all databases and those created by users.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.

URI

- URI format
GET `/v3/{project_id}/configurations`
- Parameter description

Table 5-248 Parameter description

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

Request

- Request parameters
None
- URI example

GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/
configurations

Response

- Normal response

Table 5-249 Parameter description

Name	Type	Description
configurations	Array of objects	Indicates the parameter template list. For details, see Table 5-250 .

Table 5-250 configurations field data structure description

Name	Type	Description
id	String	Indicates the parameter template ID.
name	String	Indicates the parameter template name.
description	String	Indicates the parameter template description.
datastore_v ersion_ name	String	Indicates the database version name.
datastore_ name	String	Indicates the database name.
created	String	Indicates the creation time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
updated	String	Indicates the update time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
user_define d	Boolean	Indicates whether the parameter template is created by users. <ul style="list-style-type: none"> • false: The parameter template is a default parameter template. • true: The parameter template is a custom template.

- Example normal response

```
{
  "configurations": [
    {
      "id": "887ea0d1bb0843c49e8d8e5a09a95652pr01",
      "name": "configuration_test",
      "description": "configuration_test",
      "datastore_version_name": "8.0",
      "datastore_name": "mysql",
      "created": "2019-05-15T11:53:34+0000",
      "updated": "2019-05-15T11:53:34+0000",
      "user_defined": true
    },
    {
      "id": "3bc1e9cc0d34404b9225ed7a58fb284epr01",
      "name": "Default-MySQL-5.7",
      "description": "Default parameter group for MySQL 5.7",
      "datastore_version_name": "5.7",
      "datastore_name": "mysql",
      "created": "2019-05-27T03:38:51+0000",
      "updated": "2019-05-27T03:38:51+0000",
      "user_defined": false
    }
  ]
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.11.2 Creating a Parameter Template

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.
- The new parameter template cannot have the same name as any existing parameter template.

URI

- URI format
POST /v3/{project_id}/configurations
- Parameter description

Table 5-251 Parameter description

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

Request

Table 5-252 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Specifies the parameter template name. It contains a maximum of 64 characters and can contain only uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), and periods (.).
datastore	Yes	Object	Specifies the database object. For details, see Table 5-253 .
description	No	String	Specifies the parameter template description. It contains a maximum of 256 characters and cannot contain the following special characters: >!<"&'= Its value is left blank by default.

Parameter	Mandatory	Type	Description
values	No	Map<String,String>	<p>Specifies the parameter values defined by users based on the default parameter templates. By default, the parameter values are not changed.</p> <ul style="list-style-type: none"> • key: parameter name, for example, div_precision_increment or connect_timeout. If this parameter is not specified, no parameter value is to be changed. • value: parameter value, for example, 6 or 20. If key is not blank, the parameter value cannot be left blank, either.

Table 5-253 datastore field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	<p>Specifies the DB engine. Its value can be any of the following and is case-insensitive:</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer
version	Yes	String	<p>Specifies the database version. For details, see Constraints. Example values:</p> <ul style="list-style-type: none"> • MySQL: 5.7 • PostgreSQL: 13 • Microsoft SQL Server: 2014_SE

Example Request

Create a parameter template named **configuration_test**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/configurations
{
  "name": "configuration_test",
```

```

"description": "configuration_test",
"values": {
  "div_precision_increment": "6",
  "connect_timeout": "20"
},
"datastore": {
  "type": "mysql",
  "version": "5.7"
}
}

```

Response

- Normal response

Table 5-254 Parameter description

Parameter	Type	Description
configuration	Object	Indicates the parameter template information. For details, see Table 5-255 .

Table 5-255 configuration field data structure description

Parameter	Type	Description
id	String	Parameter template ID.
name	String	Parameter template name.
datastore_version_name	String	Database version name.
datastore_name	String	Database name.
description	String	Parameter template description.
created	String	Creation time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
updated	String	Update time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

- Example normal response

```

{
  "configuration": {
    "id": "463b4b58-d0e8-4e2b-9560-5dea4552fde9",
    "name": "configuration_test",

```

```
"datastore_version_name": "5.7",  
"datastore_name": "mysql",  
"description": "configuration_test",  
"created": "2017-04-09T08:27:56+0800",  
"updated": "2017-04-09T08:27:56+0800"  
}  
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.11.3 Modifying a Parameter Template

Function

This API is used to modify a specified parameter template, including the name, description, and values of specified parameters in the parameter template.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.
- The new parameter template name must be different from the name of an existing or a default parameter template. Default parameter templates cannot be modified.
- The values of the edited parameters must be within the default value range of the specified database version. For details about the range of parameter values, see "Modifying Parameters" in the *Relational Database Service User Guide*.
- The parameter values to be changed cannot be left blank at the same time.

URI

- URI format
PUT `/v3/{project_id}/configurations/{config_id}`
- Parameter description

Table 5-256 Parameter description

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

Request

NOTICE

At least one parameter in the request body must be specified. Otherwise, the request fails to be delivered.

Table 5-257 Parameter description

Parameter	Mandatory	Type	Description
name	No	String	Parameter template name. It contains a maximum of 64 characters and can contain only uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), and periods (.).
description	No	String	Parameter template description. It contains a maximum of 256 characters and does not support the following special characters: !<>='&" Its value is left blank by default.

Parameter	Mandatory	Type	Description
values	No	Map<String,String>	<p>Parameter values defined by users based on the default parameter templates. If this parameter is not specified, no parameter value is to be changed.</p> <ul style="list-style-type: none"> • key: parameter name, for example, div_precision_increment or connect_timeout. If this parameter is not specified, no parameter value is to be changed. • value: parameter value, for example, 6 or 20. If key is not blank, the parameter value cannot be left blank, either.

Example Request

Modify parameters in a parameter template.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/configurations/463b4b58-d0e8-4e2b-9560-5dea4552fde9
{
  "name": "configuration_test",
  "description": "configuration_test",
  "values": {
    "div_precision_increment": "6",
    "connect_timeout": "20"
  }
}
```

Response

- Normal response

Table 5-258 Parameters

Parameter	Type	Description
configuration	Object	Parameter template information. For details, see Table 5-259 .

Table 5-259 configuration field data structure description

Parameter	Type	Description
id	String	Parameter template ID.
name	String	Parameter template name.
ignored_params	List	All parameters that are ignored and fail to be modified in the request parameter values . If a parameter does not exist, the modification will fail. The names of all ignored parameters are returned by ignored_params .

- Example normal response

```
{
  "configuration": {
    "id": "463b4b58-d0e8-4e2b-9560-5dea4552fde9",
    "name": "configuration_test",
    "ignored_params": {}
  }
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.11.4 Obtaining the Parameter Template of a Specified DB Instance

Function

This API is used to obtain information about the parameter template of a specified DB instance.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/configurations
- Parameter description

Table 5-260 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID compliant with the UUID format.

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/configurations

Response

- Normal response

Table 5-261 Parameter description

Name	Type	Description
datastore_version_name	String	Indicates the database version name.
datastore_name	String	Indicates the database name.
created	String	Indicates the creation time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Name	Type	Description
updated	String	Indicates the update time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
configuration_parameters	Array of objects	Indicates the parameters defined by users based on the default parameter templates. For details, see Table 5-262 .

Table 5-262 configuration_parameters field data structure description

Name	Type	Description
name	String	Indicates the parameter name.
value	String	Indicates the parameter value.
restart_required	Boolean	Indicates whether a reboot is required. <ul style="list-style-type: none"> false: A reboot is not required. true: A reboot is required.
readonly	Boolean	Indicates whether the parameter is read-only. <ul style="list-style-type: none"> false: The parameter is not read-only. true: The parameter is read-only.
value_range	String	Indicates the parameter value range. If the type is integer , the value is 0 or 1 . If the type is boolean , the value is true or false .
type	String	Indicates the parameter type, which can be integer , string , boolean , list , or float .
description	String	Indicates the parameter description.

- Example normal response

```
{
  "datastore_version_name": "5.7",
  "datastore_name": "mysql",
  "created": "2018-10-11 11:40:44",
  "updated": "2018-10-11 11:40:44",
  "configuration_parameters": [{
    "name": "auto_increment_increment",
    "value": "1",
    "restart_required": false,
```

```

    "readonly": false,
    "value_range": "1-65535",
    "type": "integer",
    "description": "auto_increment_increment and auto_increment_offset are used for master-to-
master replication and to control the operations of the AUTO_INCREMENT column.
  }}
}

```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.11.5 Obtaining Parameters in a Specified Parameter Template

Function

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

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.

URI

- URI format
GET /v3/{project_id}/configurations/{config_id}
- Parameter description

Table 5-263 Parameter description

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

Name	Mandatory	Description
config_id	Yes	Specifies the parameter template ID. When this parameter is empty (not space), the URL of the parameter template list is obtained. For details, see Obtaining a Parameter Template List .

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/configurations/463b4b58-d0e8-4e2b-9560-5dea4552fde9

Response

- Normal response

Table 5-264 Parameter description

Name	Type	Description
id	String	Indicates the parameter template ID.
name	String	Indicates the parameter template name.
datastore_version_name	String	Indicates the database version name.
datastore_name	String	Indicates the database name.
description	String	Indicates the parameter template description.
created	String	Indicates the creation time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Name	Type	Description
updated	String	Indicates the update time in the following format: yyyy-MM-ddTHH:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
configuration_parameters	Array of objects	Indicates the parameters defined by users based on the default parameter templates. For details, see Table 5-265 .

Table 5-265 configuration_parameters field data structure description

Name	Type	Description
name	String	Indicates the parameter name.
value	String	Indicates the parameter value.
restart_required	Boolean	Indicates whether a restart is required. <ul style="list-style-type: none"> ● false: indicates that a restart is not required. ● true: indicates that a restart is required.
readonly	Boolean	Indicates whether the parameter is read-only. <ul style="list-style-type: none"> ● false: indicates that the parameter is not read-only. ● true: indicates that the parameter is read-only.
value_range	String	Indicates the parameter value range. If the type is integer , the value is 0 or 1 . If the type is boolean , the value is true or false .

Name	Type	Description
type	String	Indicates the parameter type, which can be integer, string, boolean, list, or float.
description	String	Indicates the parameter description.

- Example normal response

```
{
  "id": "07fc12a8e0e94df7a3fcf53d0b5e1605pr01",
  "name": "default-mysql-5.7",
  "datastore_version_name": "5.7",
  "datastore_name": "mysql",
  "description": "Default parameter group for mysql 5.7",
  "created": "2017-05-05T04:40:51+0800",
  "updated": "2017-05-05T04:40:51+0800",
  "configuration_parameters": [
    {
      "name": "auto_increment_increment",
      "value": "1",
      "restart_required": false,
      "readonly": true,
      "value_range": "1-65535",
      "type": "integer",
      "description": "auto_increment_increment and auto_increment_offset are intended for use with master-to-master replication, and can be used to control the operation of AUTO_INCREMENT columns."
    },
    {
      "name": "autocommit",
      "value": "ON",
      "restart_required": false,
      "readonly": true,
      "value_range": "ON|OFF",
      "type": "boolean",
      "description": "The autocommit mode. If set to ON, all changes to a table take effect immediately. If set to OFF, you must use COMMIT to accept a transaction or ROLLBACK to cancel it. "
    }
  ]
}
```

- Abnormal response

For details, see [Abnormal Request Results](#).

Status Code

- Normal

200

- Abnormal

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

Error Code

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

5.11.6 Deleting a Parameter Template

Function

This API is used to delete a specified parameter template.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.
- Default parameter templates cannot be deleted.

URI

- URI format
DELETE /v3/{project_id}/configurations/{config_id}
- Parameter description

Table 5-266 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID .
config_id	Yes	Specifies the parameter template ID.

Request

- Request parameters
None
- URI example
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/configurations/463b4b58-d0e8-4e2b-9560-5dea4552fde9

Response

- Normal response
None
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.12 Recycling a DB Instance

5.12.1 Modifying Recycling Policy

Function

This API is used to modify the recycling policy for the recycle bin.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
PUT /v3/{project_id}/instances/recycle-policy
- Parameter description

Table 5-267 Parameters

Parameter	Mandator y	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

Table 5-268 Parameters

Parameter	Mandatory	Type	Description
recycle_policy	Yes	Object	<p>Explanation: Each element is associated with the recycle bin. For details on the element structure, see Table 5-269.</p> <p>Constraints: N/A</p>

Table 5-269 recycle_policy elements

Parameter	Mandatory	Type	Description
retention_period_in_days	No	String	<p>Explanation: Retention days of deleted instances.</p> <p>Constraints: N/A</p> <p>Value range: The value is an integer ranging from 1 to 7.</p> <p>Default value: If this parameter is left blank, the retention period is 7 days by default.</p>

Example Request

Set the retention period of instances in the recycle bin to one day.

```
PUT https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/recycle-policy
{
  "recycle_policy":{
    "retention_period_in_days":"1"
  }
}
```

Response

- Normal response

Table 5-270 Parameters

Parameter	Type	Description
result	String	Explanation: Calling result. Value range: success: The API is successfully called.

- Example normal response

```
{  
  "result": "success"  
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.12.2 Querying the Recycling Policy

Function

This API is used to query the recycling policy of the recycle bin.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/instances/recycle-policy
- Parameter description

Table 5-271 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

- Parameter description
None
- URI example
GET <https://rds.ap-southeast-1.myhuaweicloud.com/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/recycle-policy>

Response

- Normal response

Table 5-272 Parameters

Parameter	Type	Description
retention_period_in_days	Integer	<p>Explanation: Number of days for retaining instances in the recycle bin.</p> <p>Value range: N/A</p>

- Example normal response

```
{
  "retention_period_in_days": 7
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.12.3 Querying Instances in the Recycle Bin

Function

This API is used to query instances in the recycle bin.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/recycle-instances?offset={offset}&limit={limit}
- Parameter description

Table 5-273 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Definition Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Mandatory	Description
offset	Yes	<p>Definition Index offset. The query starts from the next piece of data indexed by this parameter.</p> <p>Constraints N/A</p> <p>Range The value must be a non-negative number.</p> <p>Default Value N/A</p>
limit	Yes	<p>Definition Number of records on each page.</p> <p>Constraints N/A</p> <p>Range [1, 50]</p> <p>Default Value N/A</p>

Request

- Parameter description
None
- URI example
GET <https://rds.ap-southeast-1.myhuaweicloud.com/v3/054ea741f700d4a32f1bc00f5c80dd4c/recycle-instances?offset=0&limit=10>

Response

- Normal response

Table 5-274 Parameters

Parameter	Type	Description
total_count	Integer	<p>Definition Number of data records in the recycle bin.</p> <p>Range N/A</p>

Parameter	Type	Description
instances	Array of objects	Definition Instance information. For details, see Table 5-275 .

Table 5-275 instances field data structure description

Parameter	Type	Description
id	String	Definition Instance ID. Range N/A
name	String	Definition Instance name. Range N/A
ha_mode	String	Definition Instance type. Range The value is case-insensitive. <ul style="list-style-type: none"> • Single: single-node instance • Ha: primary/standby instance
engine_name	String	Definition DB engine name. Range N/A
engine_version	String	Definition DB engine version. Range N/A
pay_model	String	Definition Billing mode. Range 0 : pay-per-use billing

Parameter	Type	Description
created_at	String	<p>Definition Creation time.</p> <p>Range The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100.</p>
deleted_at	String	<p>Definition Deletion time.</p> <p>Range The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100.</p>
volume_type	String	<p>Definition Storage type.</p> <p>Range</p> <ul style="list-style-type: none"> ● ULTRAHIGH: ultra-high I/O storage. ● CLOUDSSD: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances. ● LOCALSSD: local SSD storage.
volume_size	Integer	<p>Definition Storage space.</p> <p>Range 40–4000, in GB. The value must be a multiple of 10.</p>
data_vip	String	<p>Definition Floating IP address.</p> <p>Range N/A</p>

Parameter	Type	Description
data_vip_v6	String	Definition Private IPv6 address. Range N/A
enterprise_project_id	String	Definition Enterprise project ID. Range N/A
retained_until	String	Definition Time until which the instance can be retained. Range The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .
recycle_backup_id	String	Definition Backup ID. Range N/A
recycle_status	String	Definition Backup status. Range <ul style="list-style-type: none"> • BUILDING: The instance is being backed up and cannot be rebuilt. • COMPLETED: The backup is complete and the instance can be rebuilt.

- Example normal response

RDS for MySQL response example

```
{
  "total_count": 1,
  "instances": [
    {
      "id": "f55da7ba462f414da2f9505fda3562b9in01",
      "name": "mysql_57_ha_test3",
      "ha_mode": "Ha",
      "engine_name": "mysql",
      "engine_version": "5.7.44",
      "pay_model": "0",
      "created_at": "2025-09-02T09:04:06+0000",
```

```

"deleted_at": "2025-09-03T10:06:33+0000",
"volume_type": "SSD",
"volume_size": 40,
"data_vip": "172.168.235.59",
"enterprise_project_id": "0",
"retained_until": "2025-09-10T10:07:05+0000",
"recycle_backup_id": "37a3d791431045a782d72496d384150abr01",
"recycle_status": "COMPLETED",
"recycle_backups": [
  {
    "backup_id": "37a3d791431045a782d72496d384150abr01",
    "backup_name": "mysql-f55da7ba462f414da2f9505fda3562b9in01-20250903100705426",
    "backup_status": "COMPLETED",
    "backup_create_at": "2025-09-03T10:07:05+0000",
    "backup_update_at": "2025-09-03T10:08:20+0000",
    "backup_size": 3600
  }
],
"is_serverless": false
}
]
}

```

RDS for PostgreSQL response example

```

{
  "total_count": 1,
  "instances": [{
    "id": "b0fd0c715ad043c98107ad12398653adin03",
    "name": "rds-9111",
    "ha_mode": "Single",
    "engine_name": "postgresql",
    "engine_version": "17.5",
    "pay_model": "0",
    "created_at": "2025-09-03T07:59:20+0000",
    "deleted_at": "2025-09-03T08:24:18+0000",
    "volume_type": "SSD",
    "volume_size": 40,
    "data_vip": "192.168.10.251",
    "enterprise_project_id": "0",
    "retained_until": "2025-09-10T08:20:20+0000",
    "recycle_backup_id": "644b1a945db648868af8f54e04f5d6a6br03",
    "recycle_status": "COMPLETED",
    "recycle_backups": [{
      "backup_id": "644b1a945db648868af8f54e04f5d6a6br03",
      "backup_name": "postgresql-
b0fd0c715ad043c98107ad12398653adin03-20250903082020735",
      "backup_status": "COMPLETED",
      "backup_create_at": "2025-09-03T08:20:20+0000",
      "backup_update_at": "2025-09-03T08:21:27+0000",
      "backup_size": 3629
    },
    {
      "backup_id": "e225352d1f9b4c51aa170ea2c2fc4d4bbr03",
      "backup_name": "postgresql-rds-9111-20250903075947338",
      "backup_status": "COMPLETED",
      "backup_create_at": "2025-09-03T07:59:47+0000",
      "backup_update_at": "2025-09-03T08:00:57+0000",
      "backup_size": 3633
    }
  ]
},
  "is_serverless": false
}
]]
}

```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.13 Tag Management

5.13.1 Adding Tags in Batches

Function

This API is used to add tags in batches.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/tags/action
- Parameter description

Table 5-276 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Parameter	Mandatory	Description
instance_id	Yes	<p>Explanation: Instance ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

Table 5-277 Parameters

Parameter	Mandatory	Type	Description
action	Yes	String	<p>Explanation: Operation identifier.</p> <p>Constraints: N/A</p> <p>Value range: The value is case-sensitive and is create for tag creation.</p> <p>Default value: N/A</p>
tags	Yes	Array of objects	<p>Explanation: Tag list. A maximum of 10 tags can be added for each instance. For details, see Table 5-278.</p> <p>Constraints: N/A</p>

Table 5-278 tags field data structure description

Parameter	Mandatory	Type	Description
key	Yes	String	<p>Explanation: Tag key.</p> <p>Constraints: N/A</p> <p>Value range: The value must consist of 1 to 128 Unicode characters. It can contain letters, digits, spaces, and special characters <code>_.:=-@</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>. It can contain uppercase and lowercase letters, digits, hyphens (-), underscores (_), and Unicode characters (<code>\u4E00-\u9FFF</code>).</p> <p>Default value: N/A</p>
value	Yes	String	<p>Explanation: Tag value.</p> <p>Constraints: N/A</p> <p>Value range: It can be left blank or contain a maximum of 255 Unicode characters. It can contain letters, digits, spaces, and special characters <code>_.:=-@</code>. It can contain uppercase and lowercase letters, digits, periods (.), hyphens (-), underscores (_), and Unicode characters (<code>\u4E00-\u9FFF</code>).</p> <p>Default value: N/A</p>

Example Request

Add tags **key1** and **key2** for a DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
```

```
cee5265e1e5845649e354841234567dfin01/tags/action
{
  "action": "create",
  "tags": [{
    "key": "key1",
    "value": "value1"
  }, {
    "key": "key2",
    "value": "value2"
  }]
}
```

Response

- Normal response
None
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.13.2 Deleting Tags in Batches

Function

This API is used to delete tags in batches.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/tags/action
- Parameter description

Table 5-279 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region.</p> <p>For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
instance_id	Yes	<p>Explanation: Instance ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

Table 5-280 Parameters

Parameter	Mandatory	Type	Description
action	Yes	String	<p>Explanation: Operation identifier.</p> <p>Constraints: N/A</p> <p>Value range: The value is case-sensitive and is delete for tag deletion.</p> <p>Default value: N/A</p>

Parameter	Mandatory	Type	Description
tags	Yes	Array of objects	<p>Explanation: Tag list. For details, see Table 5-281.</p> <p>Constraints: N/A</p>

Table 5-281 tags field data structure description

Parameter	Mandatory	Type	Description
key	Yes	String	<p>Explanation: Tag key.</p> <p>Constraints: N/A</p> <p>Value range: The value must consist of 1 to 128 Unicode characters. It can contain letters, digits, spaces, and special characters <code>_.:=-@</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>. It can contain uppercase and lowercase letters, digits, hyphens (<code>-</code>), underscores (<code>_</code>), and Unicode characters (<code>\u4E00-\u9FFF</code>).</p> <p>Default value: N/A</p>

Parameter	Mandatory	Type	Description
value	No	String	<p>Explanation: Tag value.</p> <p>Constraints: N/A</p> <p>Value range: It can be left blank or contain a maximum of 255 Unicode characters. It can contain letters, digits, spaces, and special characters <code>_.:=-@</code>. It can contain uppercase and lowercase letters, digits, periods (<code>.</code>), hyphens (<code>-</code>), underscores (<code>_</code>), and Unicode characters (<code>\u4E00-\u9FFF</code>).</p> <p>Default value: N/A</p>

Example Request

Delete tags **key1** and **key2** from a DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
cee5265e1e5845649e354841234567dfin01/tags/action

{
  "action": "delete",
  "tags": [{
    "key": "key1"
  }, {
    "key": "key2",
    "value": "value2"
  }]
}
```

Response

- Normal response
None
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal

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

Error Code

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

5.13.3 Querying Project Tags

Function

This API is used to query project tags.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/tags
- Parameter description

Table 5-282 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/tags

Response

- Normal response

Table 5-283 Parameters

Parameter	Type	Description
tags	Array of objects	Explanation: Specifies the tag list. If there is no tag in the list, an empty array is returned. For details, see Table 5-284 .

Table 5-284 tags field data structure description

Parameter	Type	Description
key	String	Explanation: Specifies the tag key. Value range: N/A
values	List<String>	Explanation: Specifies the tag value. Value range: N/A

- Example normal response

```
{
  "tags": [{
    "key": "key1",
    "values": ["value1"]
  }, {
    "key": "key2",
    "values": ["value2"]
  }]
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

- For details, see [Error Codes](#).

5.14 Quota Management

5.14.1 Querying Resource Quotas

Function

This API is used to query resource quotas in a project.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

URI

- URI format
GET /v3/{project_id}/quotas
- Parameter description

Table 5-285 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/quotas

Response

- Normal response

Table 5-286 Parameters

Parameter	Type	Description
quotas	Object	Explanation: Specifies the objects in the quota list. For details, see Table 5-287 .

Table 5-287 quotas field data structure description

Parameter	Type	Description
resources	Array of objects	Explanation: Indicates the resource list objects. For details, see Table 5-288 .

Table 5-288 resources field data structure description

Parameter	Type	Description
quota	Integer	Explanation: Indicates the project resource quota. Value range: N/A
used	Integer	Explanation: Indicates the number of used resources. Value range: N/A
type	String	Explanation: Indicates the project resource type. Value range: instance: instance resources

- Example normal response

```
{
  "quotas" : {
    "resources" : [ {
      "quota" : 100,
      "used" : 1,
      "type" : "instance"
    } ]
  }
}
```

```
}  
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.15 Obtaining Task Information

5.15.1 Obtaining Information About a Task with a Specified ID

Function

This API is used to obtain information about a task with a specified ID in the task center.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- RDS jobs are asynchronous. After a job is generated, it takes several seconds to query the job ID.
- This API is used to query only asynchronous tasks of the last one month in the task center.
- Information of the following asynchronous tasks can be obtained: creating a single-node or primary/standby DB instance, creating a read replica, deleting a DB instance, changing a single-node DB instance to primary/standby DB instance, switching a primary/standby DB instance, scaling up storage space, binding or unbinding an EIP, and changing an instance class.

URI

- URI format
GET /v3/{project_id}/jobs?id={id}
- Parameter description

Table 5-289 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
id	Yes	<p>Explanation: Task ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/jobs?id=a9767ede-fe0f-4888-9003-e843a4c90514

Response

- Normal response

Table 5-290 Parameters

Parameter	Type	Description
job	Object	<p>Explanation: Indicates the task information. For details, see Table 5-291.</p>

Table 5-291 job field data structure description

Parameter	Type	Description
id	String	Explanation: Indicates the job ID. Value range: N/A
name	String	Explanation: Indicates the task name. Value range: N/A
status	String	Explanation: Indicates the task execution status. Value range: <ul style="list-style-type: none"> • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task fails to be executed.
created	String	Explanation: Indicates the creation time. Value range: The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
process	String	Explanation: Indicates the task execution progress. Value range: The execution progress (such as "60%") is displayed only when the task is being executed. Otherwise, "" is returned.

Parameter	Type	Description
instance	Object	Explanation: Indicates information of the DB instance on which the task is executed. For details, see Table 5-292 .
entities	Object	Explanation: The displayed information varies depending on the tasks. For details, see the following: <ul style="list-style-type: none"> • Table 5-293 • Table 5-296 • Table 5-298 • Table 5-299 NOTE For asynchronous tasks without the entities field description, {} is returned.
fail_reason	String	Explanation: Indicates the error information displayed when a task failed. Value range: N/A

Table 5-292 instances field data structure description

Parameter	Type	Description
id	String	Explanation: Indicates the DB instance ID. Value range: N/A
name	String	Explanation: Indicates the DB instance name. Value range: N/A

Table 5-293 entities field data structure description (creating DB instances, changing single DB instances to primary/standby, or creating read replicas)

Parameter	Type	Description
instance	Object	Explanation: Indicates the information about the queried DB instance. For details, see Table 5-294 .
resource_ids	List<String>	Explanation: Indicates the queried resource ID. Value range: N/A

Table 5-294 entities.instance field data structure description

Parameter	Type	Description
endpoint	String	Explanation: Indicates the DB instance connection address. Value range: N/A
type	String	Explanation: Indicates the DB instance type. Value range: <ul style="list-style-type: none"> • Single: single-node instance • Ha: primary/standby instance • Replica: read replica
datastore	Object	Explanation: Indicates the database information. For details, see Table 5-295 .
replica_of	String	Explanation: Indicates the primary DB instance ID. This parameter is returned only when a read replica is created. Value range: N/A

Table 5-295 datastore field data structure description

Parameter	Type	Description
type	String	Explanation: Indicates the DB engine. Value range: N/A
version	String	Explanation: Indicates the database version. Value range: N/A

Table 5-296 entities field data structure description (resizing a DB instance)

Parameter	Type	Description
volume	Object	Explanation: Indicates the information about the resized disk. For details, see Table 5-297 .
resource_ids	List<String>	Explanation: Indicates the queried resource ID. Value range: N/A

Table 5-297 volume field data structure description

Parameter	Type	Description
type	String	Explanation: Indicates the volume type. Value range: N/A
original_size	String	Explanation: Indicates the original volume size in GB. Value range: N/A

Parameter	Type	Description
target_size	String	Explanation: Indicates the target volume size in GB. Value range: N/A

Table 5-298 entities field data structure description (binding/unbinding EIPs or enabling/disabling remote access)

Parameter	Type	Description
public_ip	String	Explanation: Indicates the EIP bound to the DB instance. Value range: N/A

Table 5-299 entities field data structure description (primary/standby switchover)

Parameter	Type	Description
switch_strategy	String	Explanation: Indicates the primary/standby switchover policy. Value range: N/A

 **NOTE**

In the response example, some tasks in the task center are used as examples.

- Example normal response

Creating a DB instance:

```
{
  "job": {
    "id": "31b8ae23-c687-4d80-b7b4-42a66c9bb886",
    "name": "CreateMysqlSingleHAInstance",
    "status": "Completed",
    "created": "2018-08-06T10:41:14+0000",
    "process": "",
    "instance": {
      "id": "a48e43ff268f4c0e879652d65e63d0fbin01",
      "name": "DO-NOT-TOUCH-mgr2-mysql-single"
    },
    "entities": {
      "instance": {
```

```

        "endpoint": "192.168.1.203:3306",
        "type": "Single",
        "datastore": {
            "type": "mysql",
            "version": "5.7"
        }
    },
    "resource_ids": ["a48e43ff268f4c0e879652d65e63d0fbin01.vm",
"a48e43ff268f4c0e879652d65e63d0fbin01.volume"]
}
}
}

```

Creating a read replica:

```

{
  "job": {
    "id": "31b8ae23-c687-4d80-b7b4-42a66c9bb886",
    "name": " CreateMysqlReplicaInstance",
    "status": "Completed",
    "created": "2018-08-06T10:41:14+0000",
    "process": "",
    "instance": {
      "id": "288caaa9d05f4ec1a1f58de2e0945685in01",
      "name": "mysql-replica"
    },
    "entities": {
      "instance": {
        "endpoint": "192.168.1.203:3306",
        "type": "replica",
        "datastore": {
          "type": "mysql",
          "version": "5.7"
        }
      },
      "replica_of": "a48e43ff268f4c0e879652d65e63d0fbin01"
    },
    "resource_ids": ["288caaa9d05f4ec1a1f58de2e0945685in01.vm",
"288caaa9d05f4ec1a1f58de2e0945685in01.volume"]
  }
}

```

Binding an EIP:

```

{
  "job": {
    "id": "31b8ae23-c687-4d80-b7b4-42a66c9bb886",
    "name": "MysqlBindEIP",
    "status": "Completed",
    "created": "2018-08-06T10:41:14+0000",
    "process": "",
    "instance": {
      "id": "a48e43ff268f4c0e879652d65e63d0fbin01",
      "name": "DO-NOT-TOUCH-mgr2-mysql-single"
    },
    "entities": {
      "public_ip": "10.10.10.1"
    }
  }
}

```

Rebooting a DB instance:

```

{
  "job": {
    "id": "31b8ae23-c687-4d80-b7b4-42a66c9bb886",
    "name": " RestartMysqlInstance",
    "status": "Completed",
    "created": "2018-08-06T10:41:14+0000",
    "process": "",
    "instance": {
      "id": "a48e43ff268f4c0e879652d65e63d0fbin01",
      "name": "DO-NOT-TOUCH-mgr2-mysql-single"
    },
  },
}

```

```
"entities": {}  
}  
}
```

Task being executed:

```
{  
  "job": {  
    "id": "31b8ae23-c687-4d80-b7b4-42a66c9bb886",  
    "name": "CreateMysqlSingleHAInstance",  
    "status": "Completed",  
    "created": "2018-08-06T10:41:14+0000",  
    "process": "60% ",  
    "instance": {  
      "id": "a48e43ff268f4c0e879652d65e63d0fbin01",  
      "name": "DO-NOT-TOUCH-mgr2-mysql-single"  
    },  
    "entities": {  
      "instance": {  
        "type": "Single",  
        "datastore": {  
          "type": "mysql",  
          "version": "5.7"  
        }  
      }  
    }  
  }  
}
```

Task fails to be executed:

```
{  
  "job": {  
    "id": "31 b8ae23 - c687 - 4 d80 - b7b4 - 42 a66c9bb886",  
    "name": "CreateMysqlSingleHAInstance",  
    "status": "Failed",  
    "created": "2018-08-06T10:41:14+0000",  
    "process": "",  
    "instance": {  
      "id": "a48e43ff268f4c0e879652d65e63d0fbin01",  
      "name": "DO-NOT-TOUCH-mgr2-mysql-single"  
    },  
    "entities": {  
      "instance": {  
        "type": "Single",  
        "datastore": {  
          "type": "mysql",  
          "version": "5.7"  
        }  
      }  
    }  
  },  
  "fail_reason": "createVM failed."  
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.15.2 Obtaining Task Information of a Specified DB Instance in a Specified Time Range (RDS for SQL Server)

Function

This API is used to obtain the task information list of a specified SQL Server DB instance ID within a specified time range.

- Before calling an API, you need to understand the API in [Authentication](#).
- Before calling this API, learn about [request header parameters](#).

Constraints

- This API is used to query asynchronous tasks of the last one month in the task center.
- Information of the following asynchronous tasks can be obtained: creating single or primary/standby DB instances, creating read replicas, changing single DB instances to primary/standby instances, switching primary/standby DB instances, scaling up storage space, creating automated or manual backups, restoring data to original, existing, or new DB instances.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/tasklist/detail?
start_time={start_time}&end_time={end_time}
- Parameter description

Table 5-300 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Explanation: Project ID of a tenant in a region. For details about how to obtain the project ID, see Obtaining a Project ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Parameter	Mandatory	Description
instance_id	Yes	<p>Explanation: Instance ID.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
start_time	Yes	<p>Explanation: Start time in the UTC timestamp format.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>
end_time	No	<p>Explanation: End time in the UTC timestamp format.</p> <p>Constraints: N/A</p> <p>Value range: N/A</p> <p>Default value: N/A</p>

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/a48e43ff268f4c0e879652d65e63d0fbin01/tasklist/detail?start_time=1533423274000&end_time=1533823274000

Response

- Normal response

Table 5-301 Parameters

Parameter	Type	Description
jobs	Object	Explanation: Indicates the task information. For details, see Table 5-302 .
count	Integer	Explanation: Indicates the total number of tasks. Value range: N/A

Table 5-302 jobs field data structure description

Parameter	Type	Description
id	String	Explanation: Indicates the task ID. Value range: N/A
name	String	Explanation: Indicates the task name. Value range: N/A
status	String	Explanation: Indicates the task execution status. Value range: <ul style="list-style-type: none"> • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task fails to be executed.

Parameter	Type	Description
created	String	<p>Explanation: Indicates the creation time.</p> <p>Value range: The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.</p>
process	String	<p>Explanation: Indicates the task execution progress.</p> <p>Value range: The execution progress (such as "60", indicating the task execution progress is 60%) is displayed only when the task is being executed. Otherwise, "" is returned.</p>
instance	Object	<p>Explanation: Indicates information of the DB instance on which the task is executed. For details, see Table 5-303.</p>
task_detail	String	<p>Explanation: The displayed information varies depending on the tasks. For details, see the following:</p> <ul style="list-style-type: none"> • Table 5-304 • Table 5-305 <p>NOTE This field is not displayed for asynchronous tasks that do not contain the task_detail field.</p>
fail_reason	String	<p>Explanation: Indicates the error information displayed when a task failed.</p> <p>Value range: N/A</p>

Parameter	Type	Description
entities	Object	Explanation: The displayed information varies depending on the tasks. Value range: N/A

Table 5-303 instance field data structure description

Parameter	Type	Description
id	String	Explanation: Indicates the DB instance ID. Value range: N/A
name	String	Explanation: Indicates the DB instance name. Value range: N/A

Table 5-304 task_detail field data structure description (restoring data to original, existing, or new DB instances, or restoring table-level data to a specified time point)

Parameter	Type	Description
sourceInstanceid	String	Explanation: Indicates the ID of the original DB instance to which backup data is restored. Value range: N/A
targetInstanceid	String	Explanation: Indicates the ID of the target DB instance to which backup data is restored. Value range: N/A

Parameter	Type	Description
backupId	String	Explanation: Indicates the backup file ID. Value range: N/A
restoreTime	String	Explanation: Indicates the time point to which table-level data is restored. Value range: N/A
type	String	Explanation: Indicates the task type. Value range: N/A
dbNames	List<String>	Explanation: Indicates the database name. Value range: N/A

Table 5-305 task_detail field data structure description (creating automated or manual backups)

Parameter	Type	Description
instanceId	String	Explanation: Indicates the ID of the DB instance to be backed up. Value range: N/A
name	String	Explanation: Indicates the task name. Value range: N/A
description	String	Explanation: Indicates the task description. Value range: N/A

Parameter	Type	Description
dbName	String	<p>Explanation: Indicates the name of the data to be backed up.</p> <p>Value range: N/A</p>

 **NOTE**

In the response example, some returned task details are used as examples.

- Example normal response

Creating automated or manual backups:

```
{
  "jobs": [
    {
      "id": "aa4e3386-af27-436e-99f5-7cfe21c37a",
      "name": "BackupDbSqlServerInInstance",
      "status": "Completed",
      "created": "2020-07-20T16:10:07+0000",
      "ended": "2020-07-20T16:14:39+0000",
      "process": "",
      "instance": {
        "id": "9a09052dfa824caea36f583bc3e5684ein04",
        "name": "rds-8d43-0004"
      },
      "task_detail": "{\"instanceId\":\"9a09052dfa824caea36f583bc3e5684ein04\", \"name\": \"sqlserver-rds-8d43-0004-20200719161130675\"}"
    }
  ],
  "count": 1
}
```

Restoring data to original, existing, or new DB instances, or restoring table-level data to a specified time point:

```
{
  "jobs": [
    {
      "id": "11bef2cb-2924-4727-a9c2-b6fec61fc03a",
      "name": "SingleDbRestoreSqlServerInInstance",
      "status": "Failed",
      "created": "2020-07-21T01:38:00+0000",
      "ended": "2020-07-21T01:39:59+0000",
      "process": "",
      "instance": {
        "id": "9a09052dfa824caea36f583bc3e5684ein04",
        "name": "rds-8d43-0004"
      },
      "task_detail": "{\"backupId\":\"83c76e6852c145779dc153d8299ee0e1br04\", \"dbName\": \"backe\", \"sourceInstance\": \"9a09052dfa824caea36f583bc3e5684ein04\", \"targetInstance\": \"9a09052dfa824caea36f583bc3e5684ein04\"}"
    }
  ],
  "count": 1
}
```

Other task types:

```
{
  "jobs": [
    {
      "id": "11bef2cb-2924-4727-a9c2-b6fec61fc03a",
```

```
    "name": "SingleDbRestoreSqlServerInInstance",
    "status": "Complete",
    "created": "2020-07-21T01:38:00+0000",
    "ended": "2020-07-21T01:39:59+0000",
    "process": "",
    "instance": {
      "id": "9a09052dfa824caea36f583bc3e5684ein04",
      "name": "rds-8d43-0004"
    }
  },
  "count": 1
}
```

Task being executed:

```
{
  "jobs": [
    {
      "id": "32291a2e-882b-4266-b7c0-89dae34d2a9d",
      "name": "CreateSqlServerSingleHAInstance",
      "status": "Running",
      "created": "2020-07-14T15:02:29+0000",
      "ended": "2020-07-14T15:16:18+0000",
      "process": "50",
      "instance": {
        "id": "9a09052dfa824caea36f583bc3e5684ein04",
        "name": "rds-8d43-0004"
      }
    }
  ],
  "count": 1
}
```

Task fails to be executed:

```
{
  "jobs": [
    {
      "id": "32291a2e-882b-4266-b7c0-89dae34d2a9d",
      "name": "CreateSqlServerSingleHAInstance",
      "status": "Failed",
      "created": "2020-07-14T15:02:29+0000",
      "ended": "2020-07-14T15:16:18+0000",
      "process": "",
      "instance": {
        "id": "9a09052dfa824caea36f583bc3e5684ein04",
        "name": "rds-8d43-0004"
      },
      "fail_reason": "createVM failed."
    }
  ],
  "count": 1
}
```

- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
200
- Abnormal
For details, see [Status Codes](#).

Error Code

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

6 Appendix

6.1 Abnormal Request Results

v3 APIs

Abnormal response description

Table 6-1 Abnormal response description

Name	Type	Description
error_code	String	Specifies the error returned when a task submission exception occurs.
error_msg	String	Specifies the description of the error returned when a task submission exception occurs.

Response example

```
{  
  "error_code": "DBS.200022",  
  "error_msg": "The DB instance name already exists."  
}
```

6.2 Status Codes

[Table 6-2](#) describes status codes.

Table 6-2 Status codes

Status Code	Message	Description
100	Continue	The client should continue with its request. This interim response is used to inform the client that the initial part of the request has been received and has not yet been rejected by the server.
101	Switching Protocols	The protocol should be switched. The protocol can only be switched to a more advanced protocol. For example, the current HTTP protocol is switched to a later version.
200	OK	Request succeeded.
201	Created	The request for creating a resource or task has been fulfilled.
202	Accepted	The request has been accepted, but the processing has not been completed.
203	Non-Authoritative Information	Unauthorized information. The request is successful.
204	NoContent	The server has successfully processed the request, but has not returned any content. The status code is returned in response to an HTTP OPTIONS request.
205	Reset Content	The server has fulfilled the request, but the requester is required to reset the content.
206	Partial Content	The server has processed certain GET requests.
300	Multiple Choices	There are multiple options for the location of the requested resource. The response contains a list of resource characteristics and addresses from which the user or user agent (such as a browser) can choose the most appropriate one.
301	Moved Permanently	The requested resource has been assigned a new permanent URI, and the new URI is contained in the response.
302	Found	The requested resource was temporarily moved.
303	See Other	The response to the request can be found under a different URI and should be retrieved using a GET or POST method.

Status Code	Message	Description
304	Not Modified	The requested resource has not been modified. In such a case, there is no need to retransmit the resource since the client still has a previously-downloaded copy.
305	Use Proxy	The requested resource must be accessed through a proxy.
306	Unused	The HTTP status code is no longer used.
400	BadRequest	Invalid request. The client should not repeat the request without modifications.
401	Unauthorized	The status code is returned after the client provides the authentication information, indicating that the authentication information is incorrect or invalid.
402	Payment Required	This status code is reserved for future use.
403	Forbidden	The server understood the request, but is refusing to fulfill it. The client should not repeat the request without modifications.
404	NotFound	The requested resource cannot be found. The client should not repeat the request without modifications.
405	MethodNotAllowed	The method specified in the request is not supported for the requested resource. The client should not repeat the request without modifications.
406	Not Acceptable	The server cannot fulfill the request according to the content characteristics of the request.
407	Proxy Authentication Required	This status code is similar to 401, but indicates that the client must first authenticate itself with the proxy.
408	Request Time-out	The server timed out waiting for the request. The client may repeat the request without modifications at any later time.

Status Code	Message	Description
409	Conflict	The request could not be processed due to a conflict. This status code indicates that the resource that the client attempts to create already exists, or the request fails to be processed because of the update of the conflict request.
410	Gone	The requested resource is no longer available. The requested resource has been deleted permanently.
411	Length Required	The server refuses to process the request without a defined Content-Length.
412	Precondition Failed	The server does not meet one of the preconditions that the requester puts on the request.
413	Request Entity Too Large	The request is larger than that a server is able to process. The server may close the connection to prevent the client from continuing the request. If the server temporarily cannot process the request, the response will contain a Retry-After header field.
414	Request-URI Too Large	The URI provided was too long for the server to process.
415	Unsupported Media Type	The server is unable to process the media format in the request.
416	Requested range not satisfied	The requested range is invalid.
417	Expectation Failed	The server fails to meet the requirements of the Expect request-header field.
422	UnprocessableEntity	The request is well-formed but is unable to be processed due to semantic errors.
429	TooManyRequests	The client has sent more requests than its rate limit is allowed within a given amount of time, or the server has received more requests than it is able to process within a given amount of time. In this case, it is advisable for the client to re-initiate requests after the time specified in the Retry-After header of the response expires.
500	InternalServerError	The server is able to receive the request but it could not understand the request.

Status Code	Message	Description
501	Not Implemented	The server does not support the requested function.
502	Bad Gateway	The server acting as a gateway or proxy receives an invalid response from a remote server.
503	ServiceUnavailable	The requested service is invalid. The client should not repeat the request without modifications.
504	ServerTimeout	The request cannot be fulfilled within a given time. The response will reach the client only if the request carries a timeout parameter.
505	HTTP Version not supported	The server does not support the HTTP protocol version used in the request.

6.3 Error Codes

The following table describes error codes.

Table 6-3 V3 error codes

Status Code	Error Code	Description
500	DBS.108000	Server failure.
500	DBS.108002	Server failure.
500	DBS.108005	Server failure.
400	DBS.200001	Parameter error.
404	DBS.200002	The DB instance does not exist.
400	DBS.200004	Parameter error.
500	DBS.200005	Server failure.
400	DBS.200006	The request is null. Enter a request parameter.
404	DBS.200008	The ECS information of the DB instance cannot be found.
403	DBS.200010	The DB instance ID or user ID may be null, or the operation is not authorized.
409	DBS.200011	Another operation is being performed on the instance, or the instance is faulty. Try again later.

Status Code	Error Code	Description
404	DBS.200013	The original DB instance does not exist.
409	DBS.200019	Another operation is being performed on the DB instance or the DB instance is faulty.
400	DBS.200021	Invalid DB instance name.
409	DBS.200022	The DB instance name already exists.
400	DBS.200023	Storage space is out of range.
400	DBS.200024	Invalid region.
400	DBS.200025	Invalid AZ.
400	DBS.200026	Invalid storage type.
400	DBS.200027	Storage space must be a multiple of 10.
400	DBS.200040	The DB engine or version is not supported.
400	DBS.200041	Invalid database version.
400	DBS.200042	The DB engine does not exist.
400	DBS.200043	Invalid HA replication mode.
403	DBS.200044	Resource not found or permission denied.
404	DBS.200045	The DB instance does not exist.
413	DBS.200046	The number of DB instances has reached the quota.
409	DBS.200047	Another operation is being performed on the DB instance or the DB instance is faulty.
400	DBS.200048	Invalid VPC ID.
400	DBS.200049	Invalid network ID.
404	DBS.200050	The security group does not exist or does not belong to the VPC.
400	DBS.200051	Invalid HA mode.
400	DBS.200052	Invalid database root password.
400	DBS.200053	The selected specifications do not exist.
400	DBS.200054	Invalid specifications.
400	DBS.200055	Invalid replica_of_id.
400	DBS.200056	The maximum number of nodes has been reached.

Status Code	Error Code	Description
400	DBS.200076	The instance and node must be in the Available state.
400	DBS.200086	This operation is not allowed by the DB instance status.
400	DBS.200087	The number of tags added for the DB instance has reached the quota.
400	DBS.200098	The tag already exists.
400	DBS.200121	Select an AZ different from that of the standby node.
400	DBS.200203	Failed to query the DB instance.
400	DBS.200303	The scale-up times have reached the maximum value.
400	DBS.200306	The new storage space must be greater than or equal to the original storage space.
400	DBS.200308	The new storage space after scaling up cannot be greater than that of the primary DB instance.
409	DBS.200316	This operation cannot be performed because the DB instance status is Storage full.
409	DBS.200402	Invalid operation.
400	DBS.200405	Parameter error.
404	DBS.200408	Incorrect node information.
400	DBS.200461	The parameter value is out of range.
404	DBS.200470	The region or AZ does not exist.
404	DBS.200501	The subnet does not exist or does not belong to the VPC.
404	DBS.200503	The VPC does not exist or does not belong to the user.
400	DBS.200504	Invalid database version.
400	DBS.200506	Invalid KMS.
400	DBS.200543	The job does not exist.
404	DBS.200602	The DB instance does not exist.
403	DBS.200604	The DB instance ID or user ID may be null, or the operation is not authorized.
500	DBS.200811	Failed to create the database.

Status Code	Error Code	Description
403	DBS.201003	Resource not found or permission denied.
400	DBS.201006	Invalid parameters.
404	DBS.201010	The backup information does not exist.
400	DBS.201014	This operation is not allowed by the DB instance status.
404	DBS.201028	The DB instance does not exist.
400	DBS.201035	The database name must be different from the original and target database names.
400	DBS.201041	The operation is not allowed for tables with foreign keys.
400	DBS.201101	Invalid backup cycle.
400	DBS.201103	Invalid backup start time.
400	DBS.201106	Invalid retention days.
409	DBS.201201	The object already exists.
409	DBS.201202	Another operation is being performed on the DB instance or the DB instance is faulty.
400	DBS.201203	The backup file does not exist.
409	DBS.201205	Backup is in progress, please wait.
400	DBS.201207	The DB engine or version is not supported.
404	DBS.212001	The parameter template does not exist.
400	DBS.212002	Incorrect parameter template quota.
400	DBS.212003	Operation not allowed.
400	DBS.212004	Parameter template update error.
400	DBS.212005	The node does not belong to the group.
409	DBS.212006	Another operation is being performed on the DB instance or the DB instance is faulty.
400	DBS.212007	The DB engine does not exist.
400	DBS.212008	The DB engine is not supported.
400	DBS.212009	Task processing failed.
400	DBS.212010	The parameter template is being applied.
400	DBS.212011	Application failed.

Status Code	Error Code	Description
400	DBS.212012	The parameter does not exist.
404	DBS.212013	The object does not exist.
400	DBS.212014	The node does not have a default parameter template.
400	DBS.212015	Partial success
400	DBS.212016	Parameter update failed.
400	DBS.212017	Invalid parameter.
422	DBS.212019	The parameter cannot be processed.
400	DBS.212025	Update failed.
400	DBS.212030	Parameter error
400	DBS.212032	The parameter template has been applied.
400	DBS.212037	Parameters are incorrectly set.
500	DBS.213004	Failed to process the request.
400	DBS.216028	Insufficient internal resource quota.
400	DBS.280001	Parameter error.
403	DBS.280015	Resource not found or permission denied.
403	DBS.280056	Invalid token.
404	DBS.280110	Selected DB instance does not exist.
400	DBS.280127	Invalid backup description.
400	DBS.280128	The database name does not exist.
400	DBS.280204	Invalid parameter.
400	DBS.280214	The backup does not exist.
400	DBS.280235	Invalid database type.
400	DBS.280238	The DB engine or version is not supported.
400	DBS.280239	Invalid specifications.
400	DBS.280241	Invalid storage type.
400	DBS.280246	Invalid database root password.
400	DBS.280250	Invalid backup retention days.
400	DBS.280253	Invalid backup start time.
400	DBS.280262	Invalid synchronize model.

Status Code	Error Code	Description
400	DBS.280270	The parameter does not exist.
400	DBS.280271	The parameter value is out of range.
400	DBS.280272	The tag key must be unique.
400	DBS.280277	Invalid object name.
400	DBS.280285	Invalid AZ.
400	DBS.280404	Invalid DB instance ID or node ID format.
400	DBS.280449	Operation not allowed on frozen objects.
400	DBS.280450	The DB instance specifications are sold out.
400	DBS.280649	Invalid DB instance name length.
400	DBS.290000	Parameter error.
400	DBS.290001	Invalid parameter letter case.
404	DBS.290002	The selected specifications do not exist.
413	DBS.290003	The number of DB instances has reached the quota.
404	DBS.290005	The DB instance does not exist.
500	DBS.290006	Failed to process the request.
404	DBS.290011	The DB instance does not exist.
404	DBS.290013	Resource not found.
500	DBS.290015	Failed to process the request.
400	DBS.301132	This operation cannot be performed because instance has been stopped.
400	DBS.301133	This operation cannot be performed because instance has been started.

6.4 Obtaining a Project ID

Scenarios

When calling APIs, you need to specify the project ID in some URLs. To do so, you need to obtain the project ID first. Two methods are available:

- [Obtaining the Project ID by Calling an API](#)
- [Obtaining a Project ID from the Console](#)

Obtaining the Project ID by Calling an API

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"
  }
}
```

Obtaining a Project ID from the Console

- Step 1** Register yourself on the management console and log in to it.
- Step 2** Move your pointer over the username and select **My Credentials** in the displayed drop-down list.

On the **My Credentials** page, view project IDs in the project list.

----End

6.5 Replication Mode

Replication mode

Replication Mode	Description	Remarks
async	Asynchronous	N/A
semisync	Semi-synchronous	N/A
sync	Synchronous	N/A

6.6 RDS Monitoring Metrics Description

Function Description

This section describes namespaces, descriptions, and dimensions of monitoring metrics reported to Cloud Eye. You can query monitoring metrics and alarm information over the Cloud Eye API.

Namespace

SYS.RDS

Monitoring Metrics

Table 6-4 RDS performance metrics

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds001_cpu_util	CPU Usage	CPU usage of the monitored object	0%–100%	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds002_memory_util	Memory Usage	Memory usage of the monitored object	0-100%	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds003_iops	IOPS	Average number of I/O requests processed by the system in a specified period	≥ 0 counts/s	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds004_bytes_in	Network Input Throughput	Incoming traffic in bytes per second	≥ 0 bytes/s	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds005_bytes_out	Network Output Throughput	Outgoing traffic in bytes per second	≥ 0 bytes/s	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds006_conn_count	Total Connections	Total number of connections that attempt to connect to the MySQL server	≥ 0 counts	Monitored object: database Monitored instance type: MySQL instances
rds007_conn_active_count	Current Active Connections	Number of current active connections	≥ 0 counts	Monitored object: database Monitored instance type: MySQL instances
rds008_qps	QPS	Query times of SQL statements (including storage procedures) per second	≥ 0 times/s	Monitored object: database Monitored instance type: MySQL instances
rds009_tps	TPS	Execution times of submitted and rollback transactions per second	≥ 0 times/s	Monitored object: database Monitored instance type: MySQL instances
rds010_innodb_buf_usage	Buffer Pool Usage	Ratio of idle pages to the total number of buffer pool pages in the InnoDB buffer	0-1	Monitored object: database Monitored instance type: MySQL instances
rds011_innodb_buf_hit	Buffer Pool Hit Rate	Ratio of read hits to read requests in the InnoDB buffer	0-1	Monitored object: database Monitored instance type: MySQL instances

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds012_innodb_buf_dirty	Buffer Pool Dirty Block Rate	Ratio of dirty data to used pages in the InnoDB buffer	0-1	Monitored object: database Monitored instance type: MySQL instances
rds013_innodb_reads	InnoDB Read Throughput	Number of read bytes per second in the InnoDB buffer	≥ 0 bytes/s	Monitored object: database Monitored instance type: MySQL instances
rds014_innodb_writes	InnoDB Write Throughput	Number of write bytes per second in the InnoDB buffer	≥ 0 bytes/s	Monitored object: database Monitored instance type: MySQL instances
rds015_innodb_read_count	InnoDB File Read Frequency	Number of times that InnoDB reads data from files per second	≥ 0 times/s	Monitored object: database Monitored instance type: MySQL instances
rds016_innodb_write_count	InnoDB File Write Frequency	Number of times that InnoDB writes data to files per second	≥ 0 times/s	Monitored object: database Monitored instance type: MySQL instances
rds017_innodb_log_write_req_count	InnoDB Log Write Requests per Second	Number of InnoDB log write requests per second	≥ 0 counts/s	Monitored object: database Monitored instance type: MySQL instances
rds018_innodb_log_physical_write_count	InnoDB Log Physical Write Frequency	Number of InnoDB physical write times to log files per second	≥ 0 counts/s	Monitored object: database Monitored instance type: MySQL instances
rds019_innodb_log_fsync_count	InnoDB Log fsync() Write Frequency	Number of completed fsync() write times to InnoDB log files per second	≥ 0 counts/s	Monitored object: database Monitored instance type: MySQL instances

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds020_temp_tbl_rate	Temporary Tables Created per Second	Number of temporary tables created on hard disks per second	≥ 0 counts/s	Monitored object: database Monitored instance type: MySQL instances
rds021_myisam_buf_usage	Key Buffer Usage	MyISAM key buffer usage	0-1	Monitored object: database Monitored instance type: MySQL instances
rds022_myisam_buf_write_hit	Key Buffer Write Hit Ratio	MyISAM key buffer write hit ratio	0-1	Monitored object: database Monitored instance type: MySQL instances
rds023_myisam_buf_read_hit	Key Buffer Read Hit Ratio	MyISAM key buffer read hit ratio	0-1	Monitored object: database Monitored instance type: MySQL instances
rds024_myisam_disk_write_count	MyISAM Disk Write Frequency	Number of times that indexes are written to disks per second	≥ 0 times/s	Monitored object: database Monitored instance type: MySQL instances
rds025_myisam_disk_read_count	MyISAM Disk Read Frequency	Number of times that indexes are read from disks per second	≥ 0 times/s	Monitored object: database Monitored instance type: MySQL instances
rds026_myisam_buf_write_count	MyISAM Buffer Pool Write Requests per Second	Number of requests for writing indexes into the MyISAM buffer pool per second	≥ 0 counts/s	Monitored object: database Monitored instance type: MySQL instances

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds027_myisam_buffer_pool_read_count	MyISAM Buffer Pool Read Requests per Second	Number of requests for reading indexes from the MyISAM buffer pool per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds028_delete_count	DELETE Statements per Second	Number of DELETE statements executed per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds029_insert_count	INSERT Statements per Second	Number of INSERT statements executed per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds030_insert_select_count	INSERT_SELECT Statements per Second	Number of INSERT_SELECT statements executed per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds031_replace_count	REPLACE Statements per Second	Number of REPLACE statements executed per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds032_replace_selection_count	REPLACE_SELECTION Statements per Second	Number of REPLACE_SELECTION statements executed per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds033_select_count	SELECT Statements per Second	Number of SELECT statements executed per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds034_comdml_updated_count	UPDATE Statements per Second	Number of UPDATE statements executed per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds035_innodb_delete_row_count	Row Delete Frequency	Number of rows deleted from the InnoDB table per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds036_innodb_insert_row_count	Row Insert Frequency	Number of rows inserted into the InnoDB table per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds037_innodb_read_row_count	Row Read Frequency	Number of rows read from the InnoDB table per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds038_innodb_update_row_count	Row Update Frequency	Number of rows updated into the InnoDB table per second	≥ 0 counts /s	Monitored object: database Monitored instance type: MySQL instances
rds039_disk_util	Storage Space Usage	Storage space usage of the monitored object	0-100 %	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds040_transaction_logs_usage	Transaction Logs Usage	Storage space usage of transaction logs	≥ 0 MB	Monitored object: database Monitored instance type: PostgreSQL instances
rds041_replication_slot_usage	Replication Slot Usage	Storage space usage of replication slot files	≥ 0 MB	Monitored object: database Monitored instance type: PostgreSQL instances

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds042_database_connections	Database Connections in Use	Number of database connections in use	≥ 0 counts	Monitored object: database Monitored instance type: PostgreSQL instances
rds043_maximum_used_transaction_ids	Maximum Used Transaction IDs	Maximum number of transaction IDs that have been used	≥ 0 counts	Monitored object: database Monitored instance type: PostgreSQL instances
rds044_transaction_logs_generations	Transaction Logs Generation	Size of transaction logs generated per second	≥ 0 MB/s	Monitored object: database Monitored instance type: PostgreSQL instances
rds045_oldest_replication_slot_lag	Oldest Replication Slot Lag	Lagging size of the most lagging replica in terms of WAL data received	≥ 0 MB	Monitored object: database Monitored instance type: PostgreSQL instances
rds046_replication_lag	Replication Lag	Replication lag delay	≥ 0 ms	Monitored object: database Monitored instance type: PostgreSQL instances
rds047_disk_total_size	Total Storage Space	Total storage space of the monitored object	40–4,000 GB	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds048_disk_used_size	Used Storage Space	Used storage space of the monitored object	0–4,000 GB	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds049_disk_read_throughput	Disk Read Throughput	Number of bytes read from the disk per second	≥ 0 bytes/s	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds050_disk_write_throughput	Disk Write Throughput	Number of bytes written into the disk per second	≥ 0 bytes/s	Monitored object: ECS. Monitored DB instance type: <ul style="list-style-type: none"> MySQL PostgreSQL Microsoft SQL Server
rds054_db_connections_in_use	Database Connections in Use	Number of database connections in use	≥ 0 counts	Monitored object: database Monitored instance type: Microsoft SQL Server instances

Dimension

Key	Value
rds_cluster_id	RDS for MySQL DB instance ID
postgresql_cluster_id	RDS for PostgreSQL DB instance ID
rds_cluster_sqlserver_id	RDS for SQL Server DB instance ID

API Calling

Use APIs to search for RDS monitoring metrics. For details about calling methods and parameter description, see Querying Monitoring Data in the *Cloud Eye API Reference*.

Examples:

- Request

```
/V1.0/{project_id}/metric-data?
namespace=SYS.RDS&metric_name=rds001_cpu_util&dim.0=rds_cluster_id,5ea170ad-
cc6b-49cd-9020-
e94fdbeea391&from=1484123686000&to=1568188853000&period=300&filter=average
```

- Response:

```
{
  "datapoints": [
    {
      "average": 0.35,
      "timestamp": 1484123400000,
      "unit": "Ratio"
    },
    {
      "average": 0.11,
      "timestamp": 1484123700000,
      "unit": "Ratio"
    }
  ],
  "metric_name": "rds001_cpu_util",
  "httpcode" : 200,
  "header" : {
    "Transfer-Encoding" : "chunked",
    "Server" : "Web Server",
    "X-Request-Id" : "te-l-CES-
APISVR25.id-0418d62a-1e76-46ff-9a5f-9ce40b336e29.ts-1484123744291.c-15046",
    "X-Content-Type-Options" : "nosniff",
    "Connection" : "keep-alive",
    "X-Download-Options" : "noopen",
    "Date" : "Wed, 11 Jan 2017 08:35:44 GMT",
    "X-Frame-Options" : "DENY",
    "Strict-Transport-Security" : "max-age=31536000; includeSubdomains;",
    "Cache-Control" : "no-cache",
    "X-XSS-Protection" : "1; mode=block;",
    "Content-Length" : "165",
    "Content-Type" : "application/json"
  }
}
```